

# TROLLEY WIRE

No. 331

NOVEMBER 2012



\$9.90\*

Print Post Approved PP245358/00021



ISSN 01551264



9 770155 126016

00331



## In this issue

- Fire Protection and the NSWGT
- Ballarat and Bendigo in 1912
- Glengowrie Depot Upgrade

# TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM  
MAGAZINE

NOVEMBER 2012

No. 331 Vol. 53 No. 4 - ISSN 0155-1264

## CONTENTS

SETTING THE STANDARD – FIRE PROTECTION AND THE NSWGT .....	3
THE BALLARAT AND BENDIGO TRAMWAYS IN 1912.....	8
GLENGOWRIE DEPOT UPGRADE.....	17
HERE AND THERE.....	22
MUSEUM NEWS.....	25

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

Editor .....Bob Merchant  
Sub-editing and Production.....Dale Budd  
Randall Wilson  
Ross Willson

\*Cover price \$9.90 (incl. GST)

Subscription Rates (for four issues per year) to expire  
in December.

Australia.....	\$A36.00
New Zealand/Asia.....	\$A54.00
Elsewhere.....	\$A60.00

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

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

Printed by BlueStar Print - Canberra  
Tel: (02) 6280 7477 Fax: (02) 6280 7817



*Adelaide H car 365 enters the tramway museum yard  
on 26 August 2012.*

Allan Ziegler

### Vale Alan Pritchard

In the August issue of *Trolley Wire* we reported  
the retirement of Alan Pritchard from his  
production role with the magazine.

Unfortunately Alan's health declined over  
recent months, and we are sad to record that he  
passed away on 23 October.

Alan enjoyed his work on *Trolley Wire*; the  
tramway museum movement has lost a good  
friend. We extend our condolences to his family.

Front Cover:

*H 365 stands in the depot yard at St Kilda during the visit by delegates to the Council of Tramway Museums of  
Australasia on 21 August 2012.*

Steve McNicol

# SETTING THE STANDARD

## FIRE PROTECTION AND THE NSWGT

### Background

In 1882 Frederick Grinnell patented 'his famous sensitive valve automatic sprinkler recognised by underwriters everywhere as practically perfect'.

An Englishman, William Mather, purchased in 1883 patent rights to the Grinnell sprinkler for all areas outside North America.

John Wormald (1859-1933), a surveyor for the Mutual Fire Insurance Corporation of Bolton, England, wrote in 1885 the first pamphlet of rules for automatic sprinklers. The Corporation was the first insurance company officially to acknowledge that the automatic sprinkler was the answer to fire losses in cotton mills. John Wormald was one of the leading British insurance authorities on automatic sprinklers and elected to forsake the realms of insurance for the ranks of industry – first with the fire engineering company Dawson, Taylor & Co of Manchester and afterwards with Mather & Platt – as a Director of this expanding company, which became the father of the UK sprinkler industry.

Mather and Platt installed the first sprinkler in Australia, at Laycock and Co in Melbourne in 1886.

John Wormald, now with Mather and Platt, appointed in 1889 his younger brother, Joseph Dawson Wormald (1863-1921), Australian sales agent for the Grinnell sprinkler head. Along with a partner, Stanley Russell, Joseph Wormald established the business Russell and Wormald in Australia, which continued operating under this name until 1900. Wormald Brothers was formed in 1900 when another brother, Henry Percy (Harry) Wormald (1874-1932) joined Joseph in partnership in Australia. The partnership became Wormald Brothers Ltd in December 1910. It became known as Wormald International/Wormald Industries and later went on to absorb Mather & Platt Ltd itself.

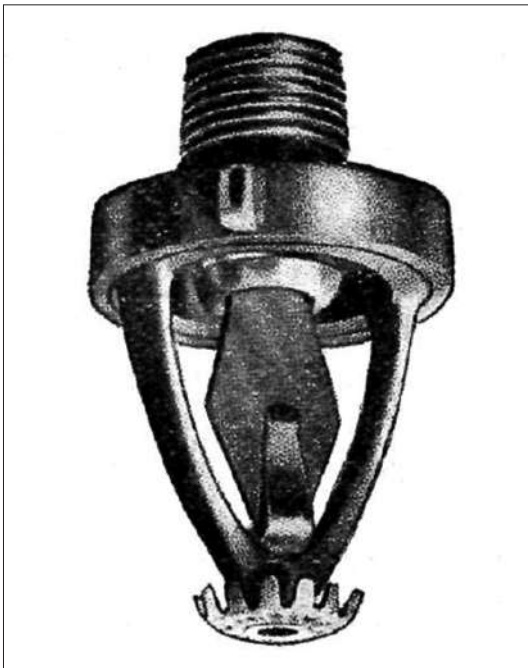
### The Rozelle Depot fire

The NSW Government Railway & Tramway Institute's monthly publication, *The New South Wales Railway and Tramway Magazine* for 9 September 1919, carried a report of a fire which had occurred at Rozelle Tram Depot. Under the heading Fire and Water, it said:

At 9.09 p.m. on Thursday, 17th July, 1919, a small fire broke out under the flooring of electric tram car No. 855 in the Rozelle Car Shed. This fire, had it gained an unchecked footing, would have developed into a bonfire such as would have done credit to the Annandale and Glebe districts as, to them, an utterly cheap and gloriously effective illumination with which to celebrate "Peace Day."

At this time the half of the shed concerned, i.e., that portion more distant from its traffic offices, was filled with 75 cars though otherwise unoccupied; the standby pitman was away with the breakdown car and attending to a derailed car; the duties of the traffic staff required their presence in the shed yard and offices: the burning car was hidden from view behind other cars. Everything seemed set in favour of the "Peace Day" Bonfire, but the ever watchful Grinnell Sprinkler system got in its deadly work and poured cold water on the scheme.

Fourteen (14) heads felt danger and sprang into operation. They doused the burning car; roof and sides; and as a further precaution the roofs and sides of cars adjacent; they watched for breaking glass and for holes appearing in the roof: prepared at any



*A Grinnell sprinkler head.*

Mather & Platt Ltd brochure  
V.C. Solomons Collection



*An exterior view of the fire damage to O car 855 in Rozelle Depot.*

The NSW R & T Magazine  
STM Archives

moment to tackle the origin of the fire at closer quarters. They rang the fire alarm bell and mustered the staff to isolate, by removal, the infectious case and to reduce its temperature to normal.

By 9.30 p.m. peace reigned again in the car shed. The cost to repair the actual damage will probably be covered by less than £1000. The value of the "save" might easily be represented by £90,000, or possibly double this figure.

The Rozelle Car Shed is divided into two sections by a fire break. The cars in the section more positively concerned were disposed in 10 rows of 7 or 8 cars each with walking space between adjacent rows. The front of the shed is open. It is one of the 13 tramway electric

car sheds required for the housing of the 1400 cars now running on the tram tracks of Sydney and Suburbs.

In the early history of the Sydney Electric Tramways, it appears that the Commissioners, with long sighted policy, decided upon the general use throughout all car sheds, of Grinnell Sprinklers. The elevated water tanks of these systems are now well known to all lovers of Sydney as blots upon its general architectural effect; but this is aside.

Many hundreds of sprinkler heads depend from the roof of each car shed. Each head having the pressure and capacity of the public water supply mains, and, as a standby, of one of the 10,000 gallon eyesores already



*A view inside the fire damaged O car 855 at Rozelle Depot.*

The NSW R & T Magazine  
STM Archives

mentioned behind it: each head keeps silent and continuous watch over any area of 100 square feet of car roof which happens to be placed under it. As the cat, by its whiskers, so the sprinkler head with its special solder; feels danger, and, when the temperature in its immediate vicinity reaches to 155 degrees Fahrenheit, this solder, which normally secures the head valve in position on its seat, melts, and 20 gallons of water are liberated per minute through each head. The jet formed strikes a rose deflector and is reversed in direction; broken up and converted into a veritable rain storm, the water falling at a rate equal to 24 in. of rain per hour. Not yet content, the head calls loudly and insistently for help by ringing a fire alarm bell – small wonder the fires feel put out about it. The Commissioners have spent many thousands of pounds in order that the whole of their tramway rolling stock shall be adequately protected against the uncontrolled ravages of misplaced fire.

At 9.30 p.m. on Thursday, 17th July, 1919, they were repaid for this outlay; principal and interest many times over.

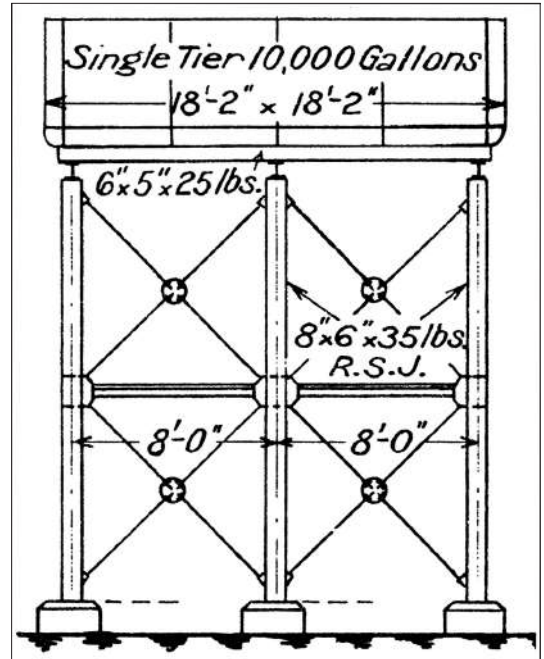
An important feature in connection with the "Grinnell" Installations in Australasia, is that they automatically call out the Fire Brigade on the outbreak of fire.

Taking Australasia alone, 168 fires have been extinguished by the "Grinnell" Automatic. Sprinkler and Fire Alarm System, with an average loss of £114, the percentage of loss to insurances representing the insignificant figure of 1/10th of 1 per cent., whilst the value of property in Australasia protected by the "Grinnell" System runs into considerably over £25,000,000.

\* \* \* \*

O class car 855 was rebuilt at Randwick Workshops as an O/P class with matchboard tongue and groove

side panels, pull-down canvas door blinds, and roof mounted built-in front destination boxes. O class car 1089, standing next to 855 in the depot, was also damaged in the fire and rebuilt as an O/P car similarly to 855. Both cars re-entered service in June 1920.



Standard railway 10,000 gallon water tanks were used at Sydney electric tram depots to provide water pressure for the sprinkler system in the days when mains water pressure may not have been sufficient to do so.  
Railway drawing ST 49 (part)  
R.I. Merchant Collection



O/P 855 with sister O/P car 1089 in Quay Street, Sydney bound for Ryde on 17 February 1949.

Noel F. Reed

The water tanks used at Sydney's tram depots were standard 10,000 gallon railway water tanks used for filling locomotive tenders. The water tank for Fort Macquarie Depot was hidden from view inside the depot's ornate tower.

A brochure dated May 1908 describing Grinnell Automatic Sprinkler Equipments published by Mather & Platt Ltd of Manchester and London, has a view on the cover of the interior of Fort Macquarie Depot, and inside a rear view of the depot.

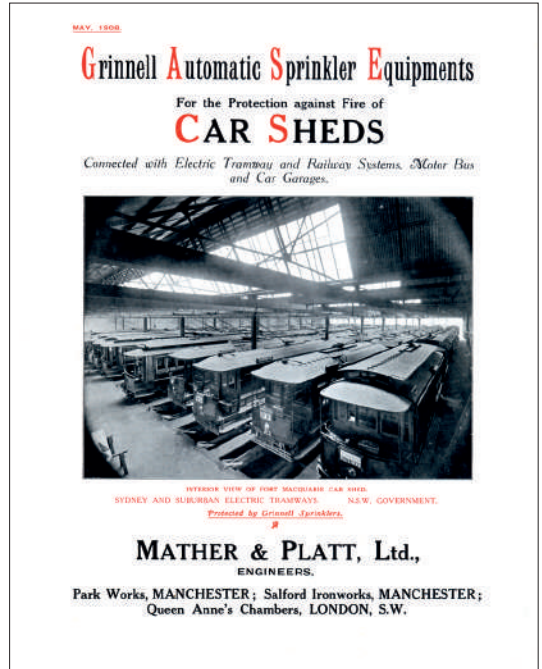
The brochure lists some of the more important Grinnell sprinkler installations in tramway car sheds around the world (excluding North America). It is noteworthy that Sydney had nearly as many Grinnell installations as the rest of the world put together. This brochure was issued before the system at the Prahran & Malvern Tramway Trust's Malvern Depot was installed. The list was as follows:

Argentina:  
Buenos Aires & Belgrano Electric Tramways Co. Ltd – Palermo Station, Buenos Aires  
La Capital Tramways Co. Ltd – Vial Station, Buenos Aires

Australia:  
Sydney & Suburban Electric Tramways – Car sheds at Rozelle, New Town, Waverley, Fort Macquarie, Rushcutters Bay, North Sydney and Ultimo  
Municipal Tramway Trust – Adelaide  
Victorian Government – West Melbourne Railway Carriage Shed

South Africa:  
Corporation Electric Car Sheds – Cape Town

Russia:  
Riga Electric Tramways – Alexander Gates Depot and Moscow Suburbs Depot



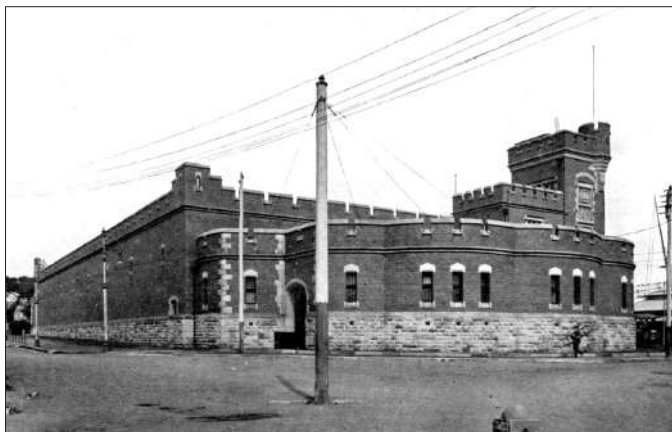
*Mather & Platt Ltd brochure of May 1908 showing the interior of Fort Macquarie Depot.*

V.C Solomons Collection

United Kingdom:  
Glasgow Corporation Tramways – Glasgow  
Manchester Corporation Car Sheds – Manchester

**Sydney's electric tram depots equipped with Grinnell sprinkler systems**

As evidenced by the Grinnell brochure, Sydney was very early in adopting sprinkler systems for its electric



*The rear of Fort Macquarie Depot which appears in the Mather & Platt brochure. The water tank is inside the depot's ornate tower.*

Mather & Platt Ltd brochure  
V.C. Solomons Collection

*The northern side of Rozelle Depot where the fire occurred. The dividing wall between the two portions of the depot can be seen above the R class tram at right.*

Leon B. Manny  
STM Archives



tram depots. Following are the opening dates of the various depots.

The cable tram depot at Ridge Street, North Sydney was rebuilt to house electric cars in 1896, and extended in 1898. Ultimo depot opened in December 1899. Newtown depot was completed in April 1900. Fort Macquarie depot was completed on 2 September 1901 and opened on 10 August 1902. Waverley depot opened on 7 September 1902.

The first part of Rozelle depot opened on 17 April 1904. The northern extension, in which the fire occurred, was completed in August 1909. The cable tram depot at Rushcutters Bay was rebuilt to house electric cars around 1905. It was enlarged in 1913.

The first portion of Dowling Street depot opened on 19 January 1909. The eastern extension was completed

in June 1913. The North Sydney depot in Military Road opened on 4 April 1909.

Manly depot opened in 1911 but the water tank in a brick tower was not added until 1920. Enfield depot opened in 1911. Its water tower was the highest of any depot in Sydney, possibly due to poor mains pressure in the surrounding area. The Sydney Tramway Museum acquired this tank in April 1995.

Tempe depot opened on 15 September 1912. Leichhardt depot opened on 22 June 1915 but never saw use as an operating depot.

The Sydney Tramway Museum's buildings were equipped with a Grinnell sprinkler system under a 1994 Transport Heritage Grant of \$75,690. The system was installed over three months and successfully tested on 13 April 1995.



*Water tanks at Enfield Depot. The Sydney Tramway Museum acquired the higher tank without its stand in 1995.*

D.R. Keenan Collection

# THE BALLARAT AND BENDIGO TRAMWAYS IN 1912

By Alan Bradley

## Introduction

In 1912 the *Titanic* sank, but inspired numerous future books and films. Captain Robert Scott's British team reached the South Pole, but all of the men died on the return trip. In the same year a team led by an Australian, Douglas Mawson, landed in Antarctica, and spent the first of two winters there.

Australia's population in 1912 was 4.6 million. The Prime Minister was a former Scottish coalminer, Andrew Fisher. In that year the Commonwealth Bank of Australia opened for business, and an international competition was held for the design of the country's new Federal capital. Six of Australia's leading test cricketers, including the captain, refused to tour England due to a dispute with officials (not surprisingly, England won the Ashes that year). Australia sent women to the Olympic Games for the first time.

On the tramway front, the Geelong system commenced operation in 1912. Brisbane tramway employees were dismissed for wearing union badges, and this led to a Queensland-wide general strike. In Western Australia, Parliament authorised the transfer of the Perth tramways from the Perth Electric Tramway Company to the Western Australian Government Railways. In Tasmania, Parliament authorised the transfer of the Hobart tramways from the Hobart

Electric Tramway Company to the Hobart City Council.

At that time the Electric Supply Company of Victoria (ESCO) operated the power supply and electric tramways in the Victorian cities of Ballarat and Bendigo. At that time the outer section of Ballarat's longest line, in the Borough of Sebastopol, was still operated by horse trams.

After many years of working long hours for low wages in all weathers, tramway men were ready to fight for better conditions. The Australian Tramway Employees' Association (ATEA) was formed in November 1910, and the men from Ballarat and Bendigo soon joined. The ATEA approached the Commonwealth Arbitration Court in 1911 to have wages examined on all tramway systems throughout Australia.

The Arbitration Court began its hearings into the various tramway operators in March 1912, with Mr Justice Higgins on the bench. For the first time a detailed comparison of wages and working conditions on tramway systems across Australia was possible.

The transcript of evidence given by ESCo employees and officials during the 1912 hearings is a fascinating



*Sturt Street, Ballarat, looking east towards the Post Office. Until 1926 road traffic moved both ways on either side of the central gardens – and trams created a third traffic stream.*

All photos are from the Ballarat Tramway Museum archives.



*No. 14 at the corner of Sturt and Lydiard Streets, Ballarat. This became the city terminus in 1937.*



account of how the Ballarat and Bendigo tramways were operated, 100 years ago.

### The witnesses

The following ESCo employees gave evidence at the hearing:

- Thomas Closie (Motorman, Bendigo)
- Alfred Davey (Motorman, Ballarat)
- Robert Haynes (Assistant Pitman and Greaser, Ballarat)
- John Honeybone (Switchboard Attendant, Bendigo)
- David McGrath (Secretary Ballarat Division ATEA)
- Robert Tregaskis (Fitter and Pitman, Ballarat).

The following ESCo management representatives also gave evidence:

- George Cole (Resident Engineer, Bendigo)
- Horace Collett (Traffic Superintendent, Ballarat)
- William Knox (Chief Accountant, Ballarat and Bendigo)
- David Maxwell (Resident Engineer, Ballarat)
- Percival Pringle (ESCo General Manager).

Two of the most prominent witnesses came from very different backgrounds. Robert Haynes had begun work on the Ballarat horse tramways as a track cleaner, aged 13, when the company commenced operation in 1887. He then became a conductor, then a groom looking after horses, and then a horse tram driver. With the coming of electric trams he was removed from driving duties to work in the Wendouree depot, as 'Assistant Pitman and Greaser'. By 1912 he was a delegate for the ATEA. At that time he lived in a cottage near the tram depot, as he had since the horse tram era.



*A gold mine in the city centre – Charing Cross, Bendigo, looking towards Lake Weeroona.*



*Traffic employees posing at the Grenville Street shelter, Ballarat.*

Percival Pringle had been ESCo General Manager since 1911. Previously he had worked in the United Kingdom for the Brush Electrical Engineering Company for seven years, and had been resident electrical engineer in several smaller British tramways. Most recently he had been electrical and tramways manager at Burton-on-Trent. He was also a member of various electrical and tramway professional organisations.<sup>1</sup>

### **Traffic staff**

There were 170 employees in the tramway departments in Ballarat and Bendigo. In Ballarat there were 26 permanent motormen, and 26 casual motormen and conductors.

In order to qualify as a motorman an employee first received a week's training in the shed, to gain knowledge of the mechanical workings of trams. This was necessary to enable motormen to replace or repair items away from the depot. This first five days in the shed were unpaid; the remaining days were spent driving under tuition and were paid.<sup>2</sup>

Permanent motormen averaged 105.5 hours per fortnight. This was considered to be an improvement on the conditions of Ballarat horse tram drivers who worked about nine or ten hours per day, seven days a week, or about 65 hours per week, with only one day off each month. Casuals accepted vacancies when they arose (often due to suspensions to permanent staff).

Youths under 21 were employed as car cleaners and conductors, the ESCo believing that these younger workers were more efficient than men doing the same work.

Casuals were required to turn up at the depot at 6.40am every morning. If there was no work they were allowed 1½ hours' pay. Some casuals turned up for a whole week without getting a shift.<sup>3</sup> While the depot in Bendigo was close to the city, the Ballarat depot was in Wendouree Parade, a more remote location that was surrounded more by paddocks than houses. It was a long way to travel if there was no work.

Motormen were supplied by the company with one tunic, waistcoat, trousers and coat per year, but had to buy their overcoats, albeit at a concessional price. The overcoats were imported military coats that were blue in colour. One employee compared them with a sponge, as they were not waterproof and absorbed moisture during wet weather. Motormen also supplied their own watches.

Traffic employees were allowed free tram travel while in uniform. This privilege was not available to maintenance staff as free passes had recently been withdrawn in 1912 due to the ESCo's financial position. Off-duty employees were charged one-third of the normal fare. Power station employees had home lighting at half rates, and had tram fare concessions.

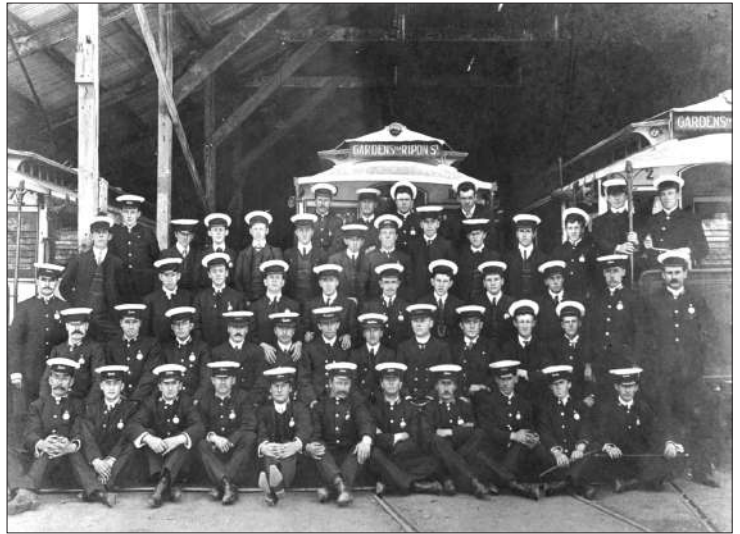
Employees on the morning shift in Ballarat signed on and received their change moneys at the depot in

<sup>1</sup> Ballarat Courier 7 January 1911

<sup>2</sup> Evidence of Robert Haynes

<sup>3</sup> Evidence of Alfred Davey

*Traffic employees pose at Wendouree depot, Ballarat, 1909*



Wendouree Parade. The afternoon shift signed on and received change at the Grenville Street shelter. (The shelter was a large building at the end of the Sturt Street double track, which included a passenger shelter, traffic office and employee room.) They were allowed ten minutes to sign on, but according to Alfred Davey, a Motorman who gave evidence to the Arbitration Court hearing, 15 minutes should have been allowed.<sup>4</sup>

There were no broken shifts<sup>5</sup>, as the cars started later in the day and ran in to the depot earlier than in other cities. Mr Justice Higgins asked whether Ballarat people stayed in bed longer, but the reason was that there were no early morning trains, as in 'the Metropolis'. No additional cars operated in Ballarat in the mornings and evenings, except on the Orphanage and Sebastopol lines.

No time was allowed for meal relief, so the men ate their meals on the trams. P.J. Pringle, the ESCo's General Manager, said that there had been no requests from the men for meal relief. Traffic employees were not allowed to enter hotels while in uniform, but they often had to enter hotels 'to obey the call of nature' because no conveniences were provided.<sup>6</sup>

### Rolling stock

In 1912 there were 20 electric cars in Ballarat. Cars 1 to 18 (of the California combination type) had no

sidebars, so passengers could enter on either side. The other two cars then used in Ballarat, Nos. 19 and 20, were an open crossbench type in which the seat backs had to be turned at the terminus. Bendigo had 16 electric cars, of a slightly different California combination design. These cars weighed between eight and nine tons, with Bendigo's being lighter as there were no front bulkheads.

All of these cars were built without windscreens, which would have made a working day an ordeal in the cold Ballarat winters. A 'glass shield', i.e. a windscreen, was fitted on a trial basis in 1911, but this was found to be unsuitable as rain continued to enter the car.

No seat was provided for the motorman, as "a man cannot possibly get to his brakes in the same manner when sitting down as standing". P.J. Pringle claimed that the Board of Trade in the United Kingdom would regard a motorman's seat as interfering with braking. Mr Justice Higgins was sceptical, noting that "They have seats in Sydney and Adelaide, and nobody has yet found that they caused harm".<sup>7</sup>

Air brakes were not fitted, the ESCo believing "they were too liable to get out of order".<sup>8</sup> Handbrakes (of a lever rather than wheel type) were used for normal service braking. The Westinghouse magnetic brake could only be used in emergencies, as it harmed the motors. There had been no instance of failure of the magnetic brake.

The now-redundant horse trams were used as trailers behind the electric trams during busy periods. The

<sup>4</sup> Evidence of Alfred Davey

<sup>5</sup> Broken or split shifts, where an employee worked about half the shift in the morning and the rest in the afternoon

<sup>6</sup> Evidence of Alfred Davey

<sup>7</sup> Evidence of P.J. Pringle

<sup>8</sup> Evidence of William Knox



*Ballarat crossbench car No. 19 departs the Grenville Street terminus for the Gardens.*

conductor on the horse tram had to use the old ratchet brake when stopping, as the trailers were not connected to a power brake. It would have been technically possible, had the ESCo wished, to fit magnetic brakes to the trailers to allow them to be braked by the motorman, but it had not been done.

### **Tram operations**

Bendigo had two lines (Eaglehawk-Quarry Hill and Golden Square-Lake Weeroona). In Ballarat there were seven routes, in which all trams shunted at Grenville Street (where Sturt Street narrowed into Bridge Street). George Cole, the Resident Engineer at Bendigo, testified that tram operation worked better in that city:

*We have two straight lines which the cars never leave. In Ballarat there are a number of lines converging at one point. These cars have to wait in Ballarat while they are starting away. The first car leaves and the second, third, fourth and fifth cars may be banked up in one spot and the last car will have a considerable amount of standing time. We only wait one minute just to give the conductor time to turn the pole and start again.*

In Ballarat police had taken names of motormen, and threatened prosecution, for waiting three minutes at Grenville Street and 'obstructing traffic'.<sup>9</sup>

Trailers were used in Ballarat each Saturday and Sunday during summer, while in Bendigo they were only used on holiday Sundays. On weekdays, only one extra car was used in Ballarat during summer compared with winter.

Comparing figures, on a normal April Saturday in Ballarat, 16 cars plus one trailer were used. On Railway Picnic Day during early March (when numerous special trains carried visitors to Ballarat from all over Victoria) 20 cars and seven trailers were used, with the trailers being used from 10:45am until 7:00pm. On Regatta Day (rowing on Lake Wendouree later in March) 18 cars and two trailers were used for six hours.

The peak on winter Saturdays in Ballarat was as high as on summer Saturdays, due to heavy traffic to and from football matches. In October on the day of the Band Contest Final (held at Ballarat's City Oval) 19 cars and six trailers were used, the heaviest peak being after 10:45pm.

Late in September, Bendigo had its own Railway Picnic Day. On this day 16 cars and five trailers were used, compared to the ordinary service of 13 cars.<sup>10</sup>

October was one of the busiest months in Ballarat, due to the Band Contests and South Street competitions. Christmas week was the busiest time of the year in Ballarat, and this was the only time that revenue per car mile in Ballarat matched that of capital city tramways.<sup>11</sup>

### **Staff discipline**

If a charge was laid against an employee a notice was placed in the Grenville Street office (in Ballarat), asking the employee, identified only by his number, to attend Mr Collett, the Traffic Superintendent. A report would be read out to the employee, who would be asked for an explanation without the right to call

<sup>9</sup> Evidence of Horace Collett

<sup>10</sup> Evidence of George Cole

<sup>11</sup> Evidence of Horace Collett

witnesses. If his explanation was unsatisfactory he could be suspended or dismissed.

A man named Exon was reprimanded for not making repairs on the road. After changing handles at a terminus the car failed to start. He went through the usual course of examining both motors separately, and failed to find a defect. He phoned the depot and an inspector came. The next day Exon was suspended for a week for failing to have sufficient knowledge to find the defect. This incident had occurred under the previous manager some two years before the Arbitration Court hearing.<sup>12</sup>

On another occasion a motorman named O'Brien was charged with smoking on a car. No witness was allowed and he was dismissed. The union applied for the right to call a witness, and O'Brien was reinstated. There were a number of cases where motormen were required to pay for damage to cars in accidents. Motorman O'Donnell was charged £5 for running into the back of another car.<sup>13</sup> Evidence of gambling would also incur the wrath of management. A conductor seen talking to "the betting fraternity" in the streets was reprimanded. Alfred Davey claimed that employees were debarred from attending race meetings, even when not in uniform. But P.J. Pringle replied: "We don't control a man's private time at all".

#### Maintenance staff

A Fitter and Pitman performed work similar to an Electrical Mechanic – examining controllers and switches, making bearings for armatures, testing field coils, and assembling bearings and castings. Robert Tregaskis worked for 18 hours per week as a Fitter at the View Point powerhouse workshop where he

assembled bearers and castings for the trams. The other 30 hours per week he worked as a Pitman at the tram depot being covered with oil and grease, standing in pits with drainage problems while repairing trams. At the powerhouse he worked in a clean workshop, whereas the tram depot was "damp, dark and draughty". There was often water in the bottom of the pits, and the Pitman had to stand on a grating to keep his feet dry. He could be called from home to attend to a disabled tram, on one occasion working from 11:00pm to 1:00am.<sup>14</sup>

An Assistant Pitman and Greaser at the Wendouree depot worked 53½ hours per week, with a one-hour lunch break each day. Under the Carriage Board award he was paid at two rates, one for greasing, oiling and pit work, and another for wheel work. He lubricated armature bearings, axle bearings, axle boxes, trolley wheels and trolley bases. He adjusted brakes, replaced brake blocks and repaired the undercarriage, but did not work on car bodies. Although it was dirty work, he was not provided with special clothing (such as overalls).<sup>15</sup>

#### Generation of electricity

The boilers at the powerhouse were manned 24 hours per day. George Cole testified:

*With respect to the lighting station we keep the supply of lighting running for 24 hours; the tramway power from 5.45am till 1am. During that time one engine and two panels of the switchboard control the tramway units. On the lighting side of the station there are two engines run during the day, one in the early morning between 1am and 8am, and sometimes*

<sup>12</sup> Evidence of Robert Haynes

<sup>13</sup> Evidence of Alfred Davey

<sup>14</sup> Evidence of Robert Tregaskis

<sup>15</sup> Evidence of Robert Haynes



*A tram at the Eaglehawk terminus, Bendigo.*



*The View Point powerhouse, Ballarat, viewed from across Lake Wendouree. The lower left portion of this card illustrates the engine switchboard room and the lower right shows the fixed pressure turbo generator.*

*as many as four between 8pm and 12 midnight, are required for lighting sometimes. The switchboard bearing the two panels controls the electricity department.<sup>16</sup>*

The Switchboard Attendant at the powerhouse examined the machines and switchboards. Every half an hour he took records of fuel consumption, units generated and water evaporated. At night he turned off a machine, and then re-started it in the morning. Duties at night were “very light”.<sup>17</sup>

High-grade Newcastle coal was not normally used for the boilers. “Powlett slack coal” from the State Mine at Wonthaggi was used, it being a lower cost coal. The coal was transported by train to Melbourne, and then to Ballarat with subsidised freight. The cost of coal was about 40-50% higher in Ballarat than in Melbourne, due to the cost of transport. Wood, the main household fuel used, was 40% cheaper in Ballarat and Bendigo than in Melbourne.<sup>18</sup>

The tramways used only about one third of the total power generated by the powerhouse. About two thirds of the power was used for lighting.<sup>19</sup> The power usage from private consumers was negligible.

### Financial position

The Court stated during the hearings that ESCo employees would be paid at rates comparable to Melbourne cable tram employees, unless the Company

could prove it was unaffordable. Naturally the Company provided much detail regarding its financial position, to demonstrate that further wage increases were unaffordable. It also argued that the cost of living in Ballarat and Bendigo was lower than in Melbourne.

The ESCo’s parent company was the British Insulated Wire Company (BIWCo), of Liverpool, UK. The BIWCo manufactured the electrical cable and fittings used in Ballarat and Bendigo. The ESCo reported to the BIWCo Board in faraway Liverpool.

The undertaking cost the Company and its shareholders capital of £470,000, of which £448,000 was the initial start-up cost (52% being spent on the tramways). The undertaking was now worth only £170,000. Contrary to expectations, the populations of Ballarat and Bendigo had reduced, the gold mining industry in both cities had declined, and there was less prosperity. Mr Justice Higgins could not understand why so much of the value of the undertakings had declined in such a short time.<sup>20</sup>

Overall, replacements and maintenance were becoming more expensive each year. Track repairs were increasing, and this was expected to increase the working cost per car mile. Rather than using the traditional method of laying rails on wooden sleepers, the ESCo had laid the rails on concrete stringers 18 inches wide by 6 inches deep. If the ground underneath was soft, water would wash it away, and the stringers would sink. Rail corrugations (not seen twelve months before) were now appearing.<sup>21</sup>

<sup>16</sup> Evidence of George Cole

<sup>17</sup> Evidence of John Honeybone

<sup>18</sup> Evidence of P.J. Pringle

<sup>19</sup> Evidence of P.J. Pringle

<sup>20</sup> Evidence of P.J. Pringle

<sup>21</sup> Evidence of George Cole

*A tram at an unidentified suburban terminus and unsealed road in Bendigo.*



One option was to raise fares. However the ESCo decided: “We would lose traffic and it would not be a wise proposition”.<sup>22</sup>

Some of the statistics were:

- Revenue per car mile: Ballarat 9.81d, Bendigo 10.77d;
- Passengers per car mile: Ballarat 4.39, Bendigo 4.91;
- Passengers carried per year: Ballarat 2,861,416, Bendigo 2,629,204.

The surplus in tramway operation was £4,450 in Ballarat, and £9,198 in Bendigo. The tramways paid better than the lighting; there was a loss on the electric lighting. The deficit for all departments (tramway and lighting) was £3,312.19s.5d.

The ESCo managers, being English, compared the conditions with those of tramways in “the home country”. They claimed that wages in Australia were higher, and the working hours were lower.

### The verdict

Mr Justice Higgins had made the famous Harvester judgement in 1907, that an employer was obliged to pay his employees a wage that guaranteed them a reasonable standard of living. He used that as a principle in subsequent judgements. Evidence was taken from the Commonwealth Statistician regarding the price of groceries and fuel in Ballarat, Bendigo and Melbourne. The conclusion was that “groceries were slightly dearer than in the metropolis, but fuel was cheaper”.<sup>23</sup>

At the time of the hearings wages for permanent motormen in Ballarat and Bendigo were 10d per hour. On 1 December 1912 Mr Justice Higgins handed down his decision. Wages for permanent motormen increased from 10d per hour to 1s. 1½d per hour. Senior conductors’ wages increased from 8d per hour to 1s per hour.

The ATEA made another claim before the Arbitration Court in 1917, for cost of living adjustments since the start of the Great War. Hearings by the Court, and later the Conciliation and Arbitration Commission, would continue to be a central part of Australia’s industrial relations system for many decades.

### Postscript

In 1913 electric trams and street lighting reached neighbouring Sebastopol, and the generators had their capacity increased to 1200 kilowatts. This meant the end of the horse tram era in Ballarat. Three new toastrack trams were built for Ballarat and two for Bendigo in 1913. Windscreens were fitted to Ballarat trams that year and to Bendigo’s over the next few years.

Belt-tightening had begun in 1912 with the withdrawal of free passes for councillors and off-duty staff. In 1913 one-man tramway operation began on the Drummond Street North line in Ballarat, and the Lake Weeroona-Golden Square line in Bendigo. Other lines were converted to one-man operation within the next few years.

Ballarat’s gold era ended in 1918 with the closure of the last gold mine.

More changes occurred during the 1920s, the greatest being the huge increase in the demand for

<sup>22</sup> Evidence of George Cole

<sup>23</sup> Ballarat Courier 7 November 1912



*Sturt Street and the Town Hall, Ballarat, looking east. The large Snows building is still used today as Myer's.*

electric power, both for industries and private consumers. As this overtaxed the capacity of the original DC generators, alternating current (AC) generators were installed. The lightly-built trams in both cities fell into poor condition, and the old horse tram trailers were removed from service. The newly-formed State Electricity Commission (SEC) made plans to take over all privately-operated power supply in Victoria. In 1929 the various councils in Ballarat and Bendigo agreed to a takeover by the SEC of the ESCo's operations.

In 1930 P.J. Pringle died, and in 1934 the SEC takeover took effect. A major rehabilitation program began, involving reconditioning of tram track, overhead wire and power supply, and purchase of robust second-hand trams from Melbourne and Adelaide. Takeover by the SEC meant a more benign and less confrontational management style than that of the ESCo.

Meanwhile Robert Haynes continued working for the Ballarat tramways as a motorman, wearing cap No.1. By the time he had retired in 1939 he had worked for all three tramway operators in Ballarat, for a total of 52 years. Was this an Australian tramway record?

The SEC closed the tramway system in Ballarat in 1971, and that in Bendigo in 1972.

### 100 years later

In 2012, television programs have commemorated that other event of 1912 – the sinking of the *Titanic*. Forty years after closure, sections of track in both Ballarat and Bendigo have been preserved for heritage operation. In Ballarat the tramway depot and powerhouse have been demolished, but in Bendigo the original depot remains intact. Of the 36 electric trams that operated in both cities in 1912, Bendigo No. 7 and

No. 8, and Ballarat No. 12, have been acquired for restoration.

Of the main players involved in the 1912 Arbitration Court hearings, the ESCo passed into history decades ago. Its parent company, the British & Insulated Wire Company, went through several restructures and name changes, and after selling its cable businesses in 2000 survives as the international infrastructure company, Balfour Beatty. The SEC itself, which took over the operations in Ballarat and Bendigo, was broken up and privatised by the Kennett Government in the 1990s.

The main survivor is the Australian Tramway Employees' Association, which in 1934 was re-named the Australian Tramway & Motor Omnibus Employees' Association (ATMOEA). The ATMOEA continues today as the union representing tramway and bus employees.

*The transcripts of evidence from the 1912 Arbitration hearings are held at the Melbourne University Archives. Thanks are given to the ATMOEA for allowing access to those records.*

### Late News

A grass fire spread to bushland at Ferny Grove on the afternoon and evening of 24 October. Sometime during the night, the fire restarted and entered the museum through the west fence near the body of Dreadnought tram 140. Subsequently the body of 140 was damaged by fire, together with an old timber tool trailer and the covering on the coils of aluminium overhead feeder cable. Other flammable (timber) materials stored in the hard stand area were also burnt.



# GLENGOWRIE DEPOT UPGRADE

By Nick Marciano

*The following article is taken from a presentation given to the COTMA Conference in Adelaide in August 2012. Nick Marciano is the Manager Tram Maintenance, Public Transport Services Division of the South Australian Department for Planning, Transport and Infrastructure (DPTI). The article is reproduced with permission of the DPTI.*

## Background

In June 2008 the Adelaide Tram Extension project from City West to Entertainment Centre, Hindmarsh was announced, and required:

- Procurement of 6 Citadis and 4 Flexity Classic trams to supplement the existing fleet of 11 Flexity trams.
- Upgrading of Glengowrie tram depot stabling, maintenance and operational facilities to accommodate the increased fleet.

Stage 1 of the depot upgrade from 2009-2011 involved the stabling and maintenance upgrade. Stage 2 commenced in 2012 and involves new operational facilities.

## Design stage

The DPTI (Department for Planning, Transport and Infrastructure) depot upgrade project team visited Melbourne during 2009. Places visited included:

- Kew depot (to inspect new pit, overhead platform works and a custom construction handstand).
- Glenhuntly depot (to inspect the new rainwater recycling installation).
- Brunswick (to inspect the tram wash facility).
- Preston depot and workshop (to inspect wheel manufacture and reprofiling, and spray paint repairs).

While in Melbourne, the project team also looked at rail bending and turnout assemblies and visited fabricators and suppliers of track turnout components.

## Design factors

As can be seen from Diagram 1 (below), the major constraint facing the project team was the limitation of a narrow site.

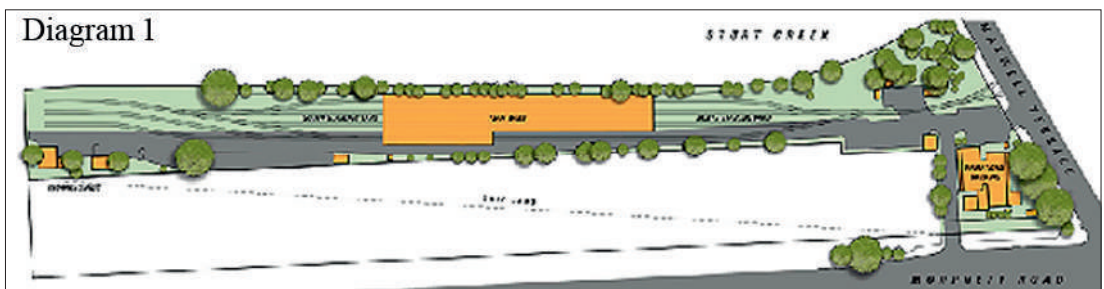
Design factors included:

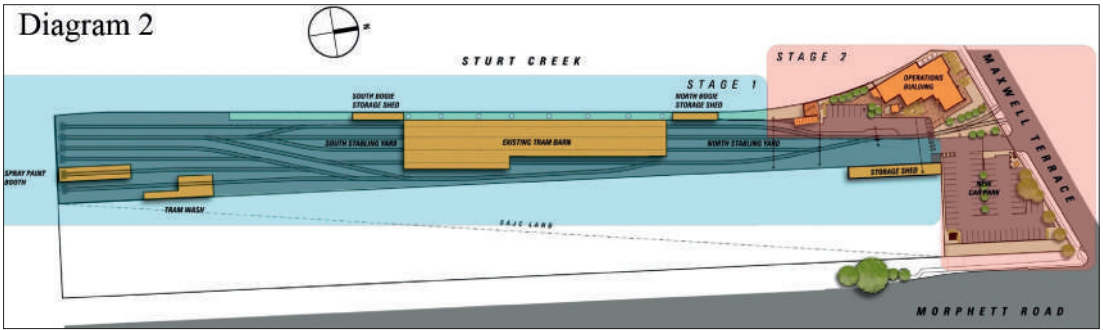
- Developing the most functional stabling layout achieved in South Yard (left side of diagram).
- A new tram road bypassing barn to east (bottom side of diagram).
- Although desirable, the tram wash facility was not feasible in the North Yard (right side of diagram).
- Main stores shed to be located in front of depot (right side of diagram) to minimise delivery vehicle travel.
- A new pit and lifting facilities was required for the longer Citadis trams.
- The new operations building to be located on vacant land at front west (top right side of diagram) minimising disruption to operations (Stage 2 Project).
- The most efficient car parking to east (bottom right side of diagram) minimising track crossings (Stage 2 project).

The end result shown in Diagram 2 (on next page) was the most functional use of the narrow site.

An important part of the design phase was to get involvement an input of depot maintenance staff who contributed the following design ideas:

- Build an external barn bypass track (Road 5) avoiding the need to use the barn as a thoroughfare to get to and from the South stabling yard.





- Use the unused space on western perimeter of the site for stores sheds and water tanks.
- Widen the Roads 1 and 2 South pit to assist moving alongside the edges of trams.
- Provide a flatter surface on Road 3 South – West for better lifting jack positioning.
- Extending the Road 3 South pit track for manoeuvring bogies.

Track design resulted in:

- Concrete paving for both North and South yards with rail in one layer of pavement.
- Grooved tram rail obtained from Melbourne.
- Fabrication of special junction sections to join the grooved rail to the existing 82lb rail within the barn.
- Standard 1 in 5 tram turnouts and point mechanisms.
- A special two-way turnout on Road 2 in the South Yard – increases efficiencies of tram movements and enables stabled trams to enter the key maintenance station at Road 3 South in the Barn directly from Road 2 and less directly from Road 1.

**Key reconstruction tasks**

Key aspects of the depot yards reconstruction included:

- The bypass track (Road 5) along eastern side of barn negating need to travel through the barn to South Stabling Yard.
- Reconstruction of South Yard with additional storage tracks and tram wash and spray booth facilities.
- Reconstruction of the North Yard track in concrete.
- Construction of new parts storage sheds using yard perimeters.
- Construction of tram wash and spray booth facilities in the South Yard.

Key aspects of the barn reconstruction included:

- Excavation of deeper pits to better accommodate working under low floor trams.
- Construction of new overhead platforms designed to work on either Flexity or Citadis trams.



*Construction of the special two-way turnout in the South Yard in February 2010.*

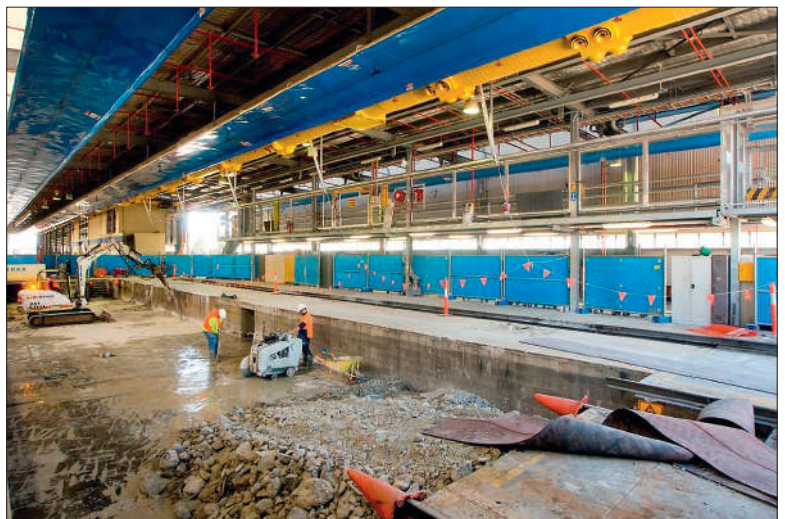
*Flexity tram 110 enters the tram wash from the north end on a test in May 2010.*



- Installation of a new tram lifting facility on Road 3 North for lifting Citadis trams.
- Acquisition of a bogie drop trolley for removing and relocating Citadis tram bogies.
- Reconstruction of the maintenance staff offices and facilities.
- Ensuring safety compliance at all times.
- Maintaining the tram servicing schedule.
- Arrival and familiarisation of the six Citadis trams during the depot upgrade.
- The opening of the Entertainment Centre, Hindmarsh line during the upgrade:
  - Flexity trams needed to be available for new line crew training.
  - Citadis trams needed to be available for crew training.
- Maintaining clear communication with all parties:
  - DPTI special projects, maintenance and

**Challenges**

The mission for the project team was to undertake all this work while still operating regular tram services and maintaining the fleet. Factors to be considered involved:



*The pit on Roads 1 and 2 South during reconstruction in June 2010.*



Citadis tram 206 is raised on Road 3 North for a lifting test in February 2011.

- operations staff, external contractors, on-site contractors.
- Daily meetings with project supervisor.
- Weekly meetings with major stakeholders.
- Managing conflicting needs of on-site contractors and Public Transport Services staff:
  - De-energising overhead versus tram availability for maintenance and training.
  - Up to 10 times normal amount of people on site at different times.
- Closure of the South Yard during reconstruction:
  - Trams needed to be briefly stored overnight at Hindmarsh, South Terrace, Glenelg and on main line near depot.
  - Three H cars were stored off site.
  - There was no access to the Road 3 South major service bay.

- Construction of the new track and overhead past the eastern side of barn impeding vehicular access to South Yard.
- Relocation of inventory items to the new stores sheds.
- Dust and noise from pit excavations.
- Temporary office and amenities relocations:
- Temporary computer wireless network.
- Delays in installation of some equipment and teething problems.

Despite all challenges faced, the mission was achieved with:

- No disruption to tram services.
- No lost time injuries were incurred.
- No industrial disputation occurred.



The bogie drop trolley being tested in February 2011.

*The completed pit on Roads 1 & 2 South in March 2011.*



### Further upgrade projects

Since the major depot upgrade, further upgrade projects and improvements were carried out:

- Acquisition of a tram sand filling vehicle.
- Installation of JIB Crane on Barn Road 1 central for lifting bogie parts.
- Pit guard rails and painted walkways.
- Installation of platform end gates making it much safer to work on equipment near tram roof ends.
- Migration to a new computer based maintenance and inventory management system.
- Acquisition of a MiniProf wheel measurement system.
- Major revision of stores inventory.
- Spare bogies acquired to minimise tram down time.
- Acquisition of dummy bogies for moving trams during major servicing.
- Re-opening of Road 4 South pit.

### Conclusion

A modern and functional depot now exists, promoting the key principles of:

- Safety
- Flexibility
- Responsiveness
- Robust systems and procedures
- High efficiency

for the servicing of Adelaide's 21 operating trams (Flexity trams 101 to 115 and Citadis trams 201 to 206) and two heritage trams (H trams 351 and 367), thus ensuring a safe and reliable service to the public.

All diagrams and photographs courtesy of the Public Transport Services Division of the South Australian Department of Planning, Transport and Infrastructure.

*Installation of platform end gates make it much safer to work on equipment near the ends of a tram roof.*



# HERE AND THERE

## AUSTRALIAN AND OVERSEAS NEWS

### Perth light rail

On 2 September the Premier of Western Australia, Colin Barnett, announced a \$1 billion city and suburban light rail network, the biggest public transport project in the state since the Perth to Mandurah train link.

The 22km Metropolitan Area Express electric transit system, branded MAX, will link Mirrabooka in the north with the central business district. The new line will use roads including Mirrabooka Avenue, Alexander Drive and Fitzgerald Street.

The first stage will commence at Polytechnic West (Balga Campus), with the line running on an east-west alignment through the city to the Queen Elizabeth II Medical Centre in Nedlands, and the Causeway.

Western Australia's Transport Minister, Troy Buswell, said \$15.8 million of Commonwealth and State funding had been committed to the planning phase. This initial phase would involve extensive community consultation and feasibility, engineering and design studies.

He said the state government was aiming to have the project finished within six years. "Under the current timeline, contracts will be awarded in late 2015 with construction starting in 2016 and completion towards the end of 2018," he said.

Mr Buswell said the service would use the median strips of some roads and traffic lanes elsewhere, including along Fitzgerald Street. He said the State and Commonwealth would either fund the project or would adopt a public-private partnership model similar to that used to finance light rail on the Gold Coast to fund the project.

"I suspect without knowing in detail and when you have a look at what's happened on the Gold Coast, the cost for this type of infrastructure will be a billion dollars plus," he said.

"We have not worked through a procurement analysis yet. Other recent (funding) examples in Australia include the Gold Coast light rail, which is being delivered with a combination of private and public money that is one option we will consider. There is already in the budget almost a billion dollars that is joint Commonwealth and State funding committed under the nation building program. The Commonwealth is partnering us with the planning, and we will certainly be approaching the Commonwealth later on this year to use that unallocated pool of money to help fund the light rail. There is already money in the budget to deliver these types of projects. We are simply working through a process now to allocate that money to priorities."



*Melbourne D1 3530 carried advertising from 9 July for Emirates daily flights to Lisbon, Portugal. The advertisements took the form of a stretched version of a Lisbon tram.*

Steven Altham

Mr Buswell denied the project was just pre-election window dressing and underlined the importance of “getting it right. You don’t spend \$15 million planning for a project that you don’t want to give every chance of success,” he said.

“I think this is the sort of project that once you start, there is no backing out. Bringing light rail through built-up suburbs on long-established streets like Alexander Drive, Mirrabooka Avenue and Fitzgerald Street is not without its challenges. But what you see when you travel around the world is, if you get it right, it works incredibly well. What you end up with is fewer cars on the road, which helps with congestion and fewer carbon emissions, but also it adds to the vibrancy and the dynamic of the city because you literally can get people in easier and out easier and you can move them around a lot easier.”

Mr Buswell said giving the route an identity was a key priority. “I am very comfortable that people will vote with their feet when this goes in, in the same way the people of Perth have voted with their feet to support the rail system,” he said. “The other benefit here is we are separating out an enormous number of people from other road users.”

Stage two of the proposal will see the line extended west to the University of WA and east to the Burswood complex, alongside the new stadium area and south to Curtin University.

The line will service the Perth Arena and with an interchange stop at the Wellington Street bus station. It will then continue along William Street, which will be reduced to one lane in each direction for general traffic.

### Book review

#### **One American Too Many Boss Badger and the Brisbane Trams**

By David Burke

Size 280mm x 205mm, 126 pages, card bound.

ISBN 978-0-9872681-0-5

Published 2012 by the Queensland Museum

Price \$29.95

Copies (retail and wholesale) available from

Retail Manager, The Roundhouse Shop,

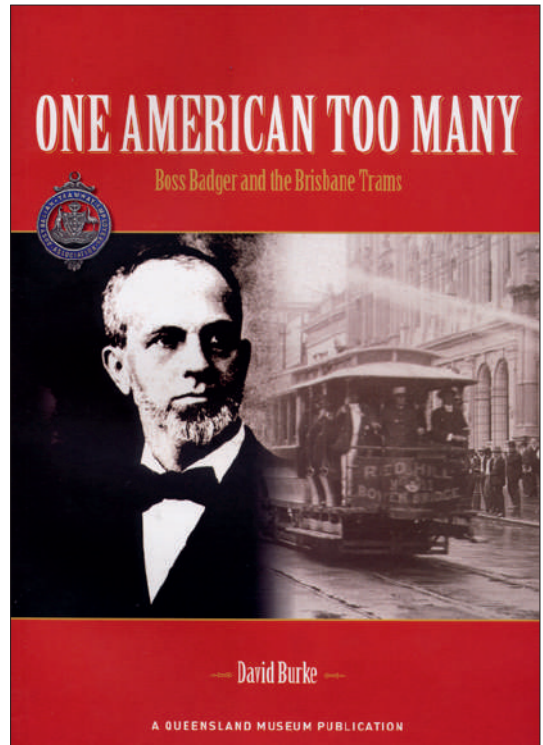
The Workshops Museum,

PO Box 2234, North Ipswich, Qld 4305

Email: leonie.peasey@qm.qld.gov.au

Phone: 07 3432 5100, Fax: 07 3432 5114

This book is a fascinating account focussed upon the activities of one man; an American electrical engineer who arrived in Brisbane in 1896. His name was Joseph (‘Boss’) Badger, and his mission on behalf of the General Electric Company was to oversee the



introduction of electric trams for the Brisbane Tramways Company.

Interestingly, we learn that the impetus behind the company came mostly from overseas-born Melbourne businessmen, well connected with the London establishment and financiers.

Badger seemed to quickly establish himself in Brisbane. Inside two years, opportunity and necessity impelled the Company to offer him employment with responsibility for tramway operation, as Chief Engineer with the added role of General Manager. Thus began a reign in that role lasting 25 years, during which time he left his mark in numerous ways on the development of the electric tramways. An example of this was the suggestion that he extend tram lines where he chose, and the building of Parlour Car 100 for his exclusive use. Also known as the ‘Palace Car’, this bogie car with lounge type seats and carpeted centre isle was used by Badger from his home near Toowong and collected, at his whim, each morning senior staff and influential businessmen to network with along the way, whilst ordinary passengers were discontent with overcrowding on the regular service cars.

Each of the ten chapters takes one through the various phases impacting the tramways until the final chapter, when in 1923, the entity was taken over by the

Brisbane Tramways Trust, with Badger succeeding in achieving an equitable price on behalf of the shareholders. Cleverly interwoven into the story are numerous quotations, from a great variety of sources, including newspapers such as *The Sydney Morning Herald*, and a London *Times* investment writer. Another interesting feature is the periodic insertion of other relevant stand alone and highlighted reports or opinion pieces from letters pages in newspapers.

The book is illustrated with many previously unseen photos of the era, including the key personalities of the time. The pictures are enhanced by the clarity of their captions. Particularly pleasing is a diagrammatic map for the years 1885 to 1923 overlaying the electric tram routes over the original horse tram routes.

The author provides an interesting insight into the personality of 'Boss' Badger, with numerous examples of his assertiveness, resolve and capacity to find quick solutions to problems as they presented themselves. The stoush with the original tram construction contractors and the issue of tram No.1 being hurriedly equipped with trucks and electrical equipment are examples, just as Badger determined that locally made trams 'were cheaper than imports'. He also determined that the company engage in the employment of locals and their manufacture (a feature possibly inherited even today in Brisbane with buses being built by the Brisbane City Council). This approach by Badger reflected his opinion of himself as 'a company chief who exercised paternal vigilance over his workers'.

The 'benevolent' approach to staff in the early days and Badger's desire to maintain a happy workforce not influenced by outside forces, at a time of growing unionism, is amply explained in chapter 6. It inevitably put him on a collision course with the union movement, leading to the Brisbane general strike of 1912. There are some amusing quotes, such as '...Why are the badgerers badgering Badger?', and a comment from an Arbitration Court Justice in Melbourne describing Badger as a 'benevolent despot'. Badger was not one for backing down, and in due course the trams started running again, albeit under police escort.

Badger was no friend of the unions, and in due course we learn that a hostile government became another threat to the existence of the company. Badger showed his loyalty to the shareholders, as always, and continued to seek an equitable price for the company, which he seemed to achieve. Perhaps with his task done, he became the 'lonely American', rather than as the title suggests, 'One American Too Many', as described by a striker in 1912.

If you think this book will provide a history of tramway extensions in Brisbane and other detailed historical data of the company era, think again. This book looks refreshingly at a personal aspect of tramway history during an exciting development stage at the end of the 19th and early 20th centuries. There are interesting parallels with Mr Parker in Hobart, who ran the tramways there as a young engineer from 1893 until 1920, and although he also worked tirelessly for his far off shareholders, he made sacrifices driving trams without drawing pay during a time of hardship. It is hard to imagine that 'Boss Badger' would have made such a sacrifice and given up his parlour car, until he had it converted to a standard 'Dreadnought' car once he became one of the first motor vehicle owners in Brisbane.

Overall, this book is a very worthy read, typical of the fluent style seen in David Burke's books and articles. I just hope he may turn his mind to Sir William Goodman of Adelaide fame (and other cities beforehand), with his next book!

A footnote: Mr Badger's former residence (now heritage listed) at 28 Woodstock Road, Toowong – 'Arlington', today known as 'Endrim' – went to auction on 13 October 2012 and was passed in at \$2.5 million.

Howard R Clark



*Fifty fibreglass elephants have been placed around the city of Melbourne to celebrate 150 years of the Melbourne Zoo. This one in City Square illustrates Melbourne SW6 960, still at Glenhuntly depot.*

Steven Altham



## COTMA

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALIA  
 PO Box 61, Carlton South, Victoria 3053 [www.cotma.org.au](http://www.cotma.org.au)

From Colin Seymour and Ian Seymour

The Council of Tramway Museums of Australasia (COTMA) conference was held in Adelaide from 16 to 21 August 2012 with the AETM being the host organisation. The conferences are held every two years, with every third one being in New Zealand. The conference was first held in Adelaide in 1977, and most recently in that city in 1986. It had therefore been some time since the AETM had been able to present its exhibits – and Adelaide's public transport system – to conference participants.

This year's COTMA conference was based appropriately at the Mecure Grosvenor hotel in North Terrace near the Adelaide Railway Station and its adjacent tram stop. Approximately 70 participants (including some partners) attended. Partners were provided with separate activities on some days.

The conference commenced on Thursday evening, 16 August with an informal get together. It was officially opened the following day by Patrick Conlon, South Australia's Minister for Transport and Infrastructure and Minister for Housing and Urban Development.

Conference sessions were held over two days and included presentations on the following subjects:

- The challenges involved in the first extension of the Glenelg tram line from Victoria Square to City West – Manuel Delgado – Director, Strategic Projects, Office of the Chief Executive, Department of Planning, Transport and Infrastructure (DPTI)

- The new rolling stock, both light rail and electric multiple unit railcars, for Adelaide – Randall Barry – Director Rolling Stock Procurement, and Peter Haskard – Manager, Rolling Stock Engineering, Public Transport Services, DPTI
- The Glengowrie Tram Workshops and Depot Upgrade, particularly the work required to enable regular operations to continue while upgrade works were being undertaken – Nick Marciano – Manager Tram Maintenance, Public Transport Services, DPTI – see separate article in this issue
- The South Road Tram Overpass, the diversion track constructed to allow continuation of tram services, and the project's alignment with the Gallipoli Underpass project at the South Road and Anzac Highway intersection – Paul Gelston – Director, Road and Traffic Management, DPTI
- The Tramway Museum Journal of Record – core business or obsolete legacy? – Brent Efford – Wellington Tramway Museum



*Car 111 on the lakeside track near Samphire Road during the COTMA visit on 18 August.*

Steve McNicol



*A 3000 series railcar set at Jacketts siding at the National Railway Museum on 19 August.*

Tom Wilson



*Flexity tram 115 stops for photographs on the South Road overpass.*  
Tom Wilson

- How the managed process almost got Invercargill Birney completed on time and on budget – David Carr – Tramway Historical Society, Christchurch
- Effects of the Christchurch Earthquake on the City Tramway and Ferrymead and news on Tram Barn 3 – Dave Hinman – Tramway Historical Society, Christchurch.
- Modern rolling stock – is it worth preserving? – Craig Tooke – Melbourne Tramcar Preservation Association, Haddon
- Looking at photographic collections, and the problem of receiving photo collections with little information and their conservation – John Ward – Australian Railway Historical Society, New South Wales, Railway Resource Centre
- Using your photographic collection in display movies – looking at the use at the Ballarat Tramway

Museum of display panels, and making movies for the panels and the website – Warren Doubleday – Ballarat Tramway Museum

- The current Melbourne tramway scene – Rod Atkins – Ballarat Tramway Museum.

The formal conference dinner was held on Friday evening and included the formal presentation of COTMA Excellence and Recognition Awards. The EAR Award for 2012 was made to the Perth Electric Tramway Society for the book *Tracks by the Swan – The Electric Tram and Trolley Bus Era of Perth, WA.*

The first series of individual museum ‘brags’ and a quiz were held during the evening with further brag sessions held on the morning of Saturday 18 August. The first visit to St Kilda by conference participants



*Refurbished H type tram 351 at Glengowrie Depot on 19 August.*  
Tom Wilson

*Brill railcar 60 with trailer car ready to depart Victor Harbor on 20 August. Tom Wilson*



was on the afternoon of that day. More information on this visit and the later one on 21 August is provided in the museum notes for St Kilda in this issue.

Sunday 19 August involved a full day of touring. Tours to the National Railway Museum and to Glengowrie Depot were sponsored by the Rail Commissioner and the Public Transport Services Division of the DPTI, with all rolling stock used for the tour being provided at no charge to conference participants.

A two car set of 3000 class railcars took participants from Adelaide Railway Station right into the National Railway Museum at Port Dock for their guided tours. The railcar set then took participants to Bowden station for lunch at the Governor Hindmarsh hotel.

After lunch, participants walked to the Adelaide Entertainment Centre tram terminus where Citadis 205 took them direct to Glengowrie Tram Depot. At Glengowrie they were treated to a ride through the new tram wash facility. Kym Smith and Colin Seymour (wearing their DPTI hats) acted as depot tour guides.

The group departed Glengowrie Depot for Glenelg at 3.45pm in brand new Flexity tram 115. The tram then departed Glenelg at 4.05pm for a run through to the Entertainment Centre. The tram then returned as far as the Morphetville Racecourse stop where participants walked across for dinner at the Morphetville Junction hotel. After the dinner individuals could leave when they wished – all trams back to the City stopped at the Racecourse platform stop upon being hailed.

*COTMA participants have just arrived at the museum on car 282 for their second visit on Tuesday, 21 August. Note the new Colorbond fence just visible between restaurant tram 378 and E type car 118.*

Steve McNicol



Another full day of touring took place on Monday 20 August. Participants travelled by coaches to Victor Harbor, a slight detour being made to inspect the new Seaford rail line and long bridge across the Onkapinga River estuary.

At Victor Harbor, two horse trams were available for conference participants followed by lunch at the Hotel Victor. After lunch, participants travelled to Strathalbyn with photo stops and a break at Goolwa on Brill Railcar number 60 towing a suburban trailer car used on the cockle train service.

The final day of the conference on Tuesday 21 August involved the official COTMA General Meeting, held at the St Kilda hotel, followed by lunch. Participants then paid a return visit to the AETM.

The COTMA Executive Committee thanks Ian Seymour who undertook the time-consuming lead role of organising the conference. It also thanks Kym Smith who arranged local guest speakers and visits on 19 August to the National Railway Museum and to Glengowrie Tram Depot, and John Pennack who organised activities for the visits to St Kilda. Special thanks are also due to Simon Green of Ballarat who organised and ran the well-received partners' tour

which was attended by 10 partners and enjoyed by all. Richard Gilbert, also of Ballarat, arranged and ran a three-day post-conference tour to Moonta, Kadina, Barossa Valley, Murray Bridge and Angaston. The tour was very successful with over 30 people participating.

### COTMA Executive

The COTMA Executive Committee following the Adelaide 2012 Conference General Meeting is:

Ian Seymour – Chairman  
 Dave Hinman – Deputy Chairman  
 Rod Atkins – Executive Officer  
 Mal Rowe – Assistant Executive Officer  
 Howard Clark – Treasurer  
 Peter Hyde – Australian Museums Liaison Officer  
 Clinton Pearce – New Zealand Museums Liaison Officer  
 Warren Doubleday – Immediate Past Chairman.

This meeting saw the retirement of Warren Doubleday as Chairman of COTMA after 10 years in the role. Ian Seymour of AETM has taken over the position. Ian is the current President of the AETM and is well known by Australasian COTMA Members.

## LOFTUS

### SOUTH PACIFIC ELECTRIC RAILWAY CO-OP SOCIETY

PO Box 103, Sutherland, NSW 1499

[www.sydneytramwaymuseum.com.au](http://www.sydneytramwaymuseum.com.au)

From *SPER News*

### New shed

With more than five years having passed since we commenced fund-raising and planning for a new shed, a construction certificate has finally been issued. The shed will be both a shorter and narrower building than originally envisaged, due to constrictions with the adjacent pine trees and the need for greater space for landscaping on the highway side.

Footings have been poured and a retaining wall about a metre high has been erected. Erection of the steel frame commenced on 8 October, and by mid-October wall cladding was erected on both side walls. This leaves the roof, south-end wall and the north-end shutters to be fitted. Small emergency access doors will be installed on the side that faces the Princes Highway.

### YMCA building

Scot Aston and several CSO workers are continuing brickwork on the second floor around the lift shaft and the south-end wall. Almost 6,000 bricks have been delivered since April.

We were fortunate to receive a very supportive half-page article in the *St George and Sutherland Shire Leader* on 9 October, under the headline 'Tram museum needs \$300k', following an interview with Howard Clark the previous week. The article covered the history of the original building in Bathurst Street,

David Canini clears the site on 15 September for the new south shed.  
Martin Pinches



The framework of the shed was erected by 10 October.

Martin Pinches

The external walls being erected on 15 October.

Martin Pinches





*C car 37 was placed on its refurbished Peckham truck on 26 September and driven onto the traverser for photographs.*  
Mick Duncan

Sydney, the re-erection of the facade, and our intentions for the use of the structure at Loftus. We hope this publicity brings external support in the future.

#### **P 1729**

To advance the restoration of this car, a spare Melbourne No. 15 truck with motors, and six corridor car wheel sets together with eight axle boxes and some brake components were dispatched to Christchurch in September. The wheel sets will be re-profiled and the axle ends modified for fitting to two new Sydney No. 9 trucks that are being made up in the Christchurch Tramways workshop. Other components will be used to fit out the truck frame we received as part of an exchange of tramway equipment with the Seashore Trolley Museum at Kennebunkport, Maine, USA. Motor bearings will be made in Christchurch, with one of the trucks being fitted with the motors from the No. 15 truck. To minimise shipping costs, the remaining motors and bearings will be fitted to the trucks at Loftus. When the project is completed there will be a pair of operational trucks for both P 1729 and PR1 1573. While this work is under way, Geoff Spaulding is carrying out extensive repairs to the roof of No. 1729.

#### **Sydney C 37**

Rod Burland has fitted the floor hatches to C 37 and is currently installing the floor slats. The car's seat support timbers have been varnished, and the two air tanks have been fitted on pedestals under the seats. Andy Rowe of Christchurch Tramways fitted new coil springs and rods, and new motor suspension beams to the Peckham truck.

The body of C 37 was lifted back onto its truck on 26 September. It was driven onto the traverser for photographs using its own motors; this was the first time since 1924 that the car has moved under its own power. As it is highly improbable that trams will be running again in Christchurch before September 2013, C 37 is likely to see service at Loftus before it is transported to New Zealand.

#### **Sydney O/P 1089 and O 957**

Frank Cuddy has overhauled the two reversers for these cars and is working on the line switches and circuit breakers for C 37.

#### **Cable grip car 322**

Warren, Terry and Rainier have fabricated three grip mechanisms for this car. One is for our grip car while the others are for the Powerhouse Museum and for the Hawthorn Depot Museum in Melbourne. Although the mechanisms have been made from original detailed drawings, they are only complete to just above rail level, with the below-ground parts having been deleted as the cars will only be used for display purposes.

#### **Ballarat 37**

Work continues on Ballarat 37 with the brake cylinder receiving attention and an overhaul occurring on the car's brake gear.

#### **Sydney C 29 and Bendigo 11**

Attention to the paintwork on Bendigo No. 11 has been carried out by Joe Spinella and Peter Butler. In

*Our Bedford tower wagon attended the Council of Motor Clubs' annual display day at Eastern Creek on 9 August.*

Geoff Olsen

*Below:*

*The installation of a frog pan and adjustment of the overhead wire over the new western track at the Railway Square Waiting Shed was carried out from 99u on 22 September.*

Martin Pinches



addition to this work, repainting has commenced on the exterior of Sydney tram No. 29. Windows have been removed for revarnishing and arrangements are in hand to undertake the coach lining and gold leaf work required. Car 29 is currently being repainted in its existing crimson colour scheme.

### Other tram movements

All three of the trams at Glenreagh Mountain Railway together with spare motors and other parts, have now been retrieved and transferred for safe off-site storage under tarpaulins. This has been an

expensive lesson. A goodwill gesture by STM to GMR was followed by an upheaval in the membership structure of that body, and a need to rescue the trams from likely destruction.

In other developments, R 1849 and two motored No. 1 Melbourne trucks have been retrieved from a property near Robertson in the southern highlands of NSW. One of the trucks has GE247 motors whilst the other has the more usual MV101 type, which will be valuable as spares. We are grateful to Chris O'Sullivan for facilitating the donation of this tram.

A full complement of R1 class bulkhead and drop-centre fixed seat backs also came with the car as well as an end coupler. The body is sound, and the roof had been protected by a fibreglass cover. R 1849 had been on the property for about 20 years, and before that it was located for a time at the old North Sydney tram depot site as part of the Big Bear store complex. A change of property owner required the car to be moved at short notice, and no later than the day of its move. At this stage it is not envisaged that 1849 will be a candidate for restoration and future use at Loftus, and other opportunities for preservation are being explored.

### Overhead work

Continuing adjustments to the Depot Junction frog have been made and further work on the various spans in the area will be carried out after installation of the new waiting shed point work.

The frog pan for the second road in Tramway Avenue near the Railway Square Waiting Shed was installed and is operational for Sydney corridor cars. Trials for the other operating cars in the fleet will determine whether further alignment work is required.

As part of the new overhead wiring at the Railway Square Waiting Shed, a team from the paintshop





*The eastern track north of Pitt Street being dismantled for reconstruction on 8 September.  
Martin Pinches*

repainted another four of the Mannesman cast iron poles near the Depot Junction. This means that virtually all of these poles in the public area of the museum have been repainted.

### **Trackwork**

From July to October, a range of trackwork tasks were carried out in the vicinity of the Depot Junction and the Railway Square Waiting Shed. In total approximately 41 cubic metres of concrete was used to complete this work, which included the new eastern and western tracks from Depot Junction and the new points to the western track, down to the Railway Square Waiting Shed. Many thanks to all the members who assisted in this important job over an extended period.

Other work has included the replacement of 22 sleepers on the Sutherland line which has been closed to passenger operations beyond the TAFE crossing for several months.

### **Southern Sydney Volunteer Expo**

This expo was held at the Sutherland Entertainment Centre on 11 October, with various volunteer groups maintaining information stands. Peter Kahn and John McFadden looked after our stand, and some prospective volunteers came forward. Presentations were made to various individuals and groups for the 'Volunteer of the Year' awards. Our gardening team of Andy McDonald, Eva and Ted Gay and Ian MacCowan received a well-deserved certificate to recognise their efforts.



*Reconstruction of the eastern track north of Pitt Street was well under way a week later.  
Martin Pinches*





*Welding steel angle iron sleepers and levelling of the new track curve just south of the Railway Square Waiting Shed on 12 September.*

Martin Pinches



*Two days later, the 'four-foot' of this track was concreted, with surplus concrete being used north of Pitt Street. The area to the left – the 'six-foot' - was concreted on 19 September.*

Martin Pinches



*Bill Parkinson uses the fork lift to move rails on 8 September.*

Martin Pinches



*On 23 August ITSR senior staff learn how to 'read the track', a requirement where derailments and other track irregularities are concerned. Ian Saxon*

**Independent Transport Safety Regulator training exercise at Loftus**

On 23 August, 13 senior staff and investigators from the Independent Transport Safety Regulator (ITSR) attended a training exercise at Loftus.

The number of investigators required the team being split into two groups, with each group attending two training exercises. The rolling stock components session, which dealt with bogie and tramcar construction, wheel profile and the rail interface, was conducted by Grant Holliday who is Director Technical Services with ITSR. The track condition and components session was conducted by STM's John Gorman who took the groups on a tour of the Sutherland line from Pitt Street to the end of the new track work.

The teams then came together to be shown track geometry recording techniques by John Gorman, using the Royal National Park line. The techniques are used in the course of investigating a derailment or other accident. The Royal National Park line was selected as it had recently been resleepered by John Holland to a high standard.

**RailCorp Community Challenge**

RailCorp attended the museum on Wednesday, 12 September for their Community Challenge. RailCorp were conducting a management development program involving 24 middle managers, engineers and project support staff based at Bellambi, south of Sydney.

Part of the Challenge involved their staff attending the museum as volunteers to work with STM members



*Volunteering as part of the Railcorp Community Challenge, a group of middle managers, engineers and project support staff tried their hand at replacing timber sleepers on the tram line north of Pitt Street. Ian Saxon*

on various activities for a good part of the day. They provided assistance in many useful tasks at the museum including mowing, gardening, and track-laying.

The track-laying crew worked with our team and were able to replace ten sleepers on the Sutherland line. This was a truly remarkable feat considering that the team of about ten RailCorp staff were middle managers used to working in the office.

Another part of their challenge was to interact with a local community group, in this case with children from the Cooks School at Loftus, who have special needs, and deaf people from Ridges. At lunchtime, the RailCorp staff put on a barbecue spread for all those present including the STM traffic staff.

From all reports we believe that the RailCorp staff and the other visitors had a most enjoyable time.

## BALLARAT

### BALLARAT TRAMWAY MUSEUM

PO Box 632, Ballarat, Victoria 3353

[www.btm.org.au](http://www.btm.org.au)

From Dave Macartney and Peter Winspur

During July the Museum's 1952 Bedford tower truck was sent away for some needed much attention. Neale Goad, a local motor mechanic has an interest in elderly vehicles, and was able to identify and correct various ailments which had developed over the years. Having served three tramway systems over the past 60 years, the Bedford is set to continue for some time to come.

Work was also carried out on the points at the north end of the Gardens Loop during July. The point blade had settled in its housing over the years, and required building up by welding to return it to the correct

profile. A specialist welder was called in to carry out this work. Following this, the Depot Junction points were tackled. The problem here was the point mechanism which was badly worn. Some remedial work was carried out at the depot, and the points now go over with less effort and more certainty.

No. 27 remains out of service while the bearings are away at Puffing Billy at Belgrave for re-metalling. Their return is imminent, and it will be a relief to get them installed and bedded in to see this popular tram back in service.



*No. 18 being loaded for its trip to Preston on 15 October 2012.*

Neil Lardner



*No. 18 on the wheel lathe at Preston Workshops on 16 October.  
Alastair Reither*

Repairs to the roof of No. 13 are now close to being completed. A new kickboard has been made to replace one that was badly split and had been plated since the SEC days. After fitting new leaf springs, the car is expected to be painted before the end of the year.

No. 18 made a quick trip to Melbourne during October to spend a day on the wheel lathe at Preston. The car still had its SEC profile flanges, and was the only car in the running fleet still in this condition. Though relatively expensive, this saw the job carried out in just one day. The tram was loaded on Monday the 15th and returned to Ballarat on Wednesday the 17th. Previously we have dismantled the entire truck, removed the motors and sent the wheel sets off for attention. With No. 18 approaching its centenary in

November 2012, our aim was to have the car in running condition by that time. The tram will be given a heavy overhaul after the celebrations.

Ballarat Tramway Museum is an accredited museum under the Museums Australia accreditation program. Our five yearly re-accreditation was due this year and we are pleased to report that we were successful in achieving re-accreditation.

On 26 December 2012 the Museum will be celebrating the 125th anniversary of the opening of Ballarat's tramway system by operating Horse Tram No. 1. It would have been among the trams that ran on the opening day in 1887.

## BENDIGO

### BENDIGO TRAMWAYS

1 Tramways Avenue, Bendigo, Victoria 3550

[www.bendigotramways.com](http://www.bendigotramways.com)

From Len Millar and Anita Bagley

#### Overhaul of SW6 959

The major overhaul of Yarra Trams' SW6 959 is progressing well. Westmain Aust Pty Ltd has finished welding the steel underframe, and replacement of the bolsters, side sills and stringers has been completed. Work on the car's panels and flooring is under way, with our coach-building team, led by Luke Jenkins, liaising regularly with staff at Preston to ensure the integrity of the final product. Painting has commenced

under the guidance of Les Woodfield, and Mike Campbell, our new part-time fitter and turner/conservator, has been refurbishing the fittings.

#### Elsewhere in the workshop

Work has commenced on the Sydney Tramway Museum's Melbourne Y1 class car No. 611. A final

coat of Navy Dressing has been applied to the roof, and Darren Hutchesson and Julie Cain have been carrying out the laborious task of removing successive coats of varnish and paint on the ceiling. Tony Cliff has been working on re-upholstering the seats.

Sydney's Launceston 14 has been receiving attention from Mike Campbell, who is using his skills in wood and metal-working to restore the car's side panels.

We have also been advancing the restoration of Electricity Supply Company No. 8, and car's the new saloon seats look a treat! Our aim is to complete this project in time for our fortieth anniversary celebrations in December.

Birney 302 has emerged after some time in storage and protracted refurbishing. Most of the early work was carried out by Work for the Dole teams. Apart from looking resplendent in its original Port Adelaide livery, the car is now fitted with the new Talking Tram Tour destinations (Gold Mine, Joss House, Depot, etc.). The car's electrical equipment has also been modified in several respects: an inverter has been installed, so that drivers no longer have to recharge the on-board battery from 240-volt mains power at the end of the day; and wiring for the headlight has been transferred from the 600-volt DC system to the on-board 12-volt system. The headlight now activates when the driver inserts the key in the console at the 'new' end. The wheels have been re-profiled and new brake shoes fitted, so drivers have been exercising extra care to stop smoothly.

### Pall Mall's centre poles

After years of discussion and delay, some of the original ESCo centre-bracket poles along Pall Mall that date from 1903 will soon be replaced. These fine ornamental poles have had a hard life, with rust and damage from traffic taking their toll. Powercor is organising the replacements and they will be in an appropriate heritage style. The new poles will be a little taller, so that our trolley wires and Powercor's lines are separated more widely. The tramway overhead fittings will be changed as the new poles are being installed.

### The 'Blues' trams

On 22 September, Y1 610 operated with a new audio soundtrack in preparation for the Blues and Roots Festival that will be held from 8 to 11 November. Local musicians Shannon Bourne and Talisa Jobe played a mix of blues music on the crowded tram. Shannon commented that it was a great atmosphere for a gig. The event was reprised on 27 October, with Josh Owen and Jimmy Williams performing on that occasion. We are hoping that Adelaide H car 369 will be packed to the rafters during the festival, given that it has 56 seats.

Event organiser Julius Porlai has done a great job combining up-close and intimate music with some of Bendigo's best loved features.

Details of the Blues and Roots Festival can be found at [www.bendigobluesandroots.com.au](http://www.bendigobluesandroots.com.au).



*Tram 302 in the depot yard after its refurbishment.*  
Bendigo Tramways



*Yarra Trams' 959 showing its new cab framework.*

Bendigo Tramways

### **Our fortieth anniversary**

On 9 December 1972, Dick Hamer, then Premier of Victoria, broke a bottle of Balgownie champagne over the front bumper of Birney 30 and officially launched the Bendigo Talking Tram Tour. This was followed by a 15-month trial using four trams.

Four events are planned as part of the celebrations. On Saturday 9 December the Talking Tram Tours will be free, with a 15-minute service being provided. The cars used on the day will include those that inaugurated the tourist service in 1972.

Tours of the depot and workshop will also be free, and we are looking forward to showing our visitors the craftsmanship and techniques that we use for servicing and restoring our own trams as well as those operated by kindred organisations in Australasia. We are especially proud of the fact that our 109 year old depot is the oldest operating depot in Australia.

There will be free tours of the Trust's Joss House, and at the Central Deborah Gold Mine we will be turning up the heat – to 1060 degrees to be precise – to enable several gold-pouring demonstrations. Visitors will also be able to try their hand at panning for gold.

At 2:00pm we will officially celebrate 40 years of Talking Tram Tours with the launch of ESCo No. 8 at the depot and workshop. No. 8 was built by Duncan and Fraser in Adelaide in 1903, using Brill components. It was withdrawn by the State Electricity Commission in 1947 and was the first tram acquired by the Bendigo Trust. Its acquisition helped generate public support for the retention of Bendigo's trams.

### **Safety management**

The review of our Safety Management System for 2012-13 has been successfully completed, and the Bendigo Trust Board has adopted it. There were no major changes, but some minor modifications and clarifications.

Our Safety Management System governs our day-to-day operations, both out on the street, and in the depot and workshop. Its aim is to provide a safe environment for our Talking Tram Tour passengers, and for the visitors who enjoy a conducted tour of the depot and workshop, or browse at our new Souvenir Shop. The system provides assurance that all our activities are conducted with the well-being of people in mind.

Every now and then we are reminded of the so-called 'good old days' before thought was given to safety management. One of our volunteers, Darrell Tonkin, recently donated a photograph to our archives. It captures how Darrell used to return broken-down trams to the depot. He towed them using his station wagon. According to Darrell, it did not do his gearbox much good, but it did the job at the end of the day. These days, the Ford tractor would be used to perform the rescue. A utility with flashing lights would also be in attendance.

Our depot starter, Anita Bagley and others will be conducting audits as required over the 12 months covered by the update.

*Shannon Bourne and Talisa Jobe performing in the first Blues tram on 22 September.*

Frank Steele



## WHITEMAN PARK

**PERTH ELECTRIC TRAMWAY SOCIETY (INC)**

PO Box 257, Mount Lawley, Western Australia 6929

[www.pets.org.au](http://www.pets.org.au)

From Mike Stukely

### Annual General Meeting

The thirty-first Annual General Meeting of the Perth Electric Tramway Society was held in the Old School Room in the Village, Whiteman Park, on, 29 July. The following officers and councillors were elected: President, Michael Stukely; Vice-President, Allan Kelly; Secretary, Robert Pearce; Treasurer, Tony Kelly; Membership Secretary, Beth Kelly; Councillors, Garry Barker and Darren Ward.

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

During the 12 months to 31 March 2012, six trams travelled a total of 10,228.8km on 230 running days (the 2010-2011 total was 9,787.2km on 231 running days). The mainstays of the fleet were ex-Melbourne SW2 426 (3,571.2km) and W2 329 (3,252km) with significant running also by W2 441 (1,850.4km). W4 674 (1,005.6km) and, on a couple of days, W2 393 (57.6km) were available as backup/emergency cars only. There was again occasional running in most months by Fremantle 29 (492km). A total of 18,322



*The completed first panel of track on the new truck storage road south of the Lindsay Richardson Carbarn on 21 July.*

Roy Winslow



*SW2 426 has emerged from the native bush at Bennett Brook Culvert and runs through Farmgate Curve towards the Car barn on 6 October.*

Michael Stukely

*A length of rail is carted from the rail compound to be installed on the new truck storage road on 21 July. Some of the spun concrete poles obtained in 2011 can be seen at right.*

Roy Winslow



ticketed passengers were carried, which was lower than the previous year (19,754).

**Traffic operations and service cars**

The Society's membership had reached a record total of 126 at the end of March 2012, up from 119 the previous year.

A very dry winter in Perth resulted in fine (although often cold) days and good levels of patronage on the trams, including during the July school holidays. Patronage through September was very good, and this



*The track crew watch SW2 426 pass over a newly installed sleeper near the Village road crossing on 14 April.*

Michael Stukely



continued with fine spring days through the October school holidays. We thank member, Sam McGuinness who travelled from Sydney to crew the trams and then stayed an extra week to continue through these holidays with services running seven days per week.

Melbourne W2 441 and 329 were the main service cars in the winter months, with W4 674 carrying out the major task in September. Fremantle 29 ran regularly on Carbarn tour days, as usual, and made occasional appearances on other days.

### Tram restoration

The modified mechanical brake system on WAGT E class 66 was re-installed and successfully tested. Minor work remains to be done, prior to obtaining the necessary approval from the Rail Safety Regulator for No. 66 to be available for traffic.

Bryan Adcock and team have continued the body restoration work on Perth B class single-truck car No. 15, which will be used in the future as a static display by the South Perth Historical Society. Newly-cast seat brackets have been buffed to a high standard by Michael Mason-Coe. Bryan and John Budd temporarily installed an end bench seat and a newly-assembled saloon seat as a trial, with the final finishing and staining of the saloon floor boards now to be done before seats are installed. Casting of the fittings for the four concertina platform gates has been arranged by Noel Blackmore with Ausco engineering. Replica destination boxes showing '28 Como' for mounting at the cab ends have been organised by Bryan Adcock, and look superb. Bryan is progressing with installing the brass fittings to the car ceiling for supporting the strap-hangers and conductor's bell cords.

### General works

The track team has continued the spot replacement of rotted timber sleepers with steels. On 4 June, four members replaced five sleepers between Red Dam and the Village, with lifting and packing. On 21 July a larger team installed a panel of new track at the west end of the new truck storage road to the south of the Lindsay Richardson Carbarn, where preparatory excavations had been carried out. This enabled the transfer of three stored trucks from the storage road south of the WP Pennenburg Workshop, to make room for trams to be stored there. The points on Road 4 leading to the pit road on the Oketon Geddes Carbarn fan were excavated to allow re-gauging. The north points of Stockmans Loop were also regauged. On 6 October a team of ten members replaced 17 sleepers between the Carbarn and Mussel Pool and two near the Tractor Museum – this was the best attendance on a regular weekend workday for several years.

Bracket-arms have been fitted out by Duncan McVicar for installation on the next batch of steel traction poles scheduled to replace rotted timber poles. The cherry-picker is once again available for overhead maintenance following repairs to the Albion truck engine. In the engineering shed, power points were installed at the south end.

The motor of the two-man rail trolley is now functional, with further work by the motor vehicles team still to be done. The ex-WAGT pole truck has been moved to the WP Pennenburg Workshop for replacement of the tyres. The cab timbers will be assessed for restoration. Weed spraying around the museum site has been carried out by Allan Kelly and team, while Darren Ward has progressed spraying along the main line.

*On the way to the Village on 21 April, SW2 426 passes the old logging whim from the Lew Whiteman Collection on display at the original 1985 Mussel Pool tram stop.*

Michael Stukely



# FERNY GROVE

**BRISBANE TRAMWAY MUSEUM SOCIETY**

PO Box 94, Ferny Hills, Queensland 4055

[www.brisbanetramwaymuseum.org](http://www.brisbanetramwaymuseum.org)

From Peter Hyde

Activity at Ferny Grove continues to centre on the restoration of prototype FM 400 and Dreadnought 136.

FM 400 now has all the seats, stanchions, grab rails and straphangers installed together with the side destination boxes. A task still exercising the minds of the restoration team is the re-bending of anti-climber bumper bars from a Melbourne W5 to the more elegant shape of the front of an FM!

The team working on Dreadnought 136 have of course found their own difficulties. The headlight castings were taken to a local plating works to obtain a quote for re-chroming or possibly nickel replating. The surprise finding was that they were originally silver plated – and the cost of restoration was virtually the same whether silver, nickel or chrome was used. Needless to say, silver was chosen.

All of the components for the 11kV switchgear for the new substation were moved into the building on 1 September.

On Friday 28 September, 40 members and supporters gathered at Il Posto restaurant to mark the 50th anniversary of the fire that destroyed Paddington Depot. The restaurant is situated on the site – approximately where roads 11-13 were located. On the following Sunday, 30 September, the museum opened early at 10:00am for a car club rally, and experienced a very busy day with visitors encouraged by media coverage of the anniversary of the fire.



*Interior view of FM 400 showing newly installed grab rails and straphangers.*



*Alex Tafe and Kev Maizey at work re-wiring the lights in Dreadnought No. 136.*

All photos by Peter Hyde

*FM 429 with cars from the FE-FC Holden Car Club on 30 September.*



*11kV switchgear components being moved to the new substation.*

*Museum members and supporters at the dinner held to mark the 50th anniversary of the destruction of Paddington Depot.*





Newly installed grabrails, strap hangers and side destination boxes in FM 400.

# HADDON

**MELBOURNE TRAMCAR PRESERVATION ASSOCIATION**  
 324 Sago Hill Road, Haddon, Victoria 3351 [www.mtpa.com.au](http://www.mtpa.com.au)

From Kym Smith

### Trackwork

The laying of rails for the curves have now been completed with all joints welded, all tie-rods installed and all dog-screws drilled and driven into sleepers. Packing and final levelling of the south west curve is well advanced prior to it being backfilled to rail head. The next stage of the project requires realignment and tightening of the overhead to match the curves. Once this is complete, the track can be opened for passenger service.

### Retaining wall

In conjunction with work on the south west curve, the retaining wall supporting the track formation at the western end of the straight has been rebuilt and strengthened. Provision has been made for a driveway to the lower paddock, with further work to be undertaken at the centre of the straight and at the Lower Terminus to bolster the retaining walls at these locations.



*Anthony Smith driving home a dog-screw into the last of the sleepers on the south west curve as Alastair Reither supports the sleeper and Kym Smith observes the work.*  
 Jacqui Smith

*After a successful trip to the end of the packed track, Kym Smith returns W3 663 to the Car barn fan, as Frank Schroeders and Alastair Reither observe the wheel-to-rail interface on each side of the tram. Jacqui Smith*



*Kym Smith welds in the last section of outer rail to complete the curves behind the Car barn.*

Jacqui Smith



*The replacement retaining wall near the south west curve. Jacqui Smith's small vegetable garden can also be seen near the small shed in the background ...not many tramways have their own vegetable garden!*

Anthony Smith



*Alastair Reither grinds and surfaces one of the welds to smooth it prior to test running.*

Jacqui Smith

### AGM and elections

The 29th AGM of the Association was held on 15 September. This year was the first in which an amendment to our Rules of Association took effect; the initial step towards two year terms resulting in only half of the Committee of Management positions becoming vacant. The following members were re-elected:

- President – Kym Smith
- Secretary – Anthony Smith
- Committee Person – Mandy Gipps
- Committee Person – Jacqui Smith

# ST KILDA

**AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA) INC**  
 PO Box 213, Salisbury, South Australia 5108 [www.trammuseumadelaide.com.au](http://www.trammuseumadelaide.com.au)

From Colin Seymour and Kym Smith

## New depot and workshop

Work continues on the new depot and workshop with the footings laid for the southern wall, services reconnected and planning under way for the concreting of Road 4.

Application has been made to History SA for a grant under the Community Museums Program to enable installation of security and fire protection devices in the new shed. History SA was sufficiently pleased with our management of the Trolley Bus Pavilion project to place an extract of our acquittal report on its website. With the successful completion of that project we hope we will be able to obtain funding to complete our new depot and workshop. We still need donations from members and friends to carry out this work, and it is often easier to obtain a grant if we can show that the Museum is contributing substantial financial support for a project.

## Site improvements

A general clean-up of the site took place in preparation for the COTMA conference. A green

Colorbond fence was erected from the new depot shed across the area where the old workshop once stood, blocking the area off from public view and access. Additional pavers were also laid in the area in front of the old kiosk.

## H1 381

Bruce Lock, Charlie Rodgers and Christopher Steele have continued the task of refurbishing the interior of H1 381. New flooring has been laid and the seats have been reinstalled. Work is now concentrating on fitting the numerous aluminium treads around floor hatches and doorways.

## H 365

H 365 was delivered to the Museum in December 2005 for storage on behalf of its owner who intended to turn it into a Bed & Breakfast in the Adelaide Hills. No. 365 was one of ten operational H cars disposed of around that time that had been refurbished in the 1980s. We had planned to strip the tram for useful parts before the owner took the body away.



*Bib and Bub set 14 & 15 at the museum. They made a special run to the loop on the afternoon of 21 August.*

Steve McNicol

*Cars 1 and 303 pass car 365 on their return journey to the museum on 21 August.*

Steve McNicol



With the passing of the years, it was apparent that the owner's proposal for the tram was not going to happen. The Executive Committee therefore decided to buy the tram for a price similar to that paid by the owner in 2005. Car 365 was then advertised for sale to other museums. However, as most Australian museums had by then acquired an H tram, no offers were received.

Museum Secretary, William Adams recently purchased the tram from the Museum. In the short term the tram will be available for operations at St. Kilda. This is a similar scenario to H 378 (restaurant tram) and R1 1971, both of which are not owned by the Museum. William headed the cleaning of the tram and it entered traffic on 21 August for the COTMA conference.

### **COTMA visits**

Participants at the COTMA conference held in Adelaide from 16 to 21 August 2012 attended the museum on two separate occasions. To provide as many trams and tram rides as possible, different trams were generally used on each day.

Participants paid their first visit to St Kilda on Saturday, 18 August. Five trams were in service on this day: B 42, E1 111, R1 1971, F1 282 and H 360. A 15-minute service was run for most of the afternoon with trams crossing at Mangrove Loop. Participants were allowed to change trams at the loop. Being closed

to the public on the day, COTMA participants had free run of the site and were able to see the new workshop and inspect trams in areas that are not open to the public.

On the final day of the conference, Tuesday 21 August, participants visited the museum after the official COTMA General Meeting.

Trams used on the day were F1 282, A 1, G 303, H 365, A 14 & 15 (Bib & Bub), E 118, H 378 (restaurant tram) and D 192. Once again, a 15-minute service ran for most of the afternoon with trams crossing at Mangrove Loop to allow participants to change trams.

Passengers travelling on restaurant tram 378 were well provided with catered nibbles by the parents of our Secretary, William Adams. Bib and Bub set 14 & 15 made a special run to the loop later in the afternoon, participants riding on car 15 only (car 14 being internally incomplete).

Regular tram rides continued until about 6:30pm. A good crowd remained for the barbeque in the evening and were shown films from member Tim Bell's vast collection. A last ride in car 365 took place at about 7:30pm, with participants departing for the city around 8:30pm.

We were exceptionally fortunate in having fine winter weather for all outside activities, including the outdoor film show.



*Restaurant tram 378 about to enter the loop on its journey from the tramway museum at St Kilda on 21 August 2012.*  
Steve McNicol



*Adelaide E type car 118 crosses Mangrove Street on its journey from the Playground at St Kilda to the tramway museum on 21 August 2012.*  
Steve McNicol