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In this issue

- Handling Special Traffic
- Sydney's Weedburner Tram
- Prison Tram Miscellany

TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM
MAGAZINE

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CONTENTS

HANDLING OF HEAVY TRAFFIC ON SPECIAL OCCASIONS.....	3
BURNING UP THE TRACKS.....	8
PRISON TRAM MISCELLANY.....	10
HERE AND THERE.....	12
MUSEUM NEWS.....	21

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Sydney LP class 154 was in service at the Sydney Tramway Museum on 6 September to mark the 60th anniversary of the closure of the Rockdale to Brighton le Sands line. This closure prompted the first moves to obtain a tram for preservation by Norman Chinn and the eventual establishment of a tramway museum at Loftus in Sydney's southern suburbs. Norman and his wife Marjorie took a ride on 154 during the morning to mark the occasion and are seen here with Peter Kahn, OIC for the day.

Martin Pinches

Front Cover

Adelaide H type cars 359 and 360 at the South Road stop en route to Glenelg in March 1973. This is the site of an overpass now under construction - see report on pages 12 and 13.

Richard Jones

HANDLING OF HEAVY TRAFFIC ON SPECIAL OCCASIONS

SYDNEY TRAMWAYS

By P.J. Timmony

Patrick J. Timmony was Assistant Chief Traffic Manager, Department of Road Transport and Tramways NSW, and his paper dated 6 February 1934 was presented to the 4th Australian and New Zealand Tramway Conference held in Sydney from 19 to 23 March 1934. He died in 1956 at the age of 85.

A side-line to the ordinary day in and day out traffic handled by the New South Wales Tramways, which reaches a total of approximately 860,000 passengers per diem, is the special traffic to the various sports grounds and surfing beaches. In this connection Sydney is unique amongst Australian cities, for the reason that the most important sporting and racing arenas, as well as the more popular bathing resorts, are remote from railway lines, and the major transport of their patrons devolves on the tramways. This remark applies to the Royal Agricultural Society's Ground, which, during the Easter period when the Show is held, commands the largest attendance of any Showground in Australia; to the Sydney Cricket Ground, where international as well as interstate cricket and football matches are contested; and to Randwick Racecourse, which ranks second to Flemington in popularity and compares favourably with it, particularly during the Sydney Cup Meeting at Easter and the Spring Meeting in October, the latter being the curtain raiser for the Melbourne Cup.

Hundreds of thousands of people who visit Sydney's beaches at weekends and on public holidays are dependent upon the tramway system for their transport. Among the bathing resorts referred to are Bondi, Coogee, Clovelly, Maroubra Bay, and, on the north side of the Harbour, Balmoral. In addition, a number of pony racecourses, at which races are frequently held during the mid-week, claim the services of the tramways for the conveyance of their patrons. Amongst these may be mentioned Ascot, Rosebery, Kensington, and Victoria Park.

Sydney is fortunate in having the Royal Agricultural Ground and the Cricket Ground adjacent to each other, for the reason that when sports are held simultaneously at each, which is frequently the case, the one service and supervising organisation can be arranged to serve both.

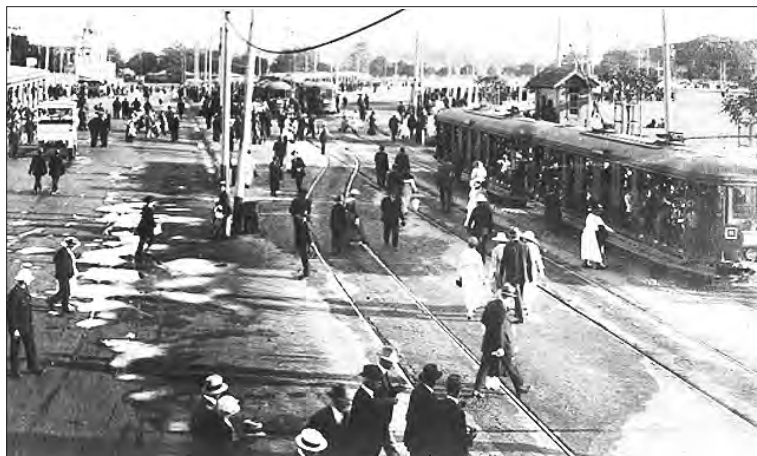
Special tracks, suitably arranged for the expeditious handling of this class of traffic and for storing and marshalling the cars necessary for the home journey, have been laid down in the vicinity of the grounds

mentioned. These sidings, which are capable of storing 200 cars, are clear of the main running lines and permit of cars being held for any period without interfering with the ordinary services. On many occasions this accommodation is inadequate for the storage of the whole of the cars required for the return service. The difficulty is then got over by timing additional cars to reach the Cricket or Showground after a portion of those already there have been despatched.

The special services to these grounds are run from Circular Quay and Railway Square Loop and are returned to these points at the conclusion of the sports. The same remark applies to the special trams serving Randwick Racecourse. The service from Circular Quay caters for passengers from the Eastern Suburbs and the north side of the harbour, and that from Railway Square Loop for passengers from the Western and Southern suburbs and the Central Railway Station.

As a record breaker the Royal Agricultural Show, which runs over a period of 9 days and 6 nights, holds pride of place. On Easter Monday a few years back 997 tram car loads were carried on the outward journey and 1,137 on the return, or a total in both directions of 2,134 car loads. Practically the whole of the cars in use were of the 80-seat type, so that the number of [seated] passengers carried was approximately 170,000. When it is considered that, in connection with the Sydney Cup Meeting held on the same day, 484 car loads were carried to Randwick and 544 car loads returned, or a total of 1,028 car loads representing approximately 82,000 [seated] passengers, and that, in addition, provision had to be simultaneously made for ordinary holiday traffic to the various seaside and picnic resorts, it will be realised that the tramways were handed a Herculean task.

The record loading to the Sydney Cricket Ground, established in connection with an International Football Match between England and Australia, was 346 car loads on the outward journey and 357 on the return, or a total of 703 car loads, representing approximately 56,000 passengers. The fact that the 357 car loads on the return from the Cricket Ground



Passengers boarding a Circular Quay-bound O class car in Driver Avenue outside the Showground.

NSWGT from STM Archives

were lifted in less than 25 minutes will give some idea of the effectiveness of the Sydney Tramways in expeditious loading and despatch. It may be remarked that passengers load at both sides of the cars at the one time and have the advantage of 16 entrances.

The loading and unloading facilities at Randwick Racecourse are on an elaborate scale and comprise 6 lengthy platforms, 2 only of which are available for discharging passengers on arrival at the racecourse, whereby they are landed at the entrance gates to the Paddock and the St. Leger, the whole 6 being in commission for the return. On the return journey 3 platforms are set apart for Railway Square Loop passengers and 3 for Circular Quay passengers.

After the finish of the races passengers reach their respective platforms by way of overhead bridges from The Paddock and from the St. Leger enclosures, and it is worthy of mention that the bridges referred to and the stairways leading to them have been specially designed to permit the exit of just that number of passengers that can be handled by the tramway service without causing congestion on the platforms.

Storage and marshalling sidings have been constructed in a portion of the racecourse reserve, and are capable of accommodating 280 cars.

The facilities mentioned permit of passengers being lifted from the platforms at the rate of 1,000 per minute, and the figures for the record day at Randwick are 664 car loads on the outward journey and 717 on the return, or a total of 1,381 car loads in both directions, representing approximately 110,480 passengers.

As in the case of the Show and Cricket Grounds, the sidings available at Randwick are insufficient to store the whole of the cars required for the return traffic on

important occasions, and it is therefore necessary to have the requisite additional cars in a handy position so that they can move into the race course as those already stored are despatched. The regulated flow of passengers to the platforms enables this to be done without difficulty. In passing it may be stated that although 717 car loads had to be provided for, it was not necessary to have that number of separate cars earmarked for the job. As a matter of fact, as the racecourse cars are required to travel over sections of the route on which heavy holiday services are already operating, it would not be practicable to handle this number of separate cars between the racecourse and Railway Square Loop and the racecourse and Circular Quay. Four hundred and twenty (420) cars are sufficient for the purpose by returning as many as may be required to the racecourse for second trips, and under such circumstances there is practically an unbroken circle of cars between the racecourse and Railway Square Loop until sufficient are on their way back for a second trip to shift the whole of the racecourse passengers.

On Easter Saturday and Easter Monday, when the attendances at both the Showground and the Racecourse are very large, it would not be possible to provide for the whole of the return traffic from both places simultaneously. By mutual arrangement with racecourse authorities, who finish their programme not later than about 4.20pm, and with the Showground authorities who prolong theirs until after 5.00pm, and by a judicious arrangement of intermittently diverting to the Showground Racecourse cars that have completed their first trip to Railway Square and Circular Quay, very little difficulty is experienced in getting the Showground patrons to town in time.

Alternative routes are available both in connection with the show and Racecourse services, and permit the special trams on both outward and return trips being

kept clear of the heavier routes over an appreciable portion of the journey, whereby they obtain an uninterrupted run. For instance, special cars to and from Circular Quay, instead of following the regular traffic route in Oxford Street, are diverted to Campbell Street. Similarly, special cars operating the Railway Square Loop-Racecourse service are diverted to Phillip and Redfern Streets, missing Anzac Parade junction which is a notorious congestion point.

Whilst the tramway traffic to the various bathing resorts does not loom so large as that to the sports grounds mentioned, it is, nevertheless, of an important nature and calls for special consideration. Fortunately this class of traffic starts early and finishes late, and this fact affords an opportunity to give the racecourse special trams a run to the beaches before they take up their legitimate work, and allows them to be similarly used after the racecourse traffic is finished.

Coogee, before losing much of its popularity to Bondi, put up a record on one occasion of 300 car loads. Bondi Beach on 26 December 1931 accounted for 225 car loads, and Balmoral Beach on the last public holiday 207 car loads.

As a result of the depression the pony racecourses, in common with other sporting centres, have lost much of their glamour, but, possibly, only temporarily. Ascot pony races on one occasion attracted 180 car loads (out and back) and Kensington 136 car loads (out and back). Incidentally it might be mentioned that, as in the case of the more important sports grounds, it has been necessary to specially provide marshalling sidings at each of the pony racecourses in order to handle the return traffic.

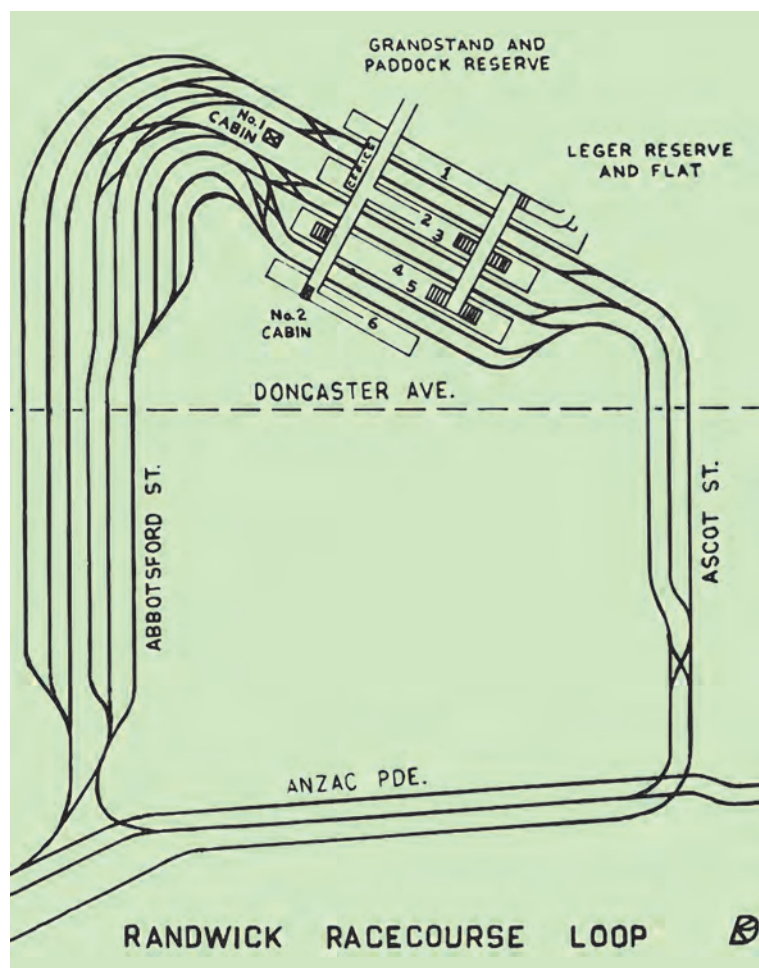
Well-dressed passengers - every man and every woman is wearing a hat - make their way along platform 1 at Randwick Racecourse. Trams are already lined up for the return traffic to come.

NSWGT from STM Archives

In catering generally for the more important sports and race meetings, the first condition necessary is a reasonably accurate forecast of the probable attendance. Arrangements must necessarily be made some time in advance to enable the requisite staff to be secured and rostered, and as the conditions which influence attendances at these fixtures are many and varied, something other than precedent – which, by the way, does not always exist – is necessary. For instance, the prospect of Don Bradman batting would easily account for an additional 10,000 at the Cricket Ground, and a meeting between Hall Mark and Peter Pan would probably have the same effect at a Randwick race meeting. Having decided on the probable attendance, the arranging of the services is an easy matter. In the case of sports meetings it has been found that the service should start generally from 11/4 to 1 1/2 hours before the commencement of the programme. On occasions, however, it has been necessary to start the services four (4) hours ahead.

In the case of race meetings at Randwick, 2 to 2 1/2 hours before the first race suitably meets requirements. During outgoing traffic the cars provided are able to run several trips, consequently a limited number, generally about 40 per cent of the total required for the return traffic, are sufficient. After the finish of the outgoing loading these cars are laid up at the sports ground or the racecourse, as the case may be, for return traffic. It has, at times, been suggested by irresponsible persons that in the interests of economy the crews employed on these trams should be signed off and brought back in time for return traffic. The answer to this is 'experientia docet' [experience teaches].





Left:

Diagram of the track layout at Randwick Racecourse.

Right:

Diagram of the track layout in the Moore Park area and the Sports, Cricket and Agricultural Show grounds. Randwick Road was renamed Anzac Parade in 1946.

Diagrams by David Keenan

Lack of interest in connection with an International Football Match (New Zealand-v-Australia) resulted in from 10,000 to 15,000 people leaving the ground at half time. A change in the weather conditions has more than once stopped an International Cricket Match in the early afternoon and sent practically the whole of the attendance homeward. From 90 to 100 car loads of people have left Randwick Racecourse after the principal race of the day, which took place in the middle of the programme. The resultant chaos can be visualised if the tram crews concerned had been at home having afternoon tea instead of being at their posts.

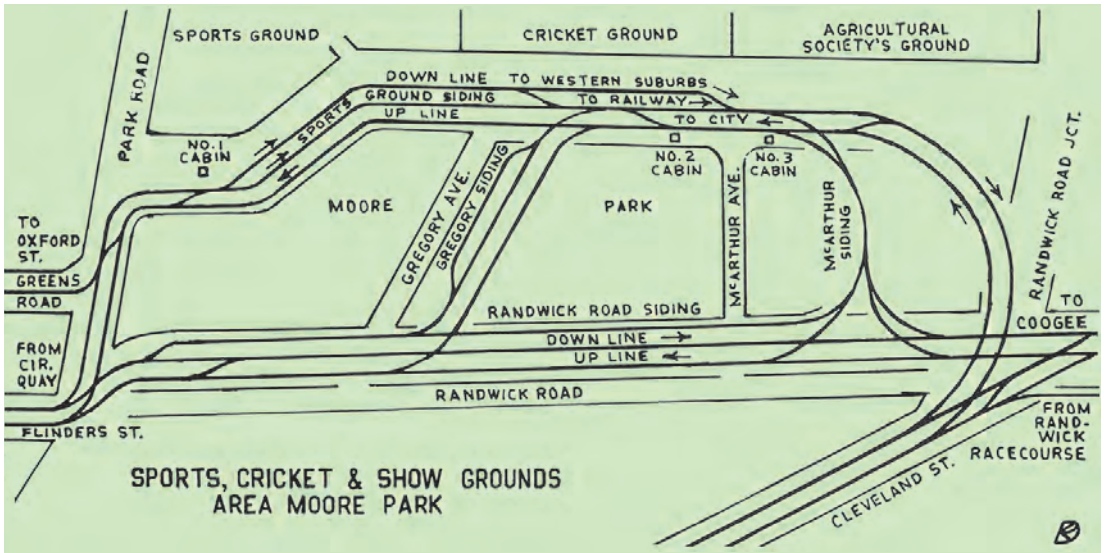
The whole of the City Tramway Depots combine in providing the necessary service, the demand made upon them being in proportion to the number of men and cars at their disposal.

Particulars as to the services required, as well as the general arrangements, special instructions, and disposition of the controlling officers are notified to all

concerned by means of a weekly pamphlet known as the Weekly Notice.

The additional cars for return traffic are provided by calling on the services of men who have already worked a morning shift, and these are known as 'call backs'. As has been previously stated, after the return traffic from the racecourse or other sports grounds has finished, the special cars are commandeered for other traffic - business traffic on ordinary days and picnic and beach traffic on Saturdays and Holidays. Every tram used for these special services carries a lettered disc indicating the Depot to which it belongs. This enables the traffic officers on point duty to divert such cars to routes which will permit of their being used in their own districts, or, if not required, to be readily despatched to their home depots.

As the Traffic Awards must be respected, the controlling officers are enabled to readily distinguish special cars that may not be used without exceeding the 12-hour span by the fact that they carry red discs



which indicate that their crews have signed on duty before 6.45am and must, therefore, be returned to their home depot not later than 6.45pm.

Special cars, the crews of which have signed on later than the hour mentioned, carry black discs.

With 1,490 cars to call upon no difficulty is experienced on public holidays in securing sufficient rolling stock to meet any demand. There is a limit on such occasions, however, so far as men are concerned, for the reason that the holiday timetables practically require all cars to be manned for a double shift.

On business days the reverse is the case, for whilst sufficient men can be made available by cancelling days off, suspending holidays, utilising call backs, etc., all available cars are required for the ordinary business traffic. On such occasions a judicious pilfering of cars from a number of lines is necessary, and is generally followed by unkind criticism in the press. However, providing the sports meeting concerned finishes reasonably early, as is the case in connection with races and football matches, the special cars on their return to the city are immediately diverted to the routes affected by withdrawals, and in many cases the critics, although unaware of it, have been provided with as much or more accommodation than they receive under normal conditions.

The collection of revenue in connection with the special services to the Show and Cricket Grounds is facilitated by the use of return tickets; single journey tickets being issued on the homeward trip only. A similar practice is followed in connection with the pony racecourses, and, in the case of Randwick

Racecourse, the return tickets also include the entrance charge to the racecourse through the outer gate. This latter arrangement obviates the necessity of passengers obtaining change and paying at the gates leading from the Platform to the racecourse enclosure, and incidentally eliminates congestion on the platforms.

The majority of the records mentioned in this paper are those of pre-depression days, and although the growth in the number of private motor cars has considerably affected the number of tram passengers handled in connection with race meetings, sports, etc., there is some hope that with the return to prosperity the records of the past will be closely approached.

The condition in regard to the parking of motor cars in the vicinity of Randwick Racecourse is such that many people arriving late have to leave their cars half a mile from the racecourse entrance. As this distance grows it is more than likely they will again return to the tramways.

Some years ago the City Council decided to convert a large portion of Moore Park adjacent to the Cricket and Show Grounds into a motor parking area. As this park is assigned to the public for recreation purposes, motor car driving is presumably a form of recreation. The Council's action has been a profitable one for it, but it has had the effect of reducing the traffic carried by the special tram services to the Cricket and Show Grounds from 50 per cent of the total attendances to less than 33 per cent.

BURNING UP THE TRACKS

Reprinted from Welding News, Folio 88, dated October 1956. This magazine was published by Commonwealth Industrial Gases, NSW and issued gratis through their nationwide dealer network.

One of these days while waiting for a tram in the Sydney area you may be startled by the approach of a curious vehicle blowing flames from its nose. Clearly the vehicle is not jet-propelled; the flames are coming out the wrong end. And its extremely sedate speed – six miles or so an hour – would clear up any doubts on that score.

It is what the tramways officially call ‘an obsolete O Type bogie’. Far from being obsolete, however, the vehicle has been refitted to carry out a novel application of oxy-acetylene which is both unexpected and unadvertised. It is also a big money-saver.

Grass is one of the big problems of Sydney’s tramways department. But on what are called ‘open ballast tracks’ grass is far more than a nuisance; it is downright dangerous. The chief danger lies in skids caused by grass between rails and wheels. Skids are unpleasant enough in vehicles; but a tramcar’s ponderous weight makes for added unpleasantness.

In its attack on grass, the department is hampered in ways unknown to the home-owner who uses weed-killer on a patch of growth he doesn’t want. Tramways run on public property. Poisons are out.

Until recently, the department waged its grass-war with that dramatic army weapon, the diesoline flame-thrower. Dramatic it may have been; but efficient it was not.

Moreover, operating a flamethrower comes under the heading of hard labour, and dirty labour at that. Hence, there was a high labour-turnover among flamethrower crews.

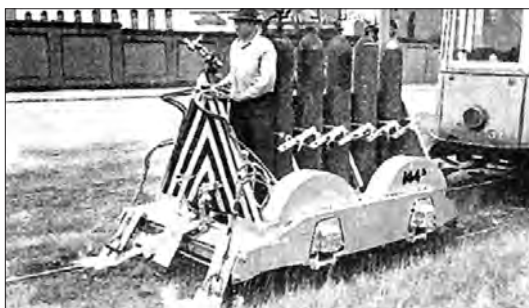
Though oxy-acetylene for the new process costs more than did the diesoline oil which the flamethrowers burnt, the speed-up and labour-savings are so great that they cancel out the increased fuel-costs many times over.

How much faster is it? How much does it save? It is 40 times faster, is estimated to save £1,900 a year.

The apparatus is now well past the experimental stage, but its actual arrangement is the result of much careful experiment. The carriage carries five 200 cu ft cylinders of oxygen, six of acetylene and – of course – the operator.

Two flexible type manifolds are provided, one of which connects the oxygen cylinders and the other the acetylene cylinders. Each manifold terminates in two junction blocks and is fitted with two regulators.

Rubber tubing is used to connect the two regulators to two dual quick acting valves and thence to two Comweld T95 blowpipe handles. The heating tips are



Weedburner 144s in operation in Driver Avenue, Moore Park.

*Welding News,
courtesy Gary Davy*



A closer view of the burning tips in action.

*Welding News,
courtesy Gary Davy*

designed so as to prevent the flames impinging on the rail head.

Air-acetylene pilot lights are provided by connecting to the inlet side of the dual quick acting shut-off valve via a Y piece and (T398) adjusting valve.

The carriage is moved at 5 to 7 mph with the fully adjustable tips set about 60 degrees to the rails and 4 inches above them. After initial adjustment, all further regulation of flames is made by the operator in the carriage. After an initial pass, the grass is allowed

to stand for three days. Three further passes complete the operation. Since the final one virtually sterilises the ground, re-growth is slower than with dieseline.

One man is easily able to work the equipment, as against the four who formed the flame-throwing squad. Besides its work on ground immediately beside the rails, oxy-acetylene is also proving invaluable for hand-operated burning-out of weed-choked drains. Where necessary, it will also clear grass from wider areas beside tramlines.

Weedburner 144s being towed by D scrubber car 137s between Dacey Avenue and Robertson Road on 27 January 1961. This was possibly the last time the weedburner was used.

Dale Budd



A cloud of smoke follows 137s as it propels weedburner 144s along 'The Dive' siding on 27 January 1961.

Dale Budd



PRISON TRAM MISCELLANY

From the Archives

Readers will recall that the May 2007 issue of this magazine dealt with the history of Prison Tram No. 948, now an exhibit in the Sydney Tramway Museum fleet. Additional material has been located in the Sydney Tramway Museum's archives and is reproduced below.

A drawing signed on behalf of the Chief Electrical Engineer, O.W. Brain on 19 August 1907, the same date as the drawing of the single truck prison tram illustrated in the May 2007 issue of *Trolley Wire*, shows floor plans for two bogie prison trams. One is for a 40-seat car with a central corridor and a length of 38 feet and the other for a 36-seat car with a side corridor and a length of 36 feet 9 inches over headstocks. The side corridor version was selected and entered service in September 1909.

Proposed additional prison van

Early in 1929, consideration was given to the construction of an additional prison tram and information contained in archived papers from Randwick Tramway Workshops provides insight into this proposal.

The Works Manager, Randwick Workshops wrote to the Supervising Engineer on 21 May 1929 advising that the preparation of an estimate for design and construction of an additional Prison Van was a matter for the Engineering Branch. The Works Manager suggested that in view of the easy grades and curves of the track between Darlinghurst Court House and Long

Bay Penitentiary, it may be practicable to equip No. 948 with more powerful motors and convert a steam trail car for use as an additional prison van. He noted that car 948 was equipped with two GE 67 motors, each of 40 horsepower.

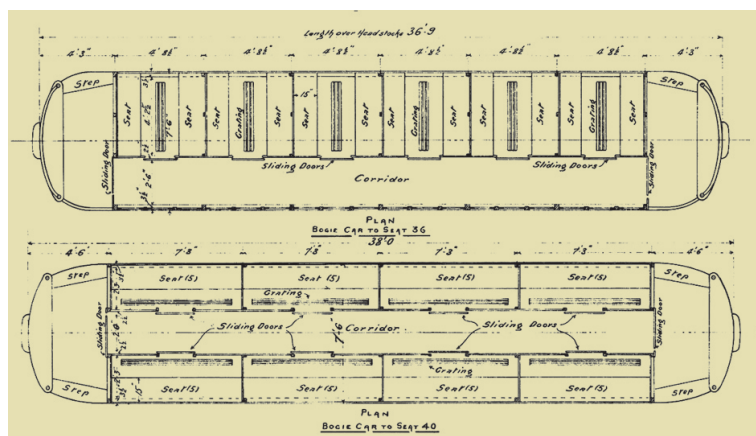
In reply, the Supervising Engineer ruled out the proposed conversion of the steam trail car and advised that the cost of a prison tram, similar to car 948, but fitted with couplers and controllers, would be £2,500 and the cost of fitting out 948 with similar couplers and controllers would be £120.

On 27 June 1929 the Secretary of the Government Tramways wrote to the Secretary of the Police Department advising that the cost of construction an additional prison tramcar, capable of coupling to car 948, would be £2,700 and the cost of fitting car 948 with similar couplers and controllers would be £120. He requested that the Police Department accept a debit of £2,820 in order that the work could be put in hand.

The Acting Secretary of the Police Department replied on 9 October 1929 advising that his department was not prepared to accept a debit for the amount involved, as Treasury had indicated that provision of funds for the proposal must stand over for the present.

The question of an additional prison tram was not raised again.

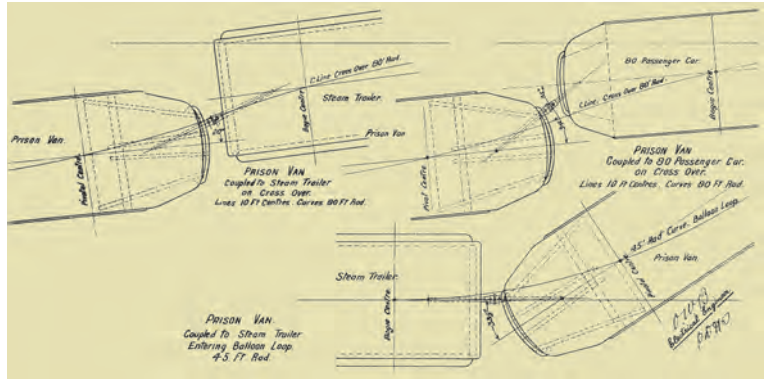
It is interesting to note that an official diagram of cars on curves dated 29 June 1909 shows the prison



The New South Wales Government Tramways drawing showing the seating and corridor proposals for the prison vans. STM Archives

The tramways drawing of the prison car coupled to a steam trailer and also to an 80-seat (O class) car. The trams are shown negotiating a crossover and balloon loop.

STM Archives



van attached to a steam trailer traversing a crossover with tracks at 10 ft centres and 80 ft radius curves, and entering a balloon loop with a radius of 45ft.

Prisoners escape from No. 948

On 4 March 1946, two prisoners sawed their way through the thin coachwood of Prison Tram 948's roof using a bread knife with a serrated edge, squeezed through the 10 inch by 12 inch hole, climbed down the roof access steps and ran off.

The escapees were Darcy Ezekiel Dugan, aged 25, 5ft 6in tall and of medium build, and Robert Porter Lewis, aged 18, 5ft 4in tall and of small build.

Constable Walter Stopp, in charge of the police guard, immediately saw them racing towards Centennial Park. Before he and another constable and three prison officials could alight the escapees had more than 100 yards start. They increased their lead and disappeared among the trees and thick foliage. Within 15 minutes an intensive police search was under way.

Dugan was a notorious criminal who on this occasion was to appear before the court on 29 charges including assault while armed, housebreaking, goods in custody and stealing. He had escaped from a Black Maria police van on 25 January and was recaptured at gun point on 18 February.

A view taken by the CID photographer of the hole cut in the prison van roof. The tram is in the Darlinghurst Police Station siding where it was examined after the escape.

STM Archives



Police believe Dugan while in custody at Long Bay secretly manufactured the knife used to hack the hole in the tram roof.

The tram, in which about 30 prisoners were distributed in six compartments, left Long Bay Gaol about 7:30am and reached Robertson Road 15 minutes later. Throughout the journey from Long Bay the 30 prisoners, including two women, maintained a loud chatter and whether deliberate or not, provided an effective cover for any noise the escapees made while sawing through the roof.

Harry Perry, the tram driver, said the tram was travelling about eight or ten miles an hour when one of the escorting constables advised him of the escape. Perry stopped the tram immediately, halfway between Robertson Road and Cleveland Street.

The tram proceeded to Darlinghurst Police Station, where CID Scientific Bureau specialists examined it. The bread knife, about 10 inches long, was found in the compartment from which the men escaped.

The two escapees were recaptured two day later.



An interior view along the corridor of the prison van whilst in the Darlinghurst Police Station siding. In the foreground are what are thought to be slop buckets for use by the prisoners during their journey.

STM Archives

HERE AND THERE

AUSTRALIAN AND OVERSEAS NEWS

Sydney – Harold Davies (1903-2009)

It is with regret that we record the passing, at the age of 105, of Harold Norton Davies, MBE, GCSJ, ME, Hon FIEAust. Mr Davies graduated from University of Sydney with the degree of Bachelor of Engineering in Civil Engineering with first class honours in 1927. After graduation Harold joined the NSW Department of Public Works team under J. J. C. Bradfield that worked on the Sydney Harbour Bridge project.

In this capacity he designed the 220ft (67m) steel arch bridge that carried the bridge tram lines from what are now known as lanes 7 and 8, over Bradfield Highway towards Blue Street in front of North Sydney station. The design of this bridge was submitted as a thesis to the University of Sydney in 1930 and resulted in Harold being awarded the degree of Master of Engineering with first class honours and a University Medal. Tram services over this bridge ended in 1958 and the structure was demolished several years later to make way for the Warringah Expressway.

From article by Ian Bowie, *Engineering Sydney* Newsletter.

Adelaide – South Road overpass

The South Australian Government appointed McConnell Dowell Constructors to deliver the \$32 million project which will take City-Glenelg trams over South Road, a very busy north-south traffic corridor.

Construction commenced in May with the diversion of the tram tracks onto Glengyle Terrace and Norman Terrace, which border the north side of the tramway each side of South Road. The South Road tram stop has been closed and removed for the duration of the construction work.

Concrete construction work commenced in July and the main beams over South Road were placed during three weekends in October. The beams, each weighing around 55 tonnes, were fabricated in Victoria. Each span is made up of five beams, one for the pedestrian/bike path on the northern side, and four to support the rails.

The bridge designed by Harold Davies carried tram tracks from Blue Street, North Sydney over the Bradfield Highway on the approach to Milsons Point station.
R.M. Phillips



Also in October contractors commenced installing centre poles as part of the overhead replacement project. The new poles replace Stobie poles erected when the former railway was electrified as a tramway in 1929.

The overpass is expected to be completed in December.

Melbourne – Collins Street trams reach Victoria Harbour

As reported in the August-September issue of *Trolley Wire*, trams on route 48 (North Balwyn-Docklands) began travelling to Docklands via Collins Street instead of Flinders Street from September. The change of route, which commenced on 20 September, was made possible by laying new curves in Spring Street at the intersections of Wellington Parade and Collins Street.

At the Docklands end of the route, tram services have been extended west along a new section of Collins Street to a terminus at Merchant Street in the

Victoria Harbour precinct. This terminus is likely to be temporary, however, as plans are afoot to extend Collins Street further to connect with the western end of Bourke Street.

The re-routing of North Balwyn trams and the extension of the Collins Street line are part of the Victorian Government's policy of providing a high standard of public transport to a fast-growing part of central Melbourne. Docklands is currently home to almost 6,000 Melburnians and houses the corporate headquarters of the ANZ and National Australia banks, Myer, *The Age* newspaper, AXA and National Foods.

No doubt the new tram service provided by route 48 will be welcomed by Docklands residents and workers alike, regardless of whether they are travelling to North Balwyn or simply to Southern Cross station or the city's central business district.

Text and photos by Randall Wilson



Glenelg-bound Flexity 109 waits at South Road for the green signal. The former level crossing gates have been replaced by traffic signals during the construction of the tramway overpass. This view is in the same direction as our cover photo.

Bob Merchant



Passengers alight from A2 300 as Citadis car 3006 crosses Batmans Hill Drive on 29 September 2009. The previous terminus in Collins Street was in the foreground.



Car 3006 drops off a passenger at one of two stops on the extended Collins Street line. The new ANZ Bank headquarters is in the background.



In mid afternoon sunshine, clean and tidy A2 294 approaches the tram stop between Harbour Esplanade and Batmans Hill Drive



Looking east along the Collins Street extension towards the new headquarters for The Age newspaper.



Inbound A2 274 uses new track to swing north into Spring Street from Wellington Parade.



Bound for North Balwyn, A2 287 uses the curves laid in June 2009 to turn south into Spring Street from Collins Street.

San Francisco – Melbourne 916 handover

San Francisco Mayor Gavin Newsom was on hand on the morning of 6 October to accept the gift of Melbourne SW6 class tram 916 from Victorian Premier John Brumby.

The new addition, built in 1946, will join the fleet of historic streetcars, trolleys and trams which San Francisco has been collecting from around the world. The fleet already includes Melbourne cars W2 496, built in 1929, and W2 586, built in 1930. The latter car has long been awaiting restoration.

It will be several months before this latest addition will be ready for service. Some of the modifications needed for operation in San Francisco include changing the motorman's controls so they open the right-hand instead of the left-hand passenger doors, and installation of equipment including radio and fare box. No. 916 has already been fitted with trolley poles which are standard equipment in San Francisco.

"I am delighted that this tram has found a new and very welcome home here and will be used for F-line services. It is with great pleasure that the Victorian community can once again donate one of our iconic W class trams to the people of San Francisco," Mr Brumby said at a ceremony held by the Ferry Building.

Mr Newsom replied "We are grateful to the people of Melbourne for this generous gift. Both of our cities understand the importance of preserving our history and using that preservation to promote environmentally-sustainable transportation. I am certain that our shared values will keep Melbourne and San Francisco beautiful and liveable for generations to come." The Mayor also thanked Market Street Railway volunteers who assisted the operation of the F-line. With their help the Municipal Railway has been able to maintain historic streetcar service in San Francisco.

From the Market Street Railway's website, with additional information.



San Francisco Mayor Gavin Newsom and Victorian Premier John Brumby face a barrage of media cameras during the official handover of Melbourne SW6 class tram 916 to the City of San Francisco on 6 October 2009.

Karl Johnson

Former Melbourne W2 496 shares the limelight after the official handover of Melbourne sister SW6 916. Karl Johnson





After one-man operation was authorised in 1954, the type D cars ran as single-enders. The rear end of No. 1007 is seen in 1968; note the modified paint scheme and the absence of a destination indicator. This car, restored as a double-ender is in service today on the F line, painted in the maroon & cream colours of the Philadelphia Suburban Transportation Company ('Red Arrow' Lines).

Dale Budd



San Francisco update: more 'torpedoes' to return

By Dale Budd

San Francisco Municipal Railway (Muni) has recently let a contract which will see a doubling of the number of PCC trams in use on the F-Market and Wharves service, operated solely by historic cars.

The F line has been a victim of its own success. Since operations started in 1995 patronage has grown to 20,000 per day, double the original prediction, helped by extension of the line to Fisherman's Wharf in 2000. The original fleet of 17 PCCs (three Muni type D cars, similar to No. 1014 at Loftus, and 14 cars from Philadelphia) has been increased by the addition of 10 Peter Witt cars from Milan and 11 PCCs from Newark. Older heritage cars from San Francisco, and imports from a number of countries including Melbourne W2 496 and newly arrived SW6 916, supplement the service on the Embarcadero, the major street along the San Francisco's waterfront tourist area.



Muni No. 1 and PCC 1050 on a charter, with Boeing LRVs in the background, on the N-Judah line near Ocean Beach terminus on 27 August 1995.

Howard Clark

The last PCC built in North America, No. 1040 stands out of use in Upper Geneva yard in 1999. Over the ten years since this picture was taken the car has suffered considerable further deterioration.

Dale Budd

But apart from impact of the growth in ridership, all is not well with the fleet. One of the PCCs from Philadelphia was written off after a collision, and two more are awaiting repairs following accidents. Of the Milan cars, seven are running with three out of service or under repair following mishaps. The cars from Newark were overhauled before coming to San Francisco in 2007, but it was decided that the work done would not include re-wiring. This proved to be a mistake, and the cars have been plagued by electrical problems to such an extent that only four are currently operational.

The contract approved in August this year will see the eleven cars from Newark re-wired, at an average cost per car of \$US736,000 (approximately \$A825,000). The first car is to be completed in about October 2010, with the remainder following at monthly intervals. The contract also provides for the rehabilitation of Muni PCC 1040, the last PCC built in North America (in 1952). This tram was retained after its sister cars were withdrawn in 1982, and ran in Trolley Festival service, a precursor to the F line, from 1983. It has not been used for at least ten years and its condition has deteriorated as a result of open storage. This car is also planned to be restored by October

2010, at a contract price of \$US1.45 million (about \$A1.6 million).

Most interesting is the decision to restore the four surviving type D cars, nick-named 'Torpedoes'. Of these No. 1006 was retained as an historic car but has been out of use for more than ten years. It ran in the Trolley Festivals and was restored to double-ended operation. No. 1008 was fitted with a pantograph and a viewing window in the roof in 1978, for use in overhead inspection. In 1980 it became Muni's repair or 'wrecker' car – a breakdown tram in Australian parlance. It was painted in a bright livery using the red, orange and white colours then being applied to passenger cars. It was noted available for service in May 1995 but has not run for some time.

The other two type D cars, 1009 and 1011, were retired with their sister cars in about 1979. While in open storage at a waterfront yard, they were heavily vandalised. No. 1009 suffered severe fire damage, with No. 1011 also being damaged in the same incident.

Now all four 'Torpedoes' are to be restored, at an average cost per car of \$US1.56 million (about \$A1.75 million). They will re-enter service in 2011. When



Car 1008, Muni's former repair car, at the Third Street yard on 7 September 2009, soon to be dispatched to Brookville Equipment Corporation for restoration. Alongside is one of the PCCs from Newark, also to be sent east for re-wiring.

Howard Clark

There's nothing wrong with these cars that a million dollars wouldn't fix – or to be more precise, around \$A1.75 million each. Seen in 1995 are the burnt-out shell of No. 1009, at left; No. 1011 is alongside, with No. 1031, a sister car to No. 1040, at right.



Only about 30 years of development in engineering and design separated Sydney's O cars and San Francisco's PCCs, but it would be hard to imagine a greater contrast. Cars 1111 and 1014 are seen at Loftus in 2000. Dale Budd



No. 1014 was donated to the Sydney Tramway Museum in 1986 it seemed that only it and No. 1006 had a secure future. Soon eight of the original ten cars in the class (Nos 1012 and 1013 were disposed of in 1982) will be in operation.

The rehabilitation of all these trams will be undertaken by Brookville Equipment Corporation of Pennsylvania. The same company was awarded a \$US1.88 million contract earlier this year to restore Muni's car No. 1, built in 1912. As a result this car, the first publicly-owned tram in America, will be restored alongside the last PCC. No. 1 will return to San Francisco in 2010. Perhaps best news of all, it and other cars will enjoy covered storage as a result of a long-awaited new building project about to be undertaken at the Geneva yard.

- from *Inside Track*, newsletter of the Market Street Railway, with additional information.

Cleveland USA – Lake Shore Electric Railway auction

Gerald Brookins, who was involved in the mobile home business and whose holdings included Columbia Mobile Homes Park in Olmsted Township, southwest of Cleveland, Ohio, had a long-time interest in trolley and streetcar transportation.

In 1954 he began a museum, purchasing interurban and trolley cars as lines were closed and placing them near Columbia Park. Brookins travelled worldwide, including to Switzerland, England, and Mexico, to collect about 30 trams and interurban cars. The museum was known as the Gerald E. Brookins Museum of Electric Railways and traded as Trolleyville USA.

A 3 1/2 mile working streetcar line, called the Columbia Park and Southwestern, operated on a route through the Columbia Trailer Park. The line also had a

Vera Cruz 9 and Aurora, Elgin & Fox River Electric 303 are seen from the mobile home park which the tramway served.

George J Becker



practical side: it transported trailer park residents to an on-site shopping centre. Brookins died in 1983 and his grandson, Mark Brookins, became the chief proprietor of Trolleyville, USA.

In June 2001, the Brookins family sold the Columbia Mobile Homes Park. The terms of the sale did not include Trolleyville USA, and the museum was given five years to find a new location.

The former Trolleyville USA museum closed down in 2005. At that time organisers sought to relocate the museum's collection of 31 trolley cars. In 2006 the collection was moved to a warehouse at Dock 32 of the Port of Cleveland, which is owned by the city's governing body. The museum was renamed the Lake Shore Electric Railway to honour an interurban company from the early 20th century. In 2007 work on constructing a new car barn started at the new location.

The plans for a new museum never materialised. The economic downturn and mounting debt forced it to cease operations. In early 2009 it was announced that the rail cars would be auctioned off. Thirty-one cars were auctioned off to ten museums on 2 October 2009 in a sealed-bid auction for the collection of streetcars and interurbans.

The ten museums, including Illinois Railway Museum (IRM) and the Fox River Trolley Museum, represented a consortium assembled by Shore Line Trolley Museum President Bill Wall.

IRM General Manager Nick Kallas travelled to Cleveland for the opening of the bids, the only railway museum executive to do so. IRM obtained six cars including Veracruz, Mexico open car 19, a type of car not represented until now in the IRM collection. A slight problem faced by IRM is the need to suddenly find room for six new cars, a stretch even for IRM,

which is just completing construction of another car barn.

Fox River Trolley Museum is equally elated. Not only did it obtain another CA&E car, No. 458 (St. Louis, 1945), it obtained an interurban that was built for its own railroad, Aurora, Elgin & Fox River Electric (AE&FRE, later Shaker Heights Rapid Transit), car 304.

Cars from the Trolleyville USA collection will be dispersed to museums in the Chicago area are as follows:

Illinois Railway Museum:

Cooperativa de Transportes Urbanos y Suburbanos (Veracruz, Mexico) open car 19, Chicago, Aurora & Elgin wood car 36 (Stephenson, 1902), Chicago, Aurora & Elgin wood car 319 (Jewett, 1914), Chicago, Aurora & Elgin steel car 409 (Pullman, 1923), Chicago, Aurora & Elgin steel car 451 (St. Louis, 1945), and Chicago, Aurora & Elgin steel car 460 (St. Louis, 1945).

Fox River Trolley Museum:

Aurora, Elgin & Fox River Electric 304 (St. Louis, 1923), and Chicago, Aurora & Elgin Steel Car 458 (St. Louis, 1945).

The cars dispersed to museums outside the Chicago area are as follows:

National Capital Trolley Museum:

Blackpool 'Boat Car' 606, Toronto PCC 3602 and MBTA PCC 3334.

Pennsylvania Trolley Museum:

Cincinnati Street Railway 2227, Toledo Railways. parlour car 'Toledo' and Centerville, Albion & Southern Railway box motor 100.



Aurora, Elgin & Fox River 304 outside the former Baltimore & Ohio Railway station relocated from Berea, Ohio to Brookins' property at Olmstead Township.

George J Becker



Vera Cruz single truck car 9 was built by JG Brill in 1908 and is going to the Illinois Railway Museum. George J Becker

Northern Ohio Railway Museum:

Aurora, Elgin & Fox River Electric 303, Cleveland Peter Witt 1225, Cleveland Transit System Airporter car 172, Northern Ohio Traction & Light Co. (later Shaker Heights and GCRTA) box motor OX, and Norfolk & Western caboose 508021.

Seashore Trolley Museum:

Cleveland Railways Peter Witt trailer 2365 and Cleveland Transit System 'Bluebird' rapid transit car 113.

Connecticut Trolley Museum:

Chicago Aurora & Elgin 303, Centerville, Albion & Southern Railway line car 1, Centerville, Albion & Southern Railway box motor 101, and New York, Ontario & Western caboose 8146.

Electric City Trolley Museum, Scranton, Pennsylvania:

Chicago, Aurora & Elgin 453, and Shaker Heights PCC cars 63, 71 and 76.

Fort Smith (Arkansas) Trolley Museum:

Cooperativa de Transportes Urbanos y Suburbanos (Veracruz) open car 9.

New York Museum of Transportation:

one unpowered line car.

Terms of the deal require the museums to remove the cars from Cleveland by the end of the year.

COTMA

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA

PO Box 61, Carlton South, Victoria 3053

www.cotma.org.au

From Warren Doubleday

Preparations are well advanced for the next COTMA conference which will commence in Wellington on Thursday, 16 September 2010. Information on the 2010 conference, including the preliminary program, can be found by clicking on the 'conference' tab on the COTMA website, www.cotma.org.au.

Organisation of the 2010 conference is being led by Bryce Pender of the Wellington Tramway Museum which is hosting the event. In the lead up to the

conference, a self-organised tour of Christchurch will be suggested. After the conference, provision will be made for a tour to Wanganui, New Plymouth and Auckland. We suggest you put aside two weeks in September for the conference and the tours. For further information or to register an expression of interest, readers are encouraged to e-mail Bryce on cotma2010@paradise.net.nz or write to the Wellington Tramway Museum, PO Box 2612, Wellington 6140, New Zealand.

BALLARAT

BALLARAT TRAMWAY MUSEUM

PO Box 632, Ballarat, Victoria 3353

www.btm.org.au

From Dave Macartney and Warren Doubleday

Accreditation

The Museum was formally advised on 30 June 2009 that after two and half year's work we would be accredited as a Rail Infrastructure Manager and Rolling Stock Operator under the Victorian Rail Safety Act 2006.

Tram operations

The month of August saw two trams returned to service: No. 14 on the 2nd after an absence of some years because of wheel profile and motor problems; and No. 671 on the 22nd after a repaint into black and white livery for Pipers by the Lake Restaurant. Both are now appearing regularly in service. A new shade of grey was used to paint the floor of 671, with enough paint remaining to deal with 661 as well.

As a result of the return of No. 14 to service, all the SEC single truck trams in the depot are currently in service, though running of No. 18 is limited due to the condition of its wheels. Maximum traction tram No. 38 remains on jacks while its trucks and wheels are overhauled. The St Kilda Tramway Museum is well advanced in turning the wheels for No. 38 and we plan to start re-assembling the truck early in 2010.

The July school holiday fortnight, usually the weakest of the year, saw 542 passengers carried, while the slightly warmer September fortnight yielded 649 passengers. The weekend running over the winter period was typically quiet.

Museum news

At the depot, work commenced in earnest on ESCo crossbench car No. 22. The first task was to remove all non-tramway additions which had appeared over the years. Most of these had been nailed into place, and great care was necessary to remove them without inflicting any further damage to the original fabric. The pillars along the side of the car which faced the prevailing weather require major rectification, while the side which faced the house survived in excellent condition.

The car was built by Duncan and Fraser, Adelaide in 1913, as were the PMTT bogie trams, and the seats from No. 39 should be adaptable to 22 with some modifications.

The area above the museum display car, No. 39, has been adapted for storage, and is being used to store any parts from No. 22 that are not required at this time.



Interior of No. 22, showing some of its surviving features.
Warren Doubleday

Close up view of the weather blinds in ESCo 22 showing their remarkably good condition given that the tram was sold in the early 1930s.

Warren Doubleday



Three vintage SEC era roof advertising signs were used to enclose the area.

The museum display precinct continues to take shape slowly. On 21 September the video program for visitors was updated to DVD format, giving a much better quality picture for visitors than the video, which was showing its age.

Some years ago one of the four metal A-frame tram ride signs was stolen from the Parade. On 21 August it turned up again, and was found leaning against the front of the shed when the staff arrived. Since the other three signs of this type have since been withdrawn, it turned out to be a rather hollow victory.

The Museum has received a number of grants from various organisations recently:

- Victorian Government – Department of Planning and Community Development – \$3,570 to assist in training and rolling out our Operational and Safety Procedures;
- RegionalOne Credit Union Community Grant - \$1,999 – for upgrading the Archives PC systems;
- Australian Government - Department of the Environment, Water, Heritage and the Arts Grant – \$2,300 received under the Voluntary Environment and Heritage Organisations program;
- Ballarat Foundation – Telstra Country Wide Ballarat Community Fund – \$3,900 for a touch screen and other electronic PC gear for the display area.
- City of Ballarat – \$1,627 for a chemical storage unit and an eyewash.

We thank these organisations for their support.



Interior of ESKo 22: after the big clean out we found that the pull down blinds, except for the lower 400mm or so, were still intact and working.

Warren Doubleday

Lake Wendouree

Our surrounding environment is constantly changing. The ongoing drought has seen many of the trees around the depot area and along Wendouree Parade removed or severely trimmed. Many trees in the Gardens and in the Ballarat area are suffering. The Council has been planting new trees including avenues and clusters to the south of the depot. On the water front, Lake Wendouree, one of Ballarat's most important tourist attractions, is filling again, this time with the assistance of recycled water mixed with storm water inflows. In her press statement, the Mayor, Judy Verlin, said "Ballarat can get back to being a garden city again".



No. 14 on its test trip at St Aidans Drive, with a very empty Lake Wendouree in the background, on 1 August 2009.

Alan Snowball

BENDIGO

BENDIGO TRAMWAYS

1 Tramways Avenue, Bendigo, Victoria 3550

www.bendigotramways.com

From Len Millar

It's birthday time again

To remind Bendigonians about the contribution we make to employment and tourism in the local community, we like to make a bit of a splash on the occasion of our birthday each December. No longer content with parking a convoy of trams in Pall Mall for a few hours, we have graduated to providing an augmented service using some of the more retiring members of our fleet. With lots of trams stored off-site while the City Depot gets its make-over, the choice this year will be a little limited – meaning the cars seen in the street this year might be distinctly unusual!

Centenary of the Prahran & Malvern Tramways Trust

Next year, 2010, will be a grand year for electric trams in Melbourne. It will be 100 years since the PMTT began plying the streets of the inner eastern suburbs. Plans are afoot to celebrate this milestone event in style, and two of Bendigo's trams will be centre stage.

California combination-style single truck 84 (formerly SECV car 16), will be transported to Malvern Depot, the home of the PMTT. It will be positioned there alongside No. 44, one of the Trust's maximum traction bogie cars.

These two Bendigo trams will be the centre of the centenary festivities. In preparation for its journey south, 84 has been moved into the workshop where the body will be stripped, cleaned and painted in PMTT chocolate and cream, just like sister car 44.

For a tram that has been out of use for four decades, 84 is in remarkably good condition. On the truck, the brake hanger 'balls' are still round, there are no broken springs and there is no evidence of tyre shedding. It appears that the body received some bracing by the SECV back in the 1960s. So we are hopeful 84 will be good for a few more decades, after being a star attraction at Malvern.

Through the excellent awareness and fundraising effort of Malvern Depot stalwart, Ron Scholten, the funding appeal is looking good, and we tactfully remind readers that donations over \$2 are tax deductible, with cheques payable to The Bendigo Trust Museum Fund.

Rollingstock

Sliding door car SW6 880 has received some attention over recent months. The interior painting and varnishing is complete, and the seats, standee hangers and grab-rails will be installed shortly. The exterior has



The dot matrix destination display fitted to car 34.

Bendigo Tramways

SW6 class 880 receives attention in our workshop.

Bendigo Tramways



Bendigo 16 is being restored to its former appearance as PMTT 84.

Bendigo Tramways



Bendigo 16 will take its place next year in the celebration of the centenary of the PMTT.

Bendigo Tramways



Bendigo 35, formerly Melbourne W2 470, being loaded for transport to its new home at Cobram in northern Victoria.

Bendigo Tramways

been undercoated and the top coats will soon be applied. The livery is not yet decided, with our marketing section currently looking for a commercial sponsor.

SW5 808, one of our regular service cars, received a pair of reconditioned MMTB No.15 trucks recently, with the result that the tram has a much steadier ride. The side-to-side rolling that crews came to know and love has gone for good!

Bendigo Tramways is pleased to be attracting attention as a finishing school for people in the region who have trade skills and experience, and are looking for good permanent jobs locally. The problem is that we keep losing them to other employers and are constantly repeating our induction and occupational health and safety courses for each round of new starters. Despite this minor problem, work on Birney 302 is progressing well because of the skills of our ever-changing team of artisans. The pneumatic folding doors have been refurbished, and window sash and other internal fittings are being refitted to the car. The truck has also been overhauled.

We are currently trialling new destination signs on car 34, one of our Melbourne W series trams. At the flick of a toggle switch or button the former Melbourne Z3 style indicator at one end quietly rolls to its new destination, while at the other end of the car, the dot matrix flicks to its new sign.

As reported in the February issue of *Trolley Wire*, the body of Melbourne W2 470, which ran in Bendigo as No. 35, was ear-marked for disposal. No. 35 departed for Cobram on the Murray River with the proud new owner proposing to establish a bar and other facilities in the car. It is good to see that 35 has gone to a good home, and that new owner is keen to use and preserve it.

We have two new drivers

Recently graduated from the hands of our Driver Trainer and Examining Officer Mick McGowan, are George Morrison and Peter Black. George has a most distinguished beard and we are grooming him for Santa Tram duties in late December. Peter was previously employed by Qantas.

Depot display area and souvenir shop

Our display area has recently had a theme change. We now have 'Treasures from the Bendigo Tramways Archives', featuring many old brochures, photographs, plans and maps from earlier operators as well as some of the Trust's early publicity material. The interactive W2 and Z1 control desks are still popular especially with younger visitors. Tinned shortbread, featuring a couple of our trams including Y1 610, has proved to be a popular line with visitors to the shop.



Tramway Superintendent Darren Hutchesson discusses our preservation efforts with US Consul General Michael Thurston whilst riding a Birney car.

Bendigo Tramways



The updated display area outside our depot shop.

Bendigo Tramways

Visit by US Consul General

On 1 September, the Bendigo Trust was honoured to welcome the US Consul General, Michael Thurston.

He visited the Central Deborah Gold Mine, then enjoyed a tram ride, on a Birney of course, to Bull

Street in the city, followed by a short walk up to the imposing Town Hall.

Darren Hutchesson was on hand to explain our preservation and tourism niches in the rich tapestry of Bendigo's life. Local media extensively featured Mr Thurston's visit.

HADDON

MELBOURNE TRAMCAR PRESERVATION ASSOCIATION
PO Box 324, Prahran, Victoria 3181 www.railpage.org.au/mpta

From Kym Smith

Annual General Meeting

The 26th Annual General Meeting was held at the Haddon museum site on 19 September 2009. For the first time in a number of years, an election was necessary as there were more nominations than vacant positions. The final results after the ballot were:

President	Anthony Smith
Vice President	John Withers
Secretary	Jacqui Smith
Treasurer	Lindsay Bounds
Committee Persons	Mandy Gipps
	Arthur Ireland
	Kym Smith

W3 663

Through the generosity of a number of members, sufficient funds have been raised to allow W3 663 to be sent to Bendigo for refurbishment of its roof. The plywood roof on 663 has failed in a number of spots, resulting in the plywood starting to de-laminate. This deterioration is primarily due to age but the tram's

W3 663 sits on the Car barn fan as while its interior is dismantled. Note the cracks visible in the roof; the cracks are the edges of the plywood sheets that have delaminated.

Anthony Smith





W3 663 during the removal of its seats and other internal fittings.
Anthony Smith

condition was not helped by its outside storage at Brunswick Depot before disposal and the short period it spent in the open at Haddon prior to construction of the Car barn.

As the intention is to restore 663 to near original condition with varnished ceilings, the decision was made to reconstruct the roof as this also eliminates the liberal coating of Colorflek paint sprayed over the original ceiling. At this stage the project in Bendigo will only involve the repairs to the roof and ceiling structure, with the remaining restoration work being undertaken by members on its return to Haddon.

Prior to its transfer, members removed interior fittings from the tram to reduce the amount of work required in Bendigo. These interior beadings, seats, internal doors and other fittings will be cleaned and revarnished concurrently with the work in Bendigo so that they are ready for re-installation on 663's return to Haddon. At the time of writing it was expected that

663 will be moved to Bendigo in late October, and photographs of the move will appear in the February 2010 issue of *Trolley Wire*.



The Car barn curve after removal of all the rails.
Jacqui Smith



Frank Schroeders tows away one of the rails from the Car barn curve for stacking near the Upper Terminus.

Jacqui Smith



The Franna crane makes light work of moving a No. 15 truck from the main line to the storage container.
Jacqui Smith

The hard work comes when the truck has to be pushed to the other end of the container; as Anthony Smith, Frank Schroeders and Daniel Edwards found out.
Jacqui Smith

Trackwork

The rail and checkrail for the curve behind the Car barn has been sent to Yarra Trams for rolling to the correct curvature. Kym Smith prepared a submission to the CEO of Yarra Trams to request assistance with the project, and we were delighted when Dennis Cliche personally approved the work. Prior to the rail being despatched to E-Gate, Yarra Trams staff visited the museum to inspect the curve and to determine the requirements for completing it. The Association thanks Dennis and Yarra Trams for their assistance with this project.

Spare parts trams

Dismantling work on SW6 901 and SW5 843 has now been completed, and the parts from these trams have been either stored or transferred for use on 849.

The lined and fenced loft over road 1 that will be used for the storage of smaller timber components.

Anthony Smith



Site works

A number of the Association's spare trucks were relocated into our shipping containers during April and May. All significant spare trucks and several examples of other trucks are now securely stored under cover to protect them from the weather.

The loft area in Road 1 of the Workshop has been insulated and lined to allow it to be used for the storage of smaller timber components. Handrails and kickboards have also been added to improve safety in the loft.

The overhead network over the fan on roads 1 and 2 has now been fully rebuilt, aligned and raised to the required height. Two new trolley wire terminations were purchased from Austbreck to ensure a neat finish for the trolley wire against the front of the Workshop. This work completes our rebuilding of the overhead between the Upper Terminus and pole 9. Our next overhead project will be to rebuild the overhead network over the curve behind the Car barn after the rails are re-laid.

The Committee resolved at its September meeting to scale back the indicator lantern system to include only



Kym Smith installs the new anchoring spans for roads 1 and 2
Anthony Smith

the level crossing lights and the automatic points functions for the Lower Terminus. Problems with point detection of the Carbar points had made the system unreliable and inoperable. The decision was therefore made to simplify it and to commence the change process to update our rules to reflect line-of-sight operation as the primary process rather than its current use as a defect process. Redundant lanterns have now been disconnected and removed to minimise



One of the new terminations to the Workshop frontage.
Anthony Smith



The completed overhead network and trolley wires over roads 1 and 2.

Anthony Smith



The two drop-centre panels from 809 being installed to form the side walls for the upgraded entertainment area.

Jacqui Smith

Kym Smith prepares the overhead frog for sending to Loftus for use on the Cross Street curve.

Anthony Smith

confusion. The wash plant was also decommissioned as it is no longer used due to water restrictions.

On a more positive note, we are rebuilding our entertainment and barbecue area to make it more weather resistant. Drop-centre panel sections from SW5 809 have been used to form walls and doorways in the previously open shelter, and the former brick barbeque has been removed and replaced by a portable unit. Tiling and clear weather blinds, and a final coat of paint are still required to complete the project.

Accreditation

The MTPA successfully completed its transition to accreditation under the Rail Safety Act (Vic) 2006 and received its new notice of accreditation for commencement on 1 July 2009. Revision 2.2 of our SMS was introduced on 28 June, ensuring that there are no outstanding or ongoing compliance matters from the reaccreditation process conducted by the Regulator.



Assistance to the Sydney Tramway Museum

A request was received from the Sydney Tramway Museum for a right-hand overhead frog for use on the Cross Street connecting curve at Loftus. A suitable frog was assembled from parts, cleaned and machined to the correct profile, then packaged and sent to Loftus.

PORTLAND

PORTLAND CABLE TRAMS INC.

2A Bentinck Street, Portland, Victoria 3305

www.portlandcabletrams.com.au

From Alan Rees

Wade Street track relocation

The Anderson Point cliff face at the northern end of our track, where our RSL water tower terminus is in close proximity, has been collapsing for a number of years. In September 2008 a 10 metre exclusion zone was placed on the area by the Department of Sustainability and Environment.

This resulted in our shunt being cut in half and we were unable to reverse the complete tram set as one unit. For the last 12 months, we have been detaching the saloon car from the grip car and shunting the grip car around the saloon car, before re-attaching the tram set for the return journey.

Numerous meetings were held involving Portland Cable Trams, Glenelg Shire Council, the Department of Sustainability and Environment and Regional Development Victoria, before and after enforcement of the exclusion zone. After these meetings funds were raised to enable Portland Cable Trams to move the shunt away from the cliff face to Hanlon Parade on the west side of the water tower, approximately 100 metres from its original location.

Relocation activity commenced on 9 September 2009 and was completed on schedule on 18 September. Puffing Billy personnel led by John Shaw performed the track work and GM Carr Pty Ltd. carried out the excavation of the area.



The Wade Street terminus track being lifted on 9 September.
Portland Cable Trams

Portland Cable Trams volunteers Denis King, Lou McKay, Ben Rietman and Daryl Alexander assisted the Puffing Billy workers and gave their time freely from start to finish.

The finished product was inspected and approved by Rolf Jinks of TRAM Engineering Services.

The relocation cost \$93,000 in total and this amount was funded by the following organisations:

•Department of Sustainability and Environment	\$50,000
•Regional Development Victoria	\$32,000 (grant)
•Portland Cable Trams Inc.	\$6,000
•Glenelg Shire Council	\$5,000

Testing of the track using PCT001 and saloon car 95 was performed on 19 September after the track was cleaned and serviced. The testing was completed without incident.

Many thanks to John Shaw and his men who did a tremendous job in very poor weather at times, and to the volunteers who worked tirelessly throughout the relocation process.

This project was great news for Portland Cable Trams. The future of the organisation was clouded by the cliff slippage, and this threat has now been removed.

Grip car PCT002

After much angst, it would seem that we are finally getting on top of the problems that have beset this grip car since it was accredited just over twelve months ago.



A view facing north from Bentinck Street into Wade Street of the new curved section of track.
Portland Cable Trams

The new curve from Wade Street into Bentinck Street, looking west.
Portland Cable Trams



The main problem has been the hydraulic system overheating, causing the tram to become defective.

With the help of Kempe Hydraulics and Rexroth a new cooling system has been installed. A larger hydraulic pump supplied by Rexroth has been fitted and a stronger grade of hydraulic fluid is being used.

Initial testing has been encouraging and it is anticipated that we will be able to place PCT002 in regular service shortly.

Saloon car 171

Winton Foundries of Ballarat are currently making four new wheels for saloon car 171. The four wheels will cost around \$8,500 when completed.

New toilets

As reported in the August/September edition of *Trolley Wire*, the new depot toilets have been completed. This will relieve congestion when we have a tour bus with 40 or more people on board, and all requiring to use the toilets at the same time.

Ben Rietman and Bill Gregory performed the building work and external plumbers did the rest. Many thanks to Ben and Bill for the many hours they put in.

The new track is nearing completion under the supervision of John Shaw from Puffing Billy. Grip car PTC001 and saloon trailer 171 are making a test run over the new track. Portland Cable Trams



FERNY GROVE

BRISBANE TRAMWAY MUSEUM SOCIETY

PO Box 94, Ferny Hills, Queensland 4055

www.brisbanetramwaymuseum.org

From Peter Hyde

Our main achievement in the past 12 months has been to resume some form of normal operations after clearing away debris left by the severe thunderstorm that hit Brisbane on 16 November 2008 (see *Trolley Wire* February 2009).

However echoes of the event are still reverberating through the museum. The partly restored substation has given trouble on occasions as components which were thought to have survived succumbed to latent water damage. The 50v DC continuous power supply which operates the 11,000v switchgear is but one example. The replacement unit which was not intended to be used until the new building was erected, was hastily completed by John Lambert. It was then installed in the old building to enable operations to continue.

An unexpected outlay was the expenditure of almost \$1,000 to remove fractured tree branches above the tramway overhead and the picnic tables - a critical area!

In the workshops, FM 400 continues to make progress. It is now starting to look like a tram again as components are re-installed. The external silver paint – notoriously difficult to deal with – has come up wonderfully well, and the blue waistband really sets the scene for completion.

Visitor numbers have steadily recovered after our six-month closure for storm repairs, and trams have been used twice for filming purposes in the last couple of months.



The new battery power supply for operating our 11,000 volt circuit breaker. Peter Hyde



Prototype FM No. 400 shows off its first coat of royal blue paint on the waistband. Peter Hyde



Restoration of prototype FM No. 400 is progressing with external painting almost complete.

Peter Hyde



How many people does it take to film a short advertisement in a tram?

Peter Hyde



Relocating a spare FM bogie frame.

Peter Hyde



Delivery of 11,000 volt cable for the new traction power supply.

Peter Hyde

LOFTUS

SOUTH PACIFIC ELECTRIC RAILWAY CO-OP SOCIETY

PO Box 103, Sutherland, NSW 1499

www.sydneytramway.museum.com.au

From SPER News

Works report

After the removal of the old eastern track beside the Railway Square waiting shed, John Holland's backhoe excavated the road bed and the 'six foot' from near the barbecues north for about 20 metres on 22 August. The spoil was dumped along the TAFE retaining wall with our yellow tipper. This work continued the following Saturday, and a substantial area was prepared for the laying of new track. The first panel of this was then laid using tee rail with bolt-on groove donated by the Powerhouse Museum several years ago.

On 12 September a temporary 'road' of sleepers was laid to allow access for concrete trucks from the Depot Junction end of the work site and concreting commenced.

A new Sydney-style track drain has been provided across the two tracks at the bottom of the grade from the junction to overcome previous drainage issues. South of the drain the road surface will be concreted to rail level while north of the drain the concrete is being left about 40mm below rail level to allow for a future tarred surface.

The second eastern track panel was gauged, welded and concreted while a second panel was set up on the



The museum's Youth Group held an outing in the museum's 1937 vintage Leyland TS2 half-cab 275 on 25 July. The tour retraced the former Manly lines, which closed on 1 October 1939, from The Spit to Manly and Narrabeen, and the branch to Harbord. The photo above was taken at Avalon. After lunch at Manly the tour visited Woolloomooloo, the trolleybus route to Potts Point, Barcom Avenue viaduct and the Watsons Bay line. On return to the museum a barbecue and tram rides completed the day.

David Critchley



Frank Cuddy withdraws the axle bearing on Nagasaki 1054 for inspection.

Mick Duncan



The Brill 27G bogie showing the new turnbuckle, brake beam and blocks, and beam guide to keep them parallel.

Mick Duncan

Sydney awoke to a red dust storm on the morning of 23 September. This is the Museum's street at 7:30am on that day. David Critchley



western track using tie bars and some of the better lengths of grooved rail recovered from the old eastern track. This was followed by a small surplus pour on 17 October. Both tracks needed to be relaid simultaneously to allow access for the concrete trucks, to avoid the need to pay for expensive concrete pumping equipment.

Display hall and YMCA building

A substantial quantity of good second hand Oregon timber was donated by Greg Sutherland. It is being used to frame part of the rear and eastern side interior walls of the display hall to support a wall made of particle board flooring panels. This will be painted ready to receive material from the Museum of Sydney

after the conclusion of its very successful tramway exhibition. Danny Adamopoulos' brother Dominic is carrying out this work.

A CSO bricklayer has completed the partly finished first brick panel forming part of the fire wall between the first floor of the YMCA building and the display hall and will continue with the other panels and the bricking of the stair shafts. Our CSO plumber is setting up the PVC sewer pipes for the toilets on the various floors.

Steel theft

A major setback occurred during the week of 28 September to 2 October when thieves stole all the



Progress on track relaying adjacent to the Railway Square waiting shed as it appeared on 6 September. Richard Jones

remaining Bondi Junction grooved rail and pointwork from along the TAFE wall, as well as the Melbourne cast blade units for the second set of points for the future trailing crossover north of Pitt Street. They also stole more blade units, steel poles and cast iron columns from the storage area near Loftus Junction. Obviously nothing is safe and a full review of security is needed. Heavy equipment must have been used to remove the steelwork. The police attended the site but there is little hope of recovering these materials which may be very difficult and expensive to replace.

Overhead

During a routine line inspection of the overhead, Tim Stuart found two bracket arms on the poles near the pine trees near Loftus Junction had been damaged. The cause has not been identified. Although trolley pole dewirement seemed the obvious cause it may have been something else as the damage to the brackets indicated a major force that certainly would have severely damaged a trolley pole.

Wiring over Road 12 (in the top shed) was installed on 5 September and has been commissioned. Work has continued on the wiring for Cross Street.

Ballast motors 99u and 42s

Ballast motor 99u was lifted in the workshop on 26 August and the No.2 bogie was taken out, enabling the No.3 DK11A traction motor to be re-installed on 29 August.

On 12 September its place was taken by 42s which was lifted on 3 October. Alan, Ian, Peter, Vic, Rainer, Bill and Mick have finished the brake modifications to the 27G trucks for 42s. They fit very nicely and are now compatible with O class and other 33-inch wheel cars.

Terry, Warren and Alan have completed the new drop sides, and have made and fitted the toolbox to 42s. New lifeguard gates have also been made and correctly fitted in place of the makeshift ones previously mounted in the wrong position.

Sydney D 117

Warren Howlett, Terry Thomas and Rainer Nickels have machined and welded new laser cut footboard brackets for D 117. Geoff Spaulding has completed the ceiling lining and work has now started on the outer skin of the main roof. Rod Burling has made excellent progress on sanding back interior woodwork for varnishing and re-fitting bulkhead lining panels and sliding doors.

Ballarat 37

This car was moved out of the paintshop a few weeks ago and transferred to Road 4 pending another move, when space permits, into the workshop. It is here that final repairs and lifting of the tram will take place. A welcome return to service will happen next year.

Sydney OP 1089

The paintshop team have completed the final coats of enamel on the ceiling of this unique tram. Ian and Peter are now concentrating their efforts on restoring the timberwork in the saloon bulkheads. A large amount of this work was carried out many years ago, making the task much simpler. Seats are being removed for repainting whilst the frames are also being worked on to restore the original timber finish.

Given the limitations on our workforce, excellent progress is being made. It is expected that by late next



Liam Brundle and Peter Kahn prepare for the start of the first day of the NSW Branch of the Australian Model Railway Association's 47th annual model railway exhibition, which this year returned to the Whitlam Centre at Liverpool.

Don Campbell

Ballarat 38 was moved out while material from the Museum of Sydney's exhibition was moved into the display hall.

Peter Butler



year the tram will be in a very advanced state of restoration. No. 1089 will be restored to its former olive, fawn and grey scheme, once carried on all Sydney trams before being phased out in favour of the green and cream scheme adopted in 1933.

Donation

The Brisbane Tramway Museum has donated a spare controller for use in Brisbane 180. Ian Hanson was in Brisbane recently, accepted the controller and brought

it back to Sydney. We thank Peter Hyde and members of the BTMS for donating this equipment.

Road vehicles

AEC double deck bus 2619 has had some of the aluminium sheeting re-riveted while further frame repairs and re-construction of the back platform continues. Bedford tower wagon No. 3 again attended Eastern Creek for display on 23 August along with vintage buses from the HCVA.

Cable trailer 23 is unloaded at the museum after being on display in Bridge Street outside the Museum of Sydney.

Mick Duncan



ST KILDA

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

From Colin Seymour

E type tram 118

New member Robert Hayes has joined the Friday work team, his first task being the restoration of the headlights of car 118 and Adelaide A type car 15. Meanwhile, after some experimentation on an ideal spread of resistances for smooth acceleration, the bank of resistors have been removed from their temporary location in the saloon and bolted up in their permanent position under the car. The lifeguards, after some modification to clear the 22E trucks, have been fitted, together with the handrails and the 'dog-guard' fencing under the side frames of the car.

Restaurant tram 378

A troublesome fuse-holder on the low voltage circuit which had caused intermittent problems with the saloon lights has been replaced with a circuit breaker. While the batteries were out of the battery box, the opportunity was taken to wire in a connection for an external battery charger. This avoids the need to have the noisy, temperamental motor-alternator set running to recharge the batteries.

E type tram 111

Lately the controller at the No. 1 end of car 111 has tended to seize at notch 2/3. Andrew Gilbertson carried out a full maintenance check of both controllers on the car and the problem was soon overcome.

Tram maintenance

Mike Crabb has taken over car maintenance while Ian Seymour is busy re-profiling wheels on the wheel lathe. Robert Hayes and William Adams have been assisting Mike with servicing.

Trackwork

A trackwork day was held on 1 August attended by Jack Pennack, Ian Seymour and Andrew Gilbertson. We were joined by Steve Gordon and Greg Mayman from the National Railway Museum, Port Adelaide, who lent their considerable trackwork experience to our efforts. Together we managed to repair the loop, which is now back in service, and also to replace six sleepers on Road 7 to the southern shed.

A further trackwork day was held at St Kilda on 12 September. Mike Bosworth, Jack Pennack, Ian Seymour and Andrew Gilbertson, along with visitor Rob Hayes, finished repairs to the recently recommissioned loop and inserted four new sleepers on the main line around pole 25. An inspection was then undertaken which saw a further 40-odd sleepers marked for replacement.

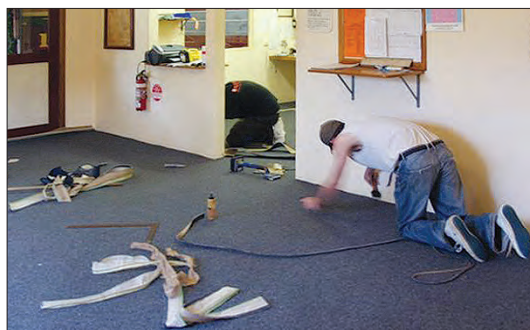
Display gallery refurbishment

Work has been proceeding steadily on the refurbishment of the visitor entrance/display gallery. Painting has now been completed and has greatly



Carpet was laid in the display gallery/bookshop on 31 July.
 Chris Summers

Carpet laying continued in the members lounge and museum office on 31 July.
 Chris Summers





Greg Mayman, Ian Seymour, Jack Pennack and Steve Gordon repairing the loop track on 1 August. W2 354 is in the right of the picture.

Andrew Gilbertson

brightened the gallery. New carpet has been laid throughout and a new air conditioning system installed. A fairly new commercial drinks fridge has been purchased and new postcard racks have been supplied by Steve McNicol.

Completion of this refurbishment involves the installation of a window on the eastern side of the building, and of the new display material which is presently being prepared. Our hard working gallery staff have passed comment on how inviting the new upgraded facilities appear and how pleasant they are to work in. Many thanks must go to Jack Pennack who has led the way on this timely revitalisation of the 'front door' of the Museum and the people who have assisted him – Maureen Parker, Chris Summers, Mike Bosworth and Peter Letherby.

Displays, archives and website upgrade

Work on upgrading the Museum's displays is at present centred on the horse tram era. A large amount

of research has been undertaken by David Williams, Ron White and John Radcliffe, ensuring that details are correct and the best pictures available are used. We are at present awaiting the proofs from Port Signs of the layout for final checking prior to manufacture of the displays.

John Radcliffe and Christopher Steele have been working on recording the Museum's archives. This task is a huge undertaking and needs to be completed to ensure the Museum receives its History Trust re-accreditation.

The Museum's website is also about to undergo a further upgrade. Priority is being given to installing an online commercial facility which was overlooked at the initial construction of the new website. The new horse tram displays will also be uploaded onto the site once they are signed off. It is envisaged that an expanded and upgraded section on Adelaide trolley buses will also be uploaded. The Museum is most

Loop repairs completed! Soon it will be back onto works tram 354 and off to the next job at St Kilda on 12 September.

Andrew Gilbertson





Ian Seymour, Mike Bosworth, Jack Pennack and visitor Rob Hayes hard at work backfilling around the repairs to Mangrove Loop on 12 September.

Andrew Gilbertson

appreciative of the work Colin Seymour and Karl Stimm have undertaken on this major communication tool for the Museum.

Training

It is pleasing to note that our traffic staff is about to gain some extra faces. On the driving side Mike Crabb has completed his 'not-in-service' training and now has only three 'in-service' days to complete to become a fully fledged driver. Andrew Gilbertson and Andrew Hall have had their qualifications with kindred museums recognised and only have to complete the three 'in-service' days to become drivers. New member William Adams is also at present completing his conductor and fiscal training.

We welcome these people and congratulate them on completing these courses and giving even greater

commitment to the Museum. Even more pleasing, is the fact that both Andrew Gilbertson and William Adams are under twenty-five.

Motor homes visit

The CMCA Adelaide Wanderers motor homes club spent a weekend at the Museum from 16 to 19 July 2009. (CMCA stands for Campervan and Motorhome Club of Australia.) Seventeen motor homes were in attendance and members had open access to the Museum. On the Friday, the tram ride down and back to the Mangrove boardwalk was very welcome, and the wander through the mangrove forest was interesting. The ride in the restaurant car on the Saturday was a highlight when the visitors were transported from the Museum to the St Kilda Beach Hotel for lunch. The event was well organised by Kevin and Marilyn Collins.



Members of the CMCA Adelaide Wanderers caravan club around the camp fire at St Kilda in July.

Kevin & Marilyn Collins

WHITEMAN PARK

PERTH ELECTRIC TRAMWAY SOCIETY (INC)

PO Box 257, Mount Lawley, Western Australia 6929

<http://pets.railpage.org.au/pets10.html>

From Michael Stukely

Annual General Meeting

The twenty-eighth Annual General Meeting of the Perth Electric Tramway Society was held in the theatre at the Public Transport Centre, East Perth, on Friday 31 July. The following Officers and Councillors were elected: President, Michael Stukely; Vice-President, David Brown; Secretary, Robert Pearce; Treasurer, Tony Kelly; Membership Secretary, Beth Kelly; Councillors, Ric Francis, Les Hunt and Frank Edwards.

Some highlights and key results from the Annual Report are given below.

During the 12 months to 31 March 2009, six trams travelled a total of 10,185 km on 233 running days. These totals were lower than the 2007-2008 figures (10,315 km on 245 days). Distances travelled by the trams were:

Fremantle No. 29	614 km
Melbourne W2 No. 329	1,605
Melbourne W2 No. 393	569
Melbourne SW2 No. 426	664
Melbourne W2 No. 441	2,036
Melbourne W7 No. 1017	4,697



One end of B 43 as first seen in May 2009, showing the gabled roof that protected it so well. The weatherboard lean-to structure at right contains a cupboard opening into the end platform, where a sink was installed. Plumbing can be seen on the car apron.

Tony Kelly

A total of 21,662 ticketed passengers were carried, which was lower than the previous year.

Society membership fell a little to 107 at 31 March, from the all-time high total of 111 the previous year. The number of members contributing voluntary work for the Society at the Park during the year rose to 55. There was an increase of over 27% in the total hours worked by members for the year; this follows the spectacular 30% increase recorded in 2007-08. Wednesday workdays continue to be the key time for Society work to be carried out, with sustained high attendances being recorded. Weekend workdays again attracted nowhere near as many members. The recently developed working structure comprising the Operations Group Committee, Restoration Group Committee and Traffic Management Committee has continued to function very efficiently and well, in conjunction with the Society's Council.

A surprising new acquisition – Perth B 43

The body of 104-year-old single-truck WAGT (Perth) B class tram No. 43 has been added to the Society's collection. No. 43 was one of the batch of five arch-roof cars (Nos. 41-45) built in 1905 by the Westralia Ironworks in North Fremantle. The body is in outstanding condition, and is significantly better than No. 46 (Westralia Ironworks, 1907) which was our leading candidate B car for restoration to operating condition. No. 43 had been kept under cover and very well hidden in a backyard in Leslie Street, Mandurah, since its disposal by the WAGT in 1951. It arrived at Whiteman Park on 26 July 2009.

We received advice of the exact location of the tram body from Graham Lees (who has subsequently joined PETS) early in 2009. Vague reports of an unknown tram body in Mandurah had been heard earlier, but could not be followed up. We had expected that it would probably be another of the car bodies removed in 1979 from the Beam Caravan Park at the beach in Mandurah (Perth B class No. 15 was moved from there to new owners in Kelmscott and later Armadale, from where PETS acquired it, whilst Perth E class No. 64 and Fremantle 14, also in our collection, were acquired directly from the caravan park).

In May, Bob Pearce and Tony Kelly travelled to Mandurah to inspect the tram, and received a wonderful surprise – truly one of those unforgettable moments. The body was fully protected by a free-standing gabled roof with good overhang, its lower sides had been enclosed with sheeting and louvres had been fitted to some of the unglazed centre saloon windows. These treatments and additions (internal as well as external) were substantially different from those typical of the cars formerly in the Beam caravan park, and this tram clearly had not been there. This excellent weather protection appears to have been added soon after the tram arrived in 1951, when it became the first residence on the block.

Bob and Tony closely inspected the tram inside and out, as well as beneath, and its structure was found to be in remarkably sound condition. Only one portion of one saloon bulkhead had been removed; otherwise the body was intact. Surprisingly, the body was supported mostly by large jarrah logs, well placed at the ends of the saloon; the local termites were clearly active in these logs, but sheets of metal placed between the logs and the tram's beams as white ant caps had prevented them from attacking the tram! Rubbing back the paint on one apron revealed the WAGT fleet number 43, together with the red border of the post-World War II WAGT green livery. The outline of the red diamond of the earlier livery could also be discerned on the apron. Our interest in acquiring the tram was made known to the owner, who was receptive to the plan.

However, the tram was located near the fence at the far end of the block, behind a brick house, and not accessible from the sides of the house or from neighbouring properties. Its removal would be difficult.



The body of Perth B class single-truck tram No. 43 as first seen by PETS members Bob Pearce and Tony Kelly in May 2009. This backyard shed might not rate a second glance, were it not for that tell-tale bumper bar showing at lower left. The arched tops of the saloon windows are hidden by the overhanging roof.

Tony Kelly

Over the next few weeks, decisions regarding the possible sale of the property were being made by the owner. The option of retaining the tram on the site was now increasingly favoured by the owner, as it concealed the back fence which was in poor condition. To our dismay, the protective iron roof along with the tram's original roof catwalk was suddenly removed, and a coat of paint applied to the aged canvas roof of the car, which was now to be left in the open, uncovered, at the start of winter! We had to act fast to save the tram. Rapid negotiations were carried out by Bob Pearce, and to our great relief, agreement was reached in June that we could have the tram following reimbursement of the owner's costs for the recent 'improvements', and we would replace the rear fence



After the removal of the gabled roof, the side sheeting and the lean-to structures, the shed has been transformed into a tram in late July. The four glazed saloon windows are clearly visible, also the jarrah log support complete with white ant cap metal sheet at the near corner.

Tony Kelly

and dispose of the rubbish after removing the sheeting and other added items from the tram.

Further visits were made to the site to check details and make plans for the move. Arrangements were put in place for a 200 tonne crane (to give the necessary 48 metre reach from the street to the rear of the block) to lift the tram in one manoeuvre over the house to the street where a semi-trailer would be waiting, and for



The 'flying tram' in Leslie Street, Mandurah on 26 July. B 43 is lifted high over the house from the far end of the block to the street in one manoeuvre by the 200 tonne crane, for loading onto the semi-trailer for the move to Perth. Graham Lees

B 43 on its way to Whiteman Park on 26 July. Tony Kelly

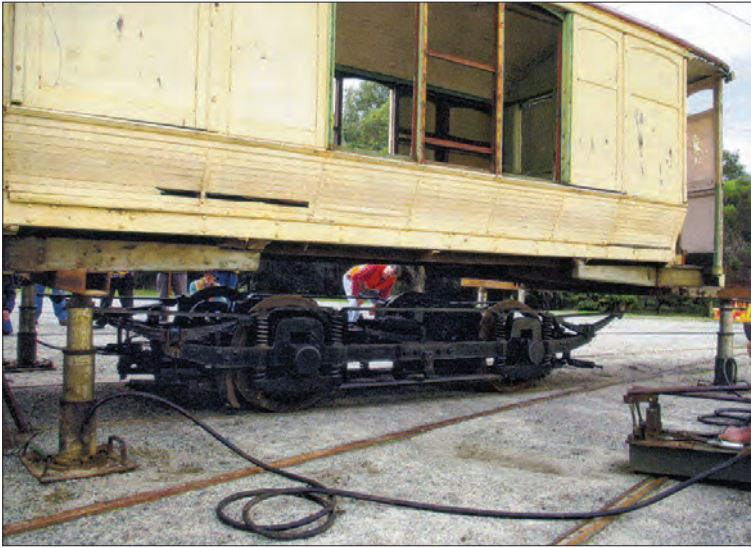
the street to be closed to all but local traffic for several hours on the morning of Sunday 26 July. All of this amounted to a very expensive exercise, but was well worth it, we believe.

On 18 July, Bryan Adcock and Jack Kendall travelled to Mandurah and stripped the added external sheeting from the tram, as well as the cupboards installed in three of the four end platform entrances in separately-roofed weatherboard lean-to structures, and the added false floor from one end platform. Electrical wiring for lighting and power was disconnected, and a sink and plumbing removed from one end. The work was completed on 25 July by Tony Kelly, with the removal of the false floor from the other cab along with the sheeting that lined the interior of the saloon walls and windows, and the louvre windows from the saloon sides. This further revealed the excellent condition of the car's structural timbers, and a further surprise – five original weather blinds still fitted in the unglazed centre saloon windows that had been covered. One blind was in the fully lowered position, one partly lowered, and the other three were then discovered fully rolled up in the cavity above each window. On each side of the saloon, two windows at each end still have their original glass, well protected by the added lining. This shows one of several window configurations (the mix of glazed/unglazed) in which these cars operated in revenue service in Perth.

The lifting and loading of No. 43 on 26 July went without a hitch, and Mandurah had its own 'flying tram' as the crane lifted it high over the house to the semi-trailer in Leslie Street. Two local community newspapers carried a front page story on the tram's departure.

We are most grateful to member, Trevor Phillips, for arranging the use of the semi-trailer (which he formerly owned with the Bunbury House Transporters business) to move the tram to Whiteman Park at no charge. Our very grateful thanks also go to the present owners.





B 43 is lowered onto the Brussels 21E truck on Road 4 of the PETS Car barn fan, using the four hydraulic jacks, on 26 July.
Tony Kelly

B 43 now resides in the back of B road in the WP Pennenburg Workshop, between Adelaide H 372 and Leyland trolley bus 22, as seen on 26 July.

Tony Kelly



Unloading No. 43 at the Park also went very smoothly. The semi-trailer was positioned on Road 4 of the Oketon Geddes Car barn fan; the car body was raised with hydraulic jacks and the semi-trailer driven clear in a well-practised procedure. Our refurbished Brill 21E truck (from Brussels) was hauled through the Car barn from the rear compound and positioned for the tram body to be lowered onto it. This truck had been shortened and modified for us by Bendigo Tramways to suit the specifications of Perth C class No. 61. To everyone's great surprise again, the bolt holes on the truck and chords matched those on No. 43 perfectly. The body was easily secured to the truck and was then towed through the Car barn, passing Perth E 66 on Road 3, and into the WP Pennenburg Workshop where it now resides on B Road between Perth Leyland trolleybus No. 22 and Adelaide H 372, safely undercover again, and an excellent prospect for restoration.

Other news

Winter patronage is directly proportional to the number of fine running days at the Park, and some good results continued to be achieved after the outstanding May-June crowds. July school holidays (with services on seven days per week) were successful. W2 441 was the main service car for July, with SW2 426 for most of August and September. Both cars have returned to service quite recently after long absences for repairs, and both have proved crucial to our continued operation as three other operational cars, previously heavily used, are now either unavailable or available as back-ups only, pending wheel-set replacements (see August/September *Trolley Wire*). W7 1017 has been out of traffic with air system problems, as well as roof leaks.

The second 'Drive a Tram' experience was held at the Park on 11 July, with four keen candidates

SW2 No. 426, which returned to regular service in March 2009 after an absence of four years for truck repairs, passing through Farmgate Curve on its way to Mussel Pool on 29 August. Michael Stukely



attending and signing up. Training of our new conductors is progressing, and with some to be trained later as Motormen, our crew shortages should then be alleviated to some extent.

Restoration to operating condition of Perth's official 'Last Tram', E class car No. 66, has continued. The new truck side bearings have been received and require bushes to be fitted before remounting. Brake rigging has been sandblasted and is being installed beneath the saloon by Graham Bedells and Graeme Eddington. The cable troughing boxes along the sides of the saloon floor have had their lids reworked by John Davies and Graham Bedells, to ensure a neat fit to the bases. They have also completed repainting the seat frames and brackets in Marble Bar (red), and foot-rails in black. Trial seat installations are continuing. It is important to get this right, as the correct alignment and throw-over action of all 28 seats should match. A few seats (of the same design) in Fremantle 29 have always caused problems when reversed as they have grazed and damaged the wooden wall panels, due to loose fitting throw-over brackets. John Budd has reworked and refitted them to solve this.

Ric Francis has completed repairs to the clerestory roof on WAGT G 35, and painted it with primer. Work is now focusing on repairs to the timber above the window frames.

The steel traction poles along the length of the Village Mall (some 300 metres) are getting a make-over by Park Management, with the extra-high tops of five having been cut to standard height. The new finials (from our store) were fitted to most poles in September, some having been re-machined to fit the varying pole sizes. To support new street lamps, new shorter steel bracket arms, with scroll work matching that of the tramway overhead bracket arms, have been fitted on the opposite side on all poles. Repainting of

the poles is to follow. Meanwhile, eight tramway bracket arm mountings have been prepared in our workshop for installation on the new steel poles west of the Triangle.

Lindsay Richardson has taken measurements in preparation for the fence at the west end of the rear compound to be realigned to allow an extension of the retaining wall, and then the extension of the present truck storage siding to the full length of the WP Pennebunburg Workshop. This can then be used for additional tram storage.

John Mitchell and Shane Parsons are now regularly carrying out greasing of the track curves, which results in a greatly improved ride and reduced wear on wheels as well as rails.

Finishing work on the members' room extension is progressing well. Bryan Adcock has constructed a new set of steps for safer and easier access to the cosmetically-restored body of Fremantle 36, which is mounted on trucks and located alongside the members room inside the Car barn on Road 2. It is used regularly as a meeting room, with the tables and seating having been retained from its previous life as a tearoom near Albany.

The four electric-powered wagon-lifting jacks obtained from the Rio Tinto mining company (reported in August/September *Trolley Wire*) require a new power board to be built.

The chassis and parts of the former WAGT tower wagon which had been sent to a country agricultural school for restoration in the mid-1990s, were eventually returned in pieces with little work done, have been passed to the Historic Commercial Vehicles Association. We still have one intact WAGT tower wagon of the same type.



Fresh out of the paint shop, No. 671 in its 'Pipers by the Lake' paintwork stands in Wendouree Parade with 'Pipers' in the background, on 18 August 2009.

Richard Gilbert



'Bumblebee' 5103 in Nicholson Street at the corner of Victoria Parade near St Vincent's Hospital. The tram was on a Route 96 service from East Brunswick to St. Kilda Beach on 27 October 2009.

Martin Pinches