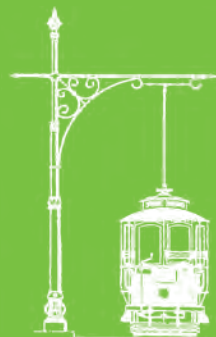


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TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM
MAGAZINE

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Front Cover:

*Sydney freight car 24s is returning from a trial run to the Sydney Tramway Museum's north terminus on
11 November 2017.*

Martin Pinches



*The Sydney Tramway Museum's Overhead Supervisor,
Gkenn Killham adjusts the overhead at the northern
terminus On 18 October 2017.*

Richard Jones

THE HORSE TRAMWAYS OF MOONTA, GAWLER AND VICTOR HARBOR

Colin Seymour

This article draws on the detailed research of the late Ken McCarthy which resulted in three articles in Trolley Wire in the 1980s. In addition, it updates the details for Victor Harbor and takes advantage of some different photos and the use of colour (not available to Trolley Wire at the time).

Preview

It is generally known that Adelaide had an extensive horse tramway system which preceded the electric trams (12 operators and 180 horse trams). This article looks at the three South Australian country horse tramways.

Whilst there is some photographic evidence of conventional passenger horse trams being used at places like Strathalbyn, Goolwa and Port Broughton, they were a temporary measure prior to the establishment of traditional steam railways (excepting at Port Broughton where a Fordson rail tractor replaced horse operation in 1926).

Moonta and Gawler clearly had urban horse tramways along their main streets, operating similarly to the extensive horse tramways of Adelaide. In fact, Moonta had three tram routes.

Unlike the commuter services of Moonta and Gawler, the Victor Harbor to Granite Island tramway was established for tourist purposes.

All three horse tramways were owned by the South Australian Railways (SAR) and were built to the 5ft 3in gauge generally used by the SAR.

The Moonta and Gawler horse tramways provided feeder services to the main SAR railways, while the Victor Harbor horse tramway provided a tourist service to Granite Island from the Victor Harbor railway station.

The three country horse tramways outlasted the city horse trams by a number of years. The Moonta and Gawler horse tramways closed in 1931, and original Victor Harbor horse tramway closed in 1955.

Moonta Horse Tramway

Introduction

The Kadina and Wallaroo Railway and Pier Company was established in 1861 to service the rich copper fields at the Wallaroo Mines at Kadina on the upper Yorke Peninsula of South Australia. They built a 5ft 3in gauge railway to transport the ore to the Wallaroo smelters and the pier. The ore wagons were horse drawn. By 1866 the railway had been extended 10 miles in a southerly direction to Moonta and Moonta Mines. The railway was further extended in 1870 to Moonta Bay where a short jetty had been built in 1865. Passenger services to Moonta Bay were operating regularly by 1877. During 1878 a new jetty was completed at Moonta Bay and the line was extended to the jetty.

With the planned expansion of the SAR 3ft 6in gauge railway from Port Wakefield to Kadina, the Kadina and Wallaroo Railway and Pier Company was taken over by the SAR in 1878 and progressively converted to the narrow gauge. SAR steam trains reached Wallaroo by 1880, but did not reach Moonta and Moonta Mines until

Two horsecars at the Moonta Bay terminus, circa 1925-1930. The tramway waiting shed is seen at the left, with the bandstand / kiosk beyond the motor car. A trolley, possibly used on the jetty appears at right.

The National Trust of South Australia, Moonta





An open top and top covered horse cars are seen moving eastwards along George Street, Moonta approaching Blanche Terrace circa 1910. The Moonta Hotel is the first building at the left. K.A. McCarthy colln

1891. (The narrow gauge railway was later converted to broad gauge in 1924).

The conventional street tramway

The broad gauge Moonta Mines to Moonta Bay railway via Yelta sidings and Moonta Town carried considerable local passenger traffic. However, the Moonta Town to Moonta Bay section was not converted to 3ft 6in gauge when the Moonta Mines railway sidings were altered. As a result of representations, the SAR decided to develop the remaining broad gauge line into a horse tramway system.

In 1896 the approach of the Moonta Bay horse line at the western end of the Moonta township was diverted into George Street through the town centre and then extended to the east along the side of North Terrace past the Moonta Mines to East Moonta. A passing loop was constructed on the single track roadside line near the school at Moonta Mines. A new tram shed was erected at the eastern end of George Street and at the same time a branch tramway opened to Hamley Flat. This new line was largely on a private right of way terminating in the 'occupation leases'.

The tramway from East Moonta to Moonta Bay was 4 miles 2 chains in length while the Hamley Flat branch accounted for an additional 1 mile 10 chains. The capital cost of the tramway amounted to £11,034 and the six tramcars were valued at £1,524 each.

The Moonta tramway system served a population of some 12,000 people in the 1890-1910 period and carried out all the urban duties of similar facilities in much larger towns and cities. Miners and businessmen were carried to and from work, shoppers used the trams to reach the Moonta commercial district while holiday makers were carried in a westerly direction to the beach at Moonta Bay during the long hot dry summers. It is recorded that during the Christmas-New Year period in 1896 the trams carried over 10,000 people to Moonta Bay.

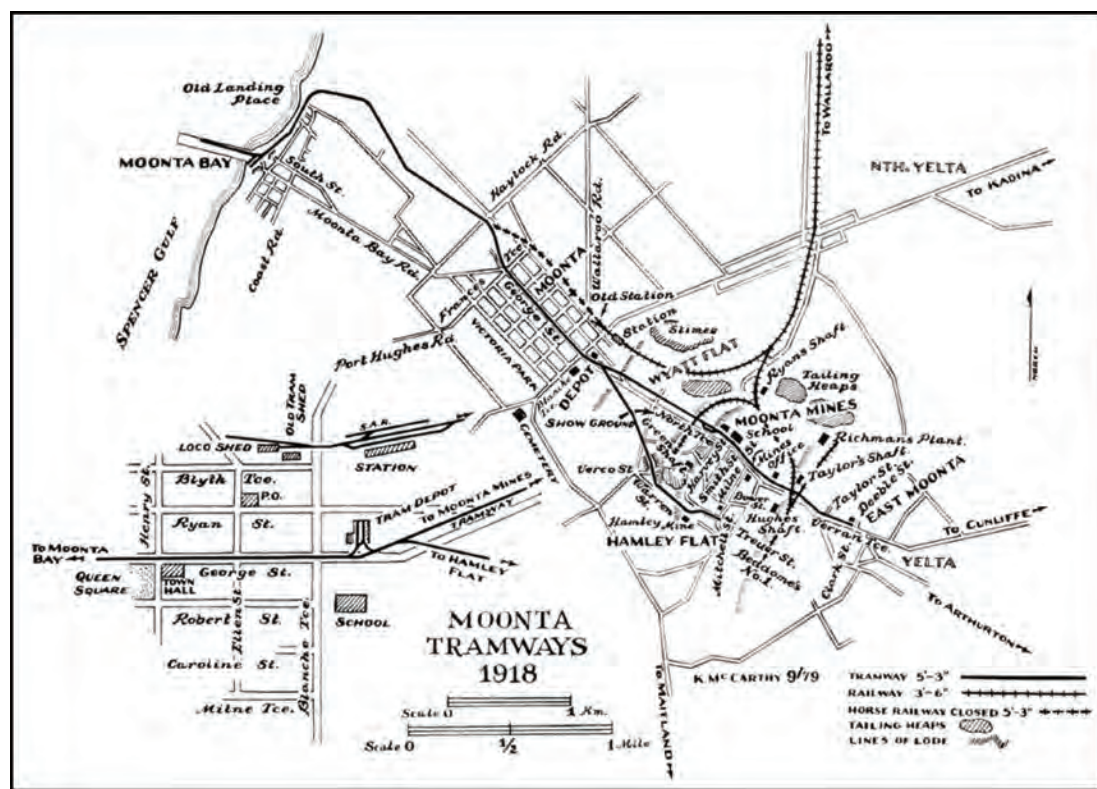
The winter timetable which commenced on 1 May 1903 showed that between 9:40am and 7:15pm on

weekdays 12 up and down trips were worked on the main East Moonta to Moonta Town service while between 6:00pm and 11:15pm on Saturday evenings, trams operated every 15 minutes to serve the late night shopping evening when trading was carried out until 10:00pm. The Hamley Flat line operated with a similar frequency on Saturday evenings, but only four return trips were made during week days.

Rolling stock

By the time of the opening of the Moonta tramway in 1896 the SAR was building standard double-decker, double-ended, four-wheel tramcars seating 16 passengers on each deck for railway support purposes, making them ideal for tramway use. Inward facing longitudinal seats were fitted in the lower saloon while passengers were accompanied on the upper deck by outward facing longitudinal 'knife board' seats. The cars had six saloon windows on each side of the lower saloon. Light top deck covers were generally carried in summer, but were removed during the cooler winter period. Although based on the John Stephenson of New York design, most of these cars were constructed by Duncan and Fraser of Adelaide on John Stephenson trucks. Seven of these cars were eventually used at Moonta.

During November 1910 the SAR purchased two double deck tramcars from the Municipal Tramways Trust (MTT) of Adelaide for country horse tram services. Car 24 was taken to the Moonta tramway and No. 25 to Victor Harbor. These were single ended cars with a single rear staircase serving a large back platform. In SAR service access to the lower deck saloon was possible from the driver's front platform. The top deck was fitted with transverse seats each accommodating four passengers reached from a side aisle running the full length of the right hand side. These two cars are thought to have been built to standard gauge by the Adelaide and Suburban Tramway Co. about 1900 at its Marryatville Workshops. The SAR converted these two tramcars to 5ft 3in gauge by regauging the wheel sets and mounting the axle boxes to a wooden sub-underframe which protruded beyond the sides of the lower concave body side panels. In SAR service, these



two vehicles operated in both directions, which proved to be a problem with the street working and passenger boarding arrangements in George Street, Moonta.

A rolling stock return for 1921 indicates that nine cars were attached to the Moonta tramway consisting of two 'English' style cars and seven 'American' type trams. One of the 'English' cars was a Brown Marshall double decker which had been attached to the system since the turn of the century. This was an eight-windowed double-ended car, with back to back longitudinal seats along the open top deck. The other 'English' style tram was No. 24, the former MTT vehicle.

Operational data

In 1918 a Commission headed by Mr P Anthony was set up to inquire into the finances and general operations of the SAR.

The Anthony enquiry revealed that for the year ended 30 June 1918 a total of 157,100 passengers were carried on the three Moonta routes which comprised a total of 51¼ route miles. The receipts of the tramway in the 1917-18 financial year was £1,293 while expenses only reached £932 giving an operating profit of £361.

Tramway closure

Towards the end of 1923 the Wallaroo and Moonta Mining and Smelting Company decided to close the mines due to the sharp decline in copper prices after World War I. This left wheat farming as the main industry of the upper Yorke Peninsula district.

The Moonta tramway service continued for another eight years and was ultimately a victim of the Depression, closing on 30 April 1931.

At this time a bus service to serve the tram terminals was established, while the normal SAR rail service continued to pick up passengers at Cross Roads (North Yelta) and Yelta Sidings for trips into Moonta, thereby continuing the provision of public transport to the business area of Moonta for the rapidly declining population of the mining areas.

After the closure of the tramway, 'American' type double decker cars 5 and 6 were transferred to the SAR tramway at Victor Harbor to work the tourist service to Granite Island during summer. Both cars had been constructed by Duncan and Fraser in 1883. The remaining cars were sold locally in Moonta for use as sheds.

One of the 'English' tramcars, the 8-window Brown Marshall vehicle, was purchased and mounted on a solid rubber tyred truck chassis by its new owner as a showman's caravan trailer. After about 1940 it found a permanent resting place as living quarters on the banks of the Camden Haven River at Laurieton NSW.

Another of the Moonta cars, an 'American' type by Duncan and Fraser, has been restored and is on display at the National Trust Museum at the former Moonta Mines school.

Gawler Horse Tramway

Introduction

The Adelaide to Gawler railway, opened on 5 October 1857, terminated at a station situated over a mile from the business centre of the town. The railway extension northward to Kapunda, opened during 1860, skirted the western perimeter of the town, leaving the original station as the main access point for the Gawler township.

Horse tramway

On 17 February 1879 the SAR opened a single track 5ft 3in gauge street horse tramway between the station and Gawler town over a distance of 11/4 miles at a cost of £6,221.

This tramway commenced at a physical railway track connection in Gawler station yard and then proceeded east to the main Adelaide Road (then Murray Street). This main thoroughfare was followed in a north-easterly direction until the South Para River bridge was crossed, after which the tracks turned northward and climbed the Murray St. hill through the business centre to a terminus at Cowan Street.

Passengers as well as goods traffic were handled over the tramway, goods handling being simplified as the tramway was built to the railway gauge, with coarse flange profiles on the wheels of the tramcars. For the goods traffic five separate industrial sidings were located along the route.

Rolling stock

During 1879 the SAR took delivery of its first tramway horse cars for the Goolwa-Victor Harbor and Goolwa-Strathalbyn horse railways as well as the Gawler tramway. These orders were shared by Brown Marshall of Birmingham, England, and John Stephenson of New York, USA.

The two 'English' type double-decker Brown Marshall vehicles were delivered to the Goolwa railway. Although three Stephenson tramcars were ordered for



Restored Moonta Horse Tram at the Moonta Mines Museum in January 1988.

Colin Seymour

the Gawler line, numbers 67 and 69 were also used at Goolwa, while No. 125 was used to open the Gawler tramway. One of the Brown Marshall tramcars soon joined the Stephenson car at Gawler, where it operated until 1886. In that year it was exchanged with an 'American' type tramcar operating on the Glanville to Largs Jetty railway. This was possibly Duncan and Fraser car No. 5 of 1883.

During November and December 1901 two new double-deck tramcars bearing numbers 22 and 20 respectively and constructed by Duncan and Fraser, entered traffic on the Gawler tramway where they remained until the line's closure in 1931. With the arrival of these new cars, car 5 was transferred to Moonta in 1902, but the movements of the other horse tram, number 125, are not known.

Operational data

The Anthony enquiry of 1918 revealed that during the year ended 30 June 1918 a total of 56,263 passengers

Horse car at the Gawler Town terminus, Murray Street, Gawler.

L. Kingsborough collection



were carried, yielding £348. In addition, goods delivered to 'on line' sidings added only £240. With working expenses at £1,231 per annum, the operating loss for 1918 was £643. The need to operate the horse cars with two horses, due to the Murray Street grade, loaded these working expenses.

Mr Anthony reported that it would be difficult to improve the financial situation of the tramway due to the competing bus services. One recommendation, to ease the financial loss, was for the tramway to be operated by private enterprise under contract.

In 1924 Mr Hobart became the contractor for the passenger and parcels service while Mr Ey was responsible for the goods operation.

James Martin Engineering

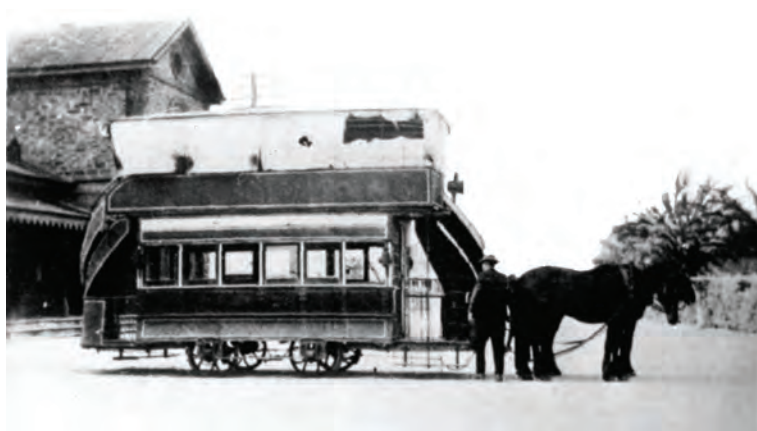
The heavy engineering plant of James Martin at Gawler constructed many railway locomotives from 1890,

with 5ft 3in gauge vehicles being delivered to the main railway at Gawler along the tram tracks, while 3ft 6in gauge locos were hauled on a special transporter rail wagon.

The Gawler plant produced a total of 228 steam locomotives up to the delivery of SAR F class 243 in mid-1915. The firm went into liquidation and was purchased by the Perry Engineering Co. who completed the balance of the F class order prior to the close of 1915. The next steam locos produced by Perry at the Gawler plant were the final batch of 10 F class engines delivered during 1922.

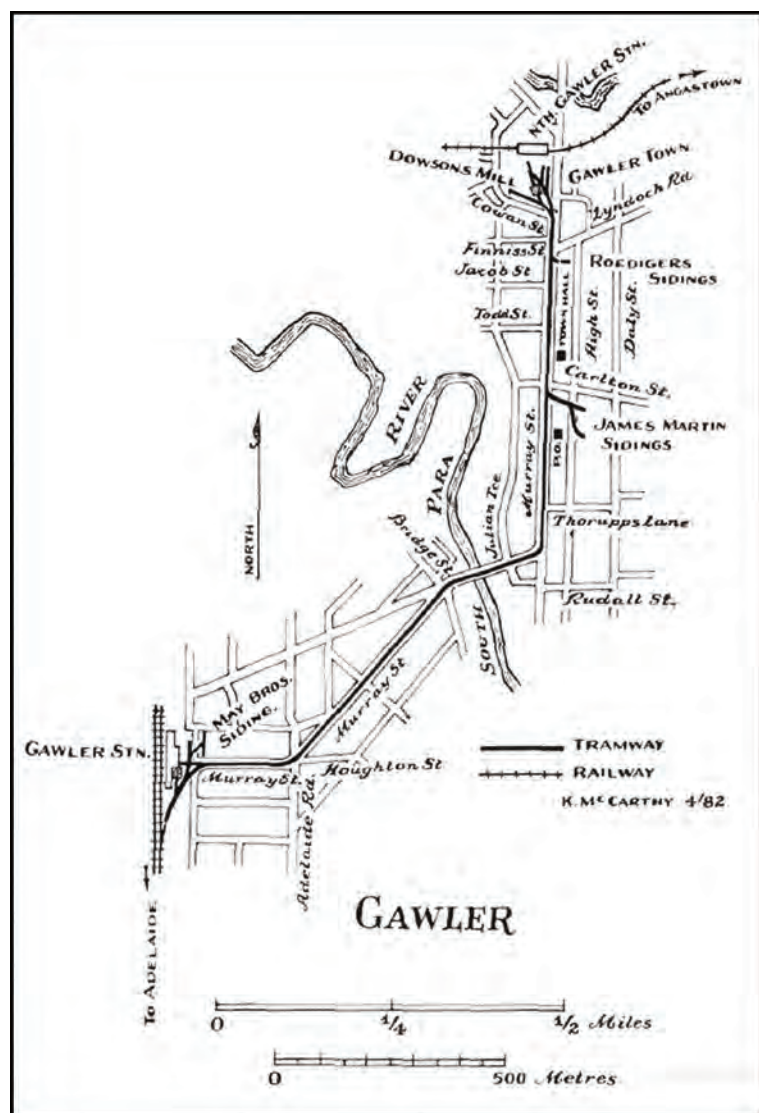
Tramway closure

The opening of the Gawler to Nuriootpa railway on 15 May 1911 and the extension to Angaston on 8 September 1911 resulted in the establishment of North Gawler (now Gawler Central) railway station adjacent to the Murray Street (north) tram terminus. This greatly



Horsecar 22 at Gawler Station circa 1920.

Rev. C.B. Thomas collection



Gawler undertaking commenced in May 1932 and the tram track was lifted at the end of that year when the machinery had been removed by steam locomotives and rail trucks along the former horse tramway.

On the closure of the tramway passenger service in May 1931 the two double-deck horse cars 20 and 22 were towed to Islington Workshops.

Victor Harbor Horse Tramway

Note: The American spelling of 'Harbor' has been the official name since the late 19th century. The township name was gazetted in 1914 as the 'Municipal Town of Victor Harbor'. Interestingly, the railway station signs displayed 'Harbour' and still do.

Introduction

The Victor Harbor horse tramway had its beginnings with the 5ft 3in gauge Goolwa to Port Elliot railway that was opened in 1854 and extended to Victor Harbor in 1864 when the Victoria Pier was built. This isolated railway system was linked to Adelaide in 1884 and steam traction was introduced in 1885. The horse routes had expanded to a system of approximately 35 miles

extending from Strathalbyn to Victor Harbor.

reduced the through passenger traffic on the tramway, while the freight shed at the tram terminus was re-erected in North Gawler station yard and the tramway freight sidings were lifted by 1914. By this time three bus proprietors were meeting all trains at Gawler station and running in direct competition with the trams.

Passenger service terminated on the Gawler tramway on 16 May 1931, but the track was still available for access to the James Martin factory.

By 1932 James Martin Engineering had closed with its operations being transferred to the Perry Engineering Mile End factory in Adelaide. The demolition of the

In 1875 the original pier was modified to connect to Granite Island which could accommodate deep draught sailing vessels. The connection to Granite Island became known as The Causeway. Goods were then transported between the mainland and Granite Island on railway wagons pulled by horses. After the conversion of the railway to steam operation in 1885 horses continued to handle most of the traffic between Victor Harbor and Granite Island.

The horse tramway

With increasing visitors and holiday makers converging on Victor Harbor, the Causeway became a local attraction, and the SAR commenced a passenger horse

Victor Harbor Brown Marshal; tramcar 7 in the single-ended state just prior to withdrawal in the 1920s.

Rev. C.B. Thomas collection



tramway service on 27 December 1894. The line was 1 mile 75 chains in length. A six-windowed double deck Brown Marshall tramcar, which had been delivered to the Goolwa railway in 1879, was transferred to the Victor Harbor working. This double-ended tramcar carried the number '7'. It had operated on the Goolwa railway between 1879 and 1887 when it was transferred to Kadina to work the Wallaroo to Moonta horse railway from 1887 to 1891. With the conversion of the Wallaroo to Moonta railways from 5ft 3in gauge to 3ft 6in gauge, the horse car was taken to Islington workshops until needed at Victor Harbor in 1894.

Car 7 was joined by another double decker car, No. 25, in 1910. This was purchased with No. 24 from the MTT in Adelaide and was a double-deck, single ended tramcar identical to No. 24 as described in the Moonta section of this article. In 1929 No. 25 was withdrawn from traffic leaving No. 7 to carry on alone for another two years.

During the 1920s car No. 7 was converted to a single-ended vehicle by the removal of one staircase and the

extension of the top deck at one end over the driver's platform.

After the closure of the Moonta tramway in April 1931 the two cars in best condition, numbers 5 and 6, were hauled to Islington Workshops for an overhaul, after which they were sent to Victor Harbor in time for the 1931-32 summer season. Car 7 was then withdrawn from traffic.

George Honeyman operated the service, under a contract with the SAR from the beginning of the 1900s until 1940 when his younger brother Frank took over and operated it until closure in 1955. The horses were kept in stables on Seymour Lane and walked to the trams, which were parked on a siding behind the Station Master's house. The cars were parked in the open.

Approximately every two years the two horse cars were towed to Islington Workshops during the winter months by rail cars for overhaul. During the winter of 1948 the trams were extensively rebuilt; the body side rubbing rails were removed and the wooden side panels replaced by sheet metal.

Horse tram 5 or 6 at Victor Harbor, circa 1950.

Rose Series Postcard
- AETM Collection





Horse trams 5 and 6 at Islington Railway Yard in June 1955.

John Radcliffe

Lower deck saloon of horse tram 5 in poor condition at Islington Railway Yard in June 1955.

John Radcliffe

Tramway closure

During the early 1950s the old working jetty and the remnants of the Victoria Pier along the Causeway were being demolished by the Harbors Board. Essential repairs to the Causeway were decided upon at this time, but additional expenditure of £3,000 would be necessary to strengthen the Causeway for continued operation.

Frank Honeyman stabled the horses for the last time in June 1954 and then retired. The Council offered the service at tender but there was no interest. The Causeway was reconstructed without rails and the horse tramway ceased operation.

Tram No. 5 continued to operate on the remaining Granite Island tracks through the summer of 1955-56, under the ownership of the proprietor of the island kiosk. It was then put on static display, at the approach to the Screwpile Jetty on the island, where it remained until the weather and vandals reduced it to a public danger. Sadly, it was disposed of by being pushed off the edge into the sea. If this is correct, one would think that it would have subsequently been found.

Tram No. 6 was placed on display at a service station near Watervale in the Clare Valley. In 1971 it was purchased by Raymond Schmidt, an American who had ridden the tramway during the war years. It is now restored as a single-deck car and is featured in a museum in Connecticut, USA.

The rubber-tyred train

Following reconstruction of the Causeway the tram service was replaced by a tractor powered, rubber-tyred train service which commenced on 22 December 1956. The initial engine was a small Ferguson tractor. This was later replaced by a Land Rover set up to look



like a steam engine, and two rubber-tyred carriages. It continued to operate until the new horse tram service began in June 1986.

Reinstatement of the horse tramway

The 150th Jubilee of South Australia was celebrated in 1986. Plans for special projects, events and celebrations were being laid in the early 1980s through the establishment of a Jubilee 150 Board.

John Drennan, State Transport Authority (STA) Public Relations Officer, registered the tramway reinstatement project as a Jubilee event and gained it

The rubber tyred train – a Land Rover set up to look like a steam engine and two rubber tyred carriages in the 1960s.

Courtesy City of Victor Harbor



Victor Harbor Horse Tram No. 5 stored at Granite Island in 1956. The late David Ellerton is in school uniform with his mother.

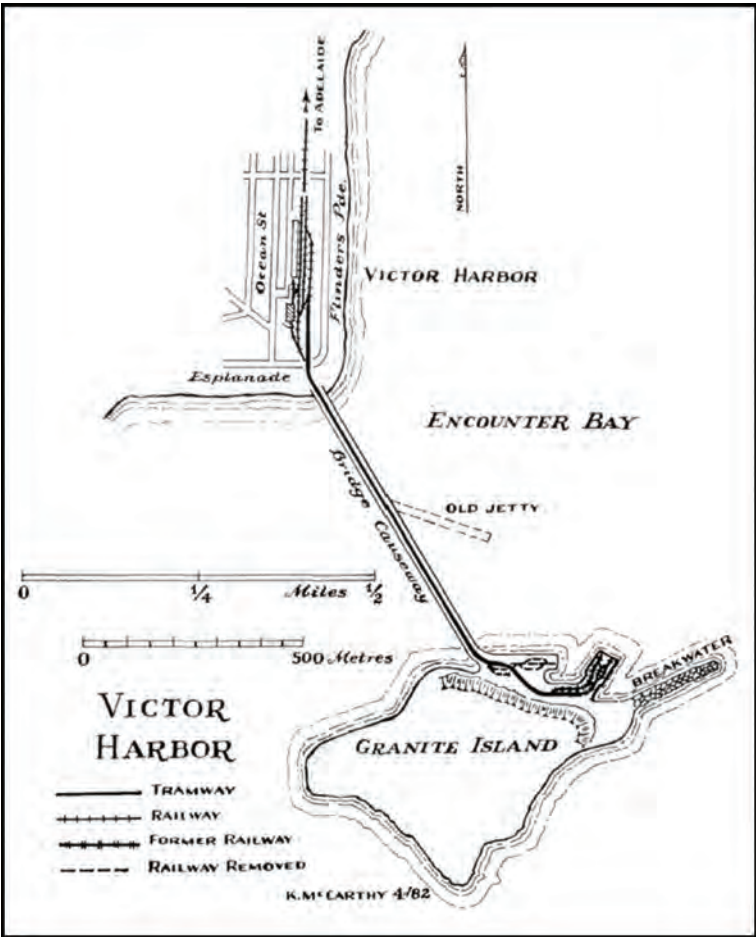
David Ellerton Collection
AETM Archives



Victor Harbor horse tram No. 6 on static display at Watervale, S.A. Photo by Frank Seymour of Colin and Meryl Seymour on top deck in 1961



Victor Harbor horse tram No. 6 on static display at a service station near Watervale, S.A. circa 1960s. The signage says 'First tram in Australia 1860'. The owners appear to have got their history a little mixed up. The tram was built by Duncan & Fraser, Adelaide in 1883 for the SAR (South Australian Railways). Australia's first railway (initially horse drawn) opened between Goolwa and Port Elliot in 1854 and was later extended to Victor Harbor. Australia's first street tramway commenced in 1861 in Sydney.
R Smith



The starting point for the current tramway is to the immediate south of the Esplanade. The tram barn is situated in front (south) of the Goods Shed to the north of the Esplanade. There is a passing loop near the Causeway end of Granite Island. Instead of the track turning into the Granite Island jetty, the track terminates just past the jetty.

official consideration. The Jubilee 150 Board allocated \$50,000, the Commonwealth Employment Program supplied \$150,000 for labour and materials, Australian

National (Railways) came forward with second-hand 60lb rail and spoked wheels for the trams, and the Victor Harbor Council was able to allocate \$200,000.

Horse tram Nos. 1, 2 and 4 inside the tram barn on 3 March 2017. The mostly glass walls result in sunlight reflection on the right side! Colin Seymour



The Department of Marine and Harbors spent \$170,000 upgrading the Causeway to a safe standard.

Basic line illustrations and photographs of horse trams formed the basis of a new design. The new trams were made of tubular steel with timber cladding and used roller bearings in custom axle boxes. They could accommodate 50 adults as opposed to 32 on the old trams.

The project began in February 1986 with two teams of ten people. One team built the four new trams at Port Adelaide, while the other team laid the 1.3km track and constructed the stables, fencing and an enclosure at Victor Harbor.

Mirko Crafts were contracted to do the carpentry work. Three-pack automotive paints were used to counter the harsh marine environment.

The paint work on the first tram, No. 1, was completed over three weeks in the goods shed in Victor Harbor. Tram No. 2 arrived only a week before the scheduled grand opening. Trams No. 3 and No. 4 arrived later in the year, but No. 1 and No. 2 were fully prepared for the opening day.

A feature which retains a link with the past are the bells of the trams. These were recovered from beneath 'Red Hen' railcars which operated the Adelaide suburban railway service. The bells date from the 1880s, and were initially used on steam engines hauling metropolitan trains.

Hand rails on the top deck were made higher and stronger than previously to satisfy today's safety requirements.

Misty and Victor Harbor horse tram No. 1 being prepared to enter service as the second tram on 4 January 2017. The original Railway Goods Shed (now the Whale Centre) can be seen behind the current depot. The Cockle Train can just be seen to the right at the Victor 'Harbour' station. Colin Seymour





Misty and horse tram No. 1 loading passengers on 4 January 2017. The Office and Stables are at right. Note the rubber matting between the rails.

Colin Seymour

The Horse Memorial Plaque on the Office Wall next to the Stables on 3 March 2017.

Colin Seymour

The new horse tramway was officially opened on 14 June 1986 by the South Australian Minister for Tourism, the Hon. Barbara Weisse. The event was witnessed by a crowd of over 4000.

The rubber-tyred road train worked its last public trip on Queen's Birthday holiday on Monday, 9 June 1986, leaving the route free for final horse training with the new passenger cars for the rest of the week.

The trams were housed in the large stone goods shed at Victor Harbor station. A passing loop was provided at the Granite Island end of the Causeway. The points of this loop are of the bladeless horse tramway style which allow the horse to guide the car either to the left or right through the switch. The new tramway was vested in the Victor Harbor District Council as owner and operator.



A side view of Misty with the stables in the background on 4 January 2017.

Colin Seymour

Thirty years on

It is now over 30 years since the re-opening of the Victor Harbor Horse Tramway. Much remains the same, but there have been some changes.

A staff office and stables were erected at the start of the tram line at the Victor Harbor end of the Causeway and a waiting shelter and platform erected at the Granite Island terminus. Improvements were made to the platform area at both ends. The stables are for the horses used on a particular day and accommodate horses during their rest from pulling the tram. The horses are floated to these stables from a pasture along the banks of the Inman River, approximately four kilometres inland.

A new tram barn was built in 1994 to allow the goods shed to be converted to the SA Whale Centre. The barn

has mostly glass walls and doors making it easy for visitors to view trams not in use.

Rubber matting was installed on the Causeway between the rails to assist the horses. It has also been installed at the Victor Harbor end in conjunction with paving improvements.

The trams were extensively refurbished at All Transport Industries at Regency Park, Adelaide in the early 2000s. ATI had recently refurbished five H type Glenelg trams. No. 4 was previously painted in a red colour but returned to the dark green livery after refurbishment.

Trams run every day except Christmas Day on an hourly timetable. One tram is sufficient for this timetable. At busy times, i.e. school and holiday weekends, a second tram is used for a half hourly service. At very busy times, i.e. Christmas / New Year and Easter a third tram may be used.

A commemorative plaque was placed on the office/stables wall in 2012 to commemorate the horses who have served the tramway since 1986. The plaque names all of the horses used since that time. About 14 Clydesdale horses are used on a rotational basis. The trams have a rolling weight of approximately 80kg and it takes a horse around 20 minutes to complete the journey. Each horse works only two shifts a week. A shift involves 3-4 trips over three hours.

A Horse Tram Advisory Committee was formed in 2016 to improve the operation of the tramway after the Victor Harbor Council reported significant losses mainly due to the upkeep of the horses. The Committee is required to:

- Contribute to the formulation of long-term management plans for the tram service.



Tram No. 1 on the Causeway having just departed Victor Harbor on its second trip for the day on 4 January 2017.

Colin Seymour

Horse tram No. 2 at left heads towards the Causeway and Victor Harbor having passed tram No. 1 at right which is heading for the Granite Island terminus on 4 January 2017.

Colin Seymour





Jay Jay and horse tram No. 2 about to enter the passing loop on Granite Island on a return trip to Victor Harbor on 4 January 2017. Colin Seymour

- Recommend, monitor and review annual business and operational plans.
- Provide guidance and advice to horse tram staff on horse husbandry and operational matters, where required.

The Land Rover and carriages of the rubber tyred train used prior to 1986 have been restored by the Southern Fleurieu Historical Museum at nearby Port Elliot.

Note

Following the building of new horse trams Nos. 1 to 4 in 1986, and with the availability of photos of trams numbered from 5 to 7 taken over the years from 1894 to 1955, it is possible for collectors to have photos of Victor Harbor horse trams numbered from 1 to 7.

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An overhead view of horse tram No. 2 having just departed the Granite Island terminus on 4 January 2017. Colin Seymour

THE ULTIMO TRAMWAY POWERHOUSE

Published in *The Evening News* (Sydney) Monday 21 August 1899. Page 2:

THE ULTIMO POWER HOUSE - VISIT OF INSPECTION

By the courtesy of the Engineer-in-Chief for Railway Construction, the members of the Electrical Association of New South Wales and a few other gentlemen were enabled to pay a visit of inspection, on Saturday last, to the new Power House for the George-street electric tramway, at Ultimo. Among those present were: Mr. G. Fischer (Principal Assistant Engineer to the Tramway Department), O.W. Brain (assistant electrical engineer of railways), Mr. W. G. T. Goodman (assistant engineer, Public Works Department), Mr. W. T. Moffitt (assistant engineer, Public Works Department), Mr. Geo. Downe (locomotive superintendent, T.D.), Mr. John Sandes, Mr. Hodgson, Mr. Moates, Mr. Dircks, Mr. Redshaw, Mr. Bigham (Redfern), Mr. J. H. D. Brearley, etc. Mr. Fischer, assisted by other officials, proved a very courteous and capable cicerone. The first thing that strikes the visitor to the works is the plain though useful character of the building itself. It is quite evident that the money expended in connection with it has gone in necessary and enduring work, rather than in costly ornamentation. The first visit was paid to the offices for the engineers and paymasters, etc. These are on the ground floor, and occupy the entire length of the building facing William Henry-street. They are lofty and roomy apartments, and look comfortable. The basement floor underneath them is devoted to the accommodation of the engineers, stokers, etc., and is provided with all arrangements for their comfort, even to the refreshing shower-bath. After a look at the goods elevator, the next visit was to the pump chamber, a lofty and well-lighted building, about 96ft long, by 45ft in breadth. Talking about light, it may here be remarked that the provision for good light in every portion of the establishment is excellent, and one could hardly find a dark corner in the entire building. In the pump chamber, visitors were shown the three great electric driven feed pumps, as well as the three pumps, which will supply salt water for condensing, from Darling Harbor, down below, through a 3ft 3in concrete tunnel. Connected with the pump chamber is the great boiler house, 96ft by 100ft, at each side of which is a row of seven huge multi-tubular boilers, 250 horse-power each, similar to those at Rushcutters' Bay. There is a space as wide as an ordinary road between each row, and the arrangements for supplying coal from the railway trucks, which will run close by, promise to be very satisfactory. There is a double system of pumping connected with the fourteen boilers, so that there shall be very little chance of a complete breakdown. Moreover, any of the boilers can, at any moment, be disconnected – each boiler being self-contained – or, the batteries or rows of boilers can be divided into sections of three and four, the system of pipes being cut up into four independent sections. The next trip was through a number of underground but well-lighted passages to the basement, where the huge pipes leading to the engine-room are placed. Here were pointed out the surface condenser, and air pump so arranged that every one of the four engines can be connected with either. Perhaps the visit to the engine floor proved the most interesting of all. It is a huge and lofty apartment, with a handsome gallery at the northern end. As the visitors entered, men were engaged working at the four great fly wheels, which are such prominent features in the place. The four sets of compound surface condensing engines with 850 Kilowatt electric generators direct acting from the main shaft were admired, also the two 30-ton electric travelling cranes overhead for erecting and repairs. Each engine is of 1250-horse power. To obviate risk from the fly-wheel running in case of accident, there is a novel arrangement by which when the engine over-runs itself by 2 per cent, steam will shut off automatically. It is one of the many precautions to prevent a breakdown in the working of the system, and on this point it may be said that no money has been spared. Mr. Fischer stated to the 'Evening News' representative that the works are expected to turn out electric power at a cheaper rate than any now known, and that American engineers have stated that the station was as complete, if not more so than any in their country. The travelling cranes alluded to are models of mechanical ingenuity, being capable of lifting, travelling, and traversing at the same time, while one man alone can work each of them. The visit to the switch-board, which is erected in the gallery of the engine room alluded to, proved more interesting. The electric cables are brought from the basement through the cable-room to the switch board gallery. The main switch board would need a long and special description to itself. Shortly speaking, it is divided at present into eleven panels, representing some one of the electric districts into which the city and suburbs have been parcelled out. They are known as self-feeder panels, each of which can be instantly connected with its particular feeder, so that a man in charge could, on the instant, bring to a standstill, or enable to start off, a car, say, on the heights of Mosman or away up at Willoughby. An ammeter on each panel shows what electric power is being taken up by its particular feeder, and a Watt meter measures the amount taken during a given time. There is, moreover, a circuit breaker, which cuts off the current in the event of an excess being taken

up. On the switch-board, also, are the four generator panels, with meters to measure the current being put out, as well as others to record the output for a day or a month, or, as someone present said, "forever." It may be mentioned that all the machinery is oiled automatically. Oil is pumped into raised tanks, and is distributed where necessary by the force of gravity. After a visit to the accumulator-room, from which all the lighting of the station and the power for small motors will be, supplied, the carriage department came under observation. It lies about 200 yards to the south of the power-house, and includes a shed capable of receiving 100 cars. About 80 cars of the enclosed type are already built – 40 being motors, and the remainder trailers. There are also 8 American cars for trial on the George-street service. They are of the combination type – one end enclosed, the other open. Some of the former have been already in use on the tram lines. Then there are about a dozen others with open seats at each end – the centre being enclosed. All these good things in store for the public look very nice, but, in the opinion of the 'News' reporter, the statement that the people of Sydney will enjoy them next month is a very rash one.

HERE AND THERE

AUSTRALIAN AND OVERSEAS NEWS

Sculpture by the Sea

Sculpture by the Sea, Bondi is a popular spring-time event in Sydney. It is staged on the spectacular Bondi to Tamarama coastal walk and is in its 27th year with over 100 sculptures by artists from around the world providing a free public exhibition. This year it was held between 19 October and 5 November 2017 and was enjoyed by over 500,000 visitors. This year there was one artwork of interest to tramway enthusiasts, Simon Rathlou's sculpture "Shooting Through", which depicts R class tram 1773 emerging from the cliff face, complete with a tram stop and departure clock.



Simon Rathlou's sculpture "Shooting Through", depicting R class tram 1773 emerging from the cliff face, complete with a tram stop and departure clock.

Chris O'Sullivan

The last Wellington trolleybus about to depart Karori Park terminus at 11:50pm on 31 October 2017. David James



Wellington, New Zealand

The last right-hand drive trolleybus in normal service in the world and the last trolleybus to run in New Zealand has made its last journey. Bus 384, owned and operated by NZ Bus as Go Wellington for Metlink, the public transport arm of the Greater Wellington Regional Council, ended 68 years of continuous service. It ran the 11:50pm service from Karori Park to Kilburnie Depot on 31 October 2017.

The trolleybus network came into being in 1949 after the tramway system closed. At its height, 110 trolleybuses were in service, compared with about half that number in 2017. The suburbs of Wadestown, Northland, Roseneath and Oriental Bay were once part of the network. In its final layout the network covered the central city and the suburbs of Island Bay, Seatoun, Minimar, Kingston, Aro Valley, Lyall Bay and Karori.

Adelaide tram news

From William Adams

The three additional Citadis trams acquired from Madrid for use on Adelaide's expanded tramway system arrived by ship at Outer Harbor on 8 December 2017. Numbered 150, 154 and 155, the cars had been in undercover storage in Madrid since they were delivered from Alstom a decade ago. The three trams were delivered to Glengowrie Depot from 12 to 16 December 2017 in the following order: 154, 155 and 150.

To make room for the additional rollingstock H type trams 351 and 352 were transferred to undercover

storage at a Department of Planning, Transport and Infrastructure facility at Walkley Heights in Adelaide's northern suburbs. Car 352 left Glengowrie on 18 December and car 351 left on 19 December.



Track construction in King William Road next to the Festival Plaza looking south towards North Terrace and the city on 19 December 2017.

William Adams



One of the current Adelaide Citadis trams, No. 204 leaves Stop 16 in Jetty Road, Glenelg for the final few hundred metres to Glenelg on 14 December 2017. The section of track from Brighton Road to Moseley Square was relaid in May 2017.

Colin Seymour

One of the span wires that has been installed on North Terrace near the Art Gallery of SA.

William Adams



Adelaide 207 on the Citadis lifting jacks at Glengowrie Depot on 19 December 2017, enabling the bogies to be removed for wheel re-profiling to Adelaide requirements. The tram still displays Madrid No. 150 (as well as 207) and the Metro Ligerio name. Note the traction motor mounting arrangement on the powered truck in the foreground.

William Adams



The recently arrived trams will be numbered 207 to 209, following on from Nos. 201 to 206, the six Citadis trams delivered in 2009 and 2010. Car 150 is currently being modified to become Adelaide 207. Considerable work is required to make the new trams ready for use in Adelaide. This includes conversion from 750V DC to 600V DC; altering the control system so that it operates more like the existing Flexity fleet; changing the wheel profile to suit Adelaide's track standards; and installing the local ticketing system.

In mid-January, track construction for the new lines was mostly complete apart from the remaining single track section on North Terrace and the tramway junction at the intersection of King William Street and North Terrace. The rest of the track has been laid and concreted except for around the point blades at the termini scissor crossovers.

Car 204 has just departed Moseley Square, Glenelg for the Entertainment Centre at Hindmarsh and travels along the recently relaid track in Jetty Road. The City of Holdfast Bay has proposed that the line turn into Colley Terrace at left to free up Moseley Square for pedestrians. Race trams were stabled in Colley Terrace until the tracks were removed in 1966.

Colin Seymour



Span wires were placed in position across North Terrace during January, with the section of North Terrace between Charles Street and Frome Street having been completed. Most of the existing street poles to be used to support the tramway overhead had their mounting brackets and the insulated span wire wrapped up in readiness for the placement of wiring across North Terrace. Several new poles were erected where existing street light poles and some poles dating from the original tram system were not suited to the new overhead.

On King William Road to the north of North Terrace, new poles were installed during January with the span wire packages mounted on the poles. It appeared at that time that some of the pre-existing centre span poles along North Terrace near Parliament House could be replaced with new kerbside poles. These would support the span wires as well as the associated pull-off wires for the junction.

Building a new tram stop opposite the old Royal Adelaide Hospital is currently under way with the concrete boxing in place. Ground work for the new tram stop near the South Australian Museum at the intersection with Gawler Place is also under way.

Construction of the new tramway junction at the intersection of King William Street and North Terrace commenced on 1 January 2018 and continued as a 24-hour, 7-day a week work project until 15 January. The work involved removal of the existing double track curves, laid in 2007, and laying new curves and the H-crossing in the centre of the intersection. During this stage of the construction schedule which took place from 1 to 22 January, all services from Glenelg terminated at the little-used crossover in Victoria Square. Tram services from Victoria Square to Hindmarsh were replaced temporarily by buses during this period.

R class tram at Mulgoa school

From *The Western Weekender*, 8 December 2017

Nepean Christian School at Mulgoa in Sydney's west acquired R class tram 1849 from Londonderry in 2014 and converted it to become a quirky senior study space. The inside of the tram was renovated to include air-conditioning, Wi-Fi, a mini fridge and wheelchair access.

The school's English and Technology teacher, Nathan Zamprogno decided the exterior of the tram was due for a makeover, and conceived the project as a way of encouraging recently idle Year 12 students, fresh from their HSC exams, to come and give back to the school. "Stretching ourselves to learn new skills and being self-motivated to see a need and address it, is at the core of what I teach, and is important to what our school is about," he said.

With help and guidance from local paint shop Auto West, Mr Zamprogno and the former Year 12 students have commenced restoration of the tram to its former glory. He had no previous experience with restoration when the project began; he simply saw a lovely piece of heritage and a quirky presence on campus in need of some TLC.

The tram is being repainted with colours true to the original livery of green and cream and Mr Zamprogno feels it is important that the tram appears authentic to its history. "There were also lovely brass parts that were entirely painted over and have now been sand-blasted and polished, and wood rot and corrosion repaired, which threatened to prevent the tram from being here in another 83 years."

One Year 12 student, who is part of the restoration team, said it was a privilege to be part of the project.

BALLARAT

BALLARAT TRAMWAY MUSEUM

PO Box 632, Ballarat, Victoria 3353

www.btm.org.au

Dave Macartney and Warren Doubleday

Tramway operations

November and December were very busy months for tram hires. No. 671 ran seven wedding trips for Pipers Restaurant, while Cuthberts939 made no less than thirteen appearances during the same period for various individuals and groups celebrating end of year events. In addition, the Museum's board met in the tram in late December and then enjoyed a meal in the tabled area of the tram.

The most notable tram hire was on 20 December, when the Mayor of the City of Ballarat, Samantha McIntosh, arranged a progressive dinner at various locations in the Gardens for the city's councillors and senior council executives. The last element of the event was a ride in Cuthberts939 along Wendouree Parade just after dark, with appropriate refreshments. Having the attention of some of the city's most influential people was too good



Santa and crew pose in front of No. 27 - Santa (Roger Salen), Roger Gosney, Chris Phillips and elf (Arthur Adams). 9 December 2017. Peter Waugh



Our Tuesday work group and other volunteers enjoyed a Christmas lunch on 19 December. Warren Doubleday

an opportunity to miss, and our President made the most of the occasion by telling them about our future plans and ambitions.

Other specials involved three school bookings, a visit from the Puffing Billy Social Group and one from the passengers on a Spirit of Progress 80th Anniversary tour arranged by the Seymour Railway Heritage Centre.

Springfest

Springfest is an annual market stall event that encircles Lake Wendouree. This year's festival was held on 26 November, with 543 passengers being carried on trams throughout the day. This is about the average level of patronage in recent years.

There was a difference to the 'tram pull' held in conjunction with this year's festival. CB Fitness hosted the event with teams comprising one male and one female. The challenge was to see how far they could haul tram No. 13 in 75 seconds. Heavy rain made it very difficult for the competitors, who struggled against a slight uphill slope in the reserved section of track at Depot Junction. Most teams failed to move the tram, but one achieved over eight metres. The other change to the event was the closure of Wendouree Parade to counter-clockwise (or inner road) traffic. This assisted tramway operations and allowed better access for emergency vehicles, had any been required.

Australia Day

Australia Day this year saw the running of Horse Tram No. 1, Australia's oldest operating tramcar, with horses supplied by Sovereign Hill. The event celebrated 130

years since the tram entered service for the Ballarat Tramway Co. Limited on 26 December 1887. An article on the opening day featured in the December issue of Fares Please! which can be seen on the Museum's website – <http://www.btm.org.au/>

The first operation of the tram by the Museum was in November 1992, following a formal launch by Professor Weston Bate, OAM. Weston was the author of two significant books on the history of Ballarat. Sadly, he passed away on 31 October 2017. There will be more about this year's event in the next issue of Trolley Wire.

Fares rise

On 1 December, adult fares rose from four dollars to five dollars, while child fares remained at two dollars. The Museum is promoting a hop-on-hop-off all-day ticket.

In the lead up to Christmas, Santa called by the Museum on two days, the event being promoted primarily through our Facebook page. Both Santa visits were well patronised with lots of photographs being taken. Over 200 happy children and adults met Santa over the two days.

Infrastructure

Over the period 13 to 16 November a major work party descended on the area around Nos. 6 and 7 roads at the depot, with 40 new sleepers being installed and a general lifting and packing of this and a couple of other areas. As in the past, John Shaw and the group from the Victorian Goldfields Railway provided some

Tamping track with a machine makes for very light work compared to the older and not as good shovel packing of ballast. This and other trackwork photos were taken on 15 November 2017.
Peter Waugh





But while tamping, you have to make sure you have the levels right using the 'eyeometer'. John Shaw uses his many years of experience and Ollie is learning how to do it.

Peter Waugh

To keep the troops fed during the depot fan reconstruction project, extensive food was provided by the Museum. We could not get a photo of the vanilla slices quickly enough, they were scoffed.

Peter Waugh

specialist machinery and expertise to enable the work to proceed rapidly. The depot diary recorded that some 22 different workers took part in the project including Clinton Pearce, who is well-known at the Museum of Transport and Technology (MOTAT) in Auckland. The depot fan area will be asphalted sometime in the future to enhance its overall appearance.

In a further development, another heritage-style shelter has appeared along our tram route. The new shelter was erected at St Aidans Drive on 12 December, further adding to the ambience of the tramway within Ballarat's Gardens precinct.

Annual General Meeting

The Museum's Annual General Meeting took place 12 November. Paul Mong moved from Vice President to President, exchanging places with Greg Rodgers; Chris



Phillips, one of our foundation members, also joined the board. Some changes in management roles have also been made. Well known COTMA Conference attendee, Simon Green, received his badge for 25 years' service during the meeting.



This view shows the location and the scope of work.

Warren Doubleday

BYLANDS

TRAMWAY MUSEUM SOCIETY OF VICTORIA

38 Piccadilly Crescent, Keysborough, Victoria 3173

www.tramwaymuseum.org.au

Graham Jordan

The Tramway Heritage Centre at Bylands re-opened to the public in early November with progress having been made on several important projects.

Following the failure of our large water tank in late September 2017, authorisation was immediately given to our local building contractor to purchase and install a new tank. Holding 25,000 litres, the replacement tank has a slightly larger capacity than the old tank. The new tank is a light grey, and is similar in colour to the heritage-listed Exhibition shed. It was operational by the end of October, just in time for the late spring rains.

Upgrading of the Visitors Entrance Centre continues with the fitting of block out curtains and wall fixtures,

and more painting. With the arrival of more donated material, the archives room has been rearranged for better and more secure storage.

In the coming months the skylights and spouting on No. 2 tram shed will be repaired, and an earthmoving contractor will regrade the eastern driveway. Drainage works which will be undertaken at this time which should alleviate flooding problems experienced in the past. Unseasonably wet weather late in December resulted in heavy rainfall and hail at Bylands. This helped to replenish our on-site water storage and freshen up the surrounding countryside.



Out with the old and in with the new: our new poly tank on the left, with the old tank adjacent to it.

Graham Jordan

Fit-out of the display gallery at the rear of the Visitors Entrance Centre continues.

William Fedor



FERNY GROVE

BRISBANE TRAMWAY MUSEUM SOCIETY

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Peter Hyde



Extensive rearrangement of the layout of the general workshop has resulted in the metalwork machinery being relocated to a separate building, thereby freeing up much more space for our woodworking machines. This will provide a safer and more pleasant workplace for our volunteers.

On 5 November 2017, the Historical Motorcycle Club of Qld held its Phil Irving Memorial Concours at the Museum for the third consecutive year. Several trams waited at the terminus while judging of the entrants takes place.



Inside the store shed, the first section of pallet racking (shown on the left) was erected after concreting of the floor was completed. More concreting will take place after repairs are carried out to the footings of one of the supporting beams of the roof.

Progress on Dreadnought car No. 136 continues slowly but steadily with bodywork now entering the final stages of restoration. Painting is essentially complete as is the varnishing of the timber passenger seats. Here, Ian Ross is shown working on the expanding platform gates. Being a 'one-man' car during the great Depression, these gates could be locked into the closed position to ensure that passengers only entered or alighted at the front where 'pay-as-you-enter' applied on inbound trips and 'pay-as-you-leave' applied on outbound trips.



On 22 October 2017, the Valley Signal Box was surrounded by cars from the Chevrolet Car Club during their rally to the Museum. Graeme Prideaux

A significant omission from the Brisbane tramcar preservation scene is a 12-bench bogie toastrack car. Unfortunately, none survived long enough to have been preserved, with car No. 107 being the last scrapped in 1953. Not being enclosed, the cars saw little use as farm sheds after their withdrawal from service. Many were broken up by the Transport Department and their seats, sometimes with heavy concrete 'feet', were used as a very basic form of seating at tram stops. Two of these seats have been salvaged over the years and now constitute the only remnants of this type of tramcar.



HADDON

MELBOURNE TRAMCAR PRESERVATION ASSOCIATION

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Anthony Smith

Restoration of W5 792

Good progress continues to be made on rebuilding and restoring this tram.

During November, 'D' mould cover straps were fitted to the drop-centre bulkhead lower panels. Work has also recommenced on the restoration of the cabin ceilings. This has involved scraping and sanding the roof boards and ribs to remove the last traces of paint and varnish. Oxalic acid was then used to remove water stains. Overall, we have been able to bring the ceiling boards up to a satisfactory finish considering their poor condition after years of water ingress when the tram was stored in the open.

Work is also continuing on the scraping and sanding of the driver's upper bulkhead panel areas to enable them to be finished in varnish. As with the ceiling boards, the No. 2 end bulkhead required considerable bleaching to remove water stains. A new lower section was made and fitted on the north side as the corner piece of the framing was completely rotted away.

New sill timbers for the drop-centre quarter panels have been machined using new materials from our store.

Replacement timbers for the four saloon sills have also been sourced from our store. These latter parts, obtained from dismantled trams, are in good condition and required only minor repairs, paint stripping and priming. These new and refurbished parts are currently being fitted to 792.

Rolling stock

Whilst carrying out routine brake adjustments on W2 407 during November, it was necessary to replace a bogie adjusting turnbuckle whose damaged thread made it hard to turn. The tram was also given a partial lift to allow the centre turntable plate to be cleaned and greased and the side bearers adjusted.

Trackwork

Further sleeper replacement within the carbarn is planned for the coming months with No. 5 road and the rear section of No. 3 road to receive attention. In early December the asphalt floor was marked out and cut in readiness for excavation works to commence.



W2 407 being lifted to service the truck bolsters.

Anthony Smith

We also propose to reconstruct No. 2 road later this year using new sleepers and replacement rail. When originally laid in the early 1980s, worn tramway rail was used as it was the only type of rail we could afford at the time. Whilst No. 2 road is primarily used to access the truck shop and to stable trams on operational days, the need to renew the sleepers provides an ideal opportunity to relay the track with better quality rail.



'D' mould cover straps being fitted to the new drop-centre bulkhead panels of 792.

Anthony Smith

Top right:

A replacement saloon sill timber being fitted to 792. Jacqui Smith

A new lower section of driver's bulkhead being fitted to 792.

Jacqui Smith



Substation

In early January, the new, larger capacity bridge rectifier unit was finally connected and brought into use. The rectifier, panel and mounting frame were assembled some time ago and once the old unit was removed, only cabling alterations were required. After appropriate tests were conducted, the substation is again available for use.





The asphalt floor on No. 5 road in the car barn being cut in preparation for sleeper replacement. Daniel Edwards

Anthony Smith tightening cable clamps on the new substation rectifier unit. Jacqui Smith

Around the site

Recently, the Dodge cherry picker truck experienced problems with the front brakes which required workshop attention. Frank Schroeders undertook the overhaul of the front braking system which involved the wheel cylinders being sleeved and the fitting of new brake linings.

With the summer season now upon us our regular site maintenance crew of Jacqui Smith and Daniel Edwards have been kept busy ensuring the site remains clean and free of fire hazards. This has involved pruning trees along the west boundary fence, removal of combustible waste and the mowing of all grassed areas.

Work has also commenced on extending the stormwater drain outlets on the south side of the new lower terminus car barn. This is readiness for the extension of the retaining wall.



Anthony Smith and Daniel Edwards cutting grass in the gully area as part of our fire prevention works. Jacqui Smith

LOFTUS

SOUTH PACIFIC ELECTRIC RAILWAY CO-OP SOCIETY

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From SPER News

Members Day 2017

Although the weather tried to spoil the party, it could not dampen the spirits of the more than 60 participants who attended the 2017 Members and Friends Day at the Museum on 2 December. This was the largest of these gatherings in many years, and the day was a particularly memorable one for several reasons.

The main event was the launch of Sydney freight tram 24s by the Member for Heathcote, Lee Evans, MP. The launch took place, appropriately, beside the Restoration Building. In launching the tram, Mr Evans praised the effort of the Sydney Tramway Museum volunteers who had returned an important piece of Sydney's transport history to operation. He also acknowledged the NSW Government and particularly Transport Heritage NSW for the grant that enabled the tram's restoration.



24s in the rain in Cross Street on 2 December 2017.

Richard Jones



Left:

Workshop Manager Bill Parkinson with Member for Heathcote, Lee Evans MP in the cab of 24s.

Scott Curnow

Howard Clark thanked Mr Evans for his support of the Museum and noted the important role of the Museum's volunteers in restoring the tram. Bill Parkinson then gave a brief history of the car and its restoration.

No. 24s then made its inaugural run along the Museum's tramway with Melbourne Y1 611 following closely behind, packed with photographers and spectators. However, instead of stopping at the base of Army Hill, both trams pressed on up the hill in what was a 'soft' opening of the almost completed new terminus. Although there are still a number of jobs to do, we are confident that the new arrangements will be ready for public use in time for February's Sydney Vintage Tramway Festival.

However, the surprises did not end there! Once 24s had moved back onto the depot fan, former MMTB grinder No. 3 (which previously was NSWGT grinder No. 2) suddenly appeared, using Cross Street to access



Ballarat 37 made a late afternoon journey to the northern terminus on Members Day, 2 December 2017.

Richard Jones

Tramway Avenue. The grinder had been in Auckland for some six years and only arrived back at Loftus on the day before Members Day.

The grinder did a number of runs to Sutherland and return for the benefit of photographers, including an early evening run where the car's lights were used to good effect. In conditions that were more like winter than early summer, Ballarat 37 then came out for a number of runs.

The day concluded with a barbeque dinner in the Railway Square waiting shed, provided by the Museum's Board in recognition of the efforts of our volunteers and supporters during 2017. The barbeque was catered by the Engadine Rover Crew, who are well known for supporting us at major events. A big thank you to those who organised this very special day for the Museum.



With lights ablaze, Grinder 3 is making its way back to the depot on 2 December.

Martin Pinches



Bullnose brick kerbing is under construction at our northern terminus on 21 October 2017.

Martin Pinches



The brick paving at the northern terminus was well under way on 18 November 2017. Martin Pinches

Track and associated work

Bull nose kerbing and brick paving, replicating early 20th century Sydney footpaths, has been extended 12 metres south of the new waiting shed at the north terminus. Danny Adamopoulos has been doing the brickwork whilst our CSO workers under the supervision of Greg Sutherland have been following behind laying the paving. This work allowed us to clear six pallets of bricks, which have been on site for several years, from the rear of the top shed.

Our long term excavation contractor Canini Excavations was back on site on 11 November to work on various projects to move them along faster so we have locations to put surplus concrete now that Waratah Loop has been finished.

Storm water pipes from the Waratah Loop drain were laid, connecting to a new pipe recently put in to align with Sutherland Council roadworks in Rawson Avenue.

The area north of Waratah Loop was excavated to allow another panel of the eastern track to be installed and concreted across the No. 2 gate. Using our tipper, the spoil removed was relocated to Army Hill, finishing off the remaining section of cess area needing back filling alongside the track.

In preparation for future council works in Rawson Avenue, a panel of track has been welded and installed on the north side of the TAFE crossing in the eastern track alignment. A 150mm storm water drain was installed for the new track drain being constructed. The track welding has been done by our Tuesday night works team due to the amount of traffic using the crossing during the day.

Recovered rail from Kensington

As previously reported, rail recovered from Anzac Parade, Kensington is being welded into 66 metre lengths for the South Hill relay. Other materials for the relay such as track drains and steel sleepers are being prepared. In order to minimise the time the track



Mike Giddey is welding recovered rail from Kensington into lengths we require for our next track relay. 18 November 2017. Martin Pinches



A view of the cleared land for the new fruit markets taken on 12 December 1910. Just visible in the top right corner is freight car 24s in its original open front condition leaving Ultimo Depot.

SCC CRS 51/2539

is out of service, we are preparing all the materials in advance so we have everything ready to go when we start excavating.

Workshop and maintenance

Again as previously reported, the mechanical and electrical work on Freight Car 24s was completed during October. The tram was inspected and re-accredited by our Workshop Manager and Chief Engineer as fit to operate on 28 October. Work then turned to the completion of exterior repainting by our team of Ian Hanson, Peter Butler, Bill Parkinson and Katie Strancar, who was co-opted to repaint the wording on the two crane jibs.

It was found that the car had been fitted with new brake shoes not long before it was placed out of service by the



A glimpse of freight car 24s entering Dowling Street Depot in the 1920s.

R.I. Merchant collection

The crew of freight car 24s pose for a photograph in Allison Road, Randwick in 1939.

Eric Law

Freight car 24s on transfer to Loftus passing P class car 1604 at Daceyville Junction in early 1957.
Noel Reed



tramways. As a result, the brakes were not as efficient as they should have been at first but after some running the brakes are improving as the shoes bed in. On its second trial run north its unique construction came into its own as it was used to transport a prefabricated track drain top to the TAFE crossing. The drain unit was loaded into 24s by our No. 3 fork lift and placed into position by one of the car's swivel cranes and chain blocks. 24s is already proving its worth and will no doubt come in handy for future jobs of this kind.

The car is 114 years of age, having entered service in 1903. That the tram is now operational again after many years out of service is a tribute to the work that the many volunteers were able to accomplish within the time limit stipulated with the Transport Heritage NSW grant received in 2016.

Essanee rail grinder No. 3 returned from its stay at MOTAT, Auckland on 1 December as reported above. Within 24 hours of its arrival it was reassembled and made operational. The vehicle is now in much better shape than when it left Loftus some years ago thanks

to the efforts of the team at MOTAT. They restored and painted the tram, all the lights now work and a safety 'cage' now surrounds the workings of the vehicle, making it safe to have on public display.

Melbourne Y1 611 made what could be one of the shortest visits to the workshop on the morning of the Members Day. Its carbon shoe trolley poles were exchanged for ones fitted with Victorian pattern trolley wheels which are more compatible with our overhead wiring. The car had not seen much use in traffic due to problems with the carbon shoes not tracking properly and dewiring at certain points and junctions. (The carbon shoes on San Francisco PCC 1014 do not have the same problem.) No. 611 will now return to normal service.

New sheet metal panels and beading have been refitted to Melbourne W2 392 and under-coated. Our external contractor on this job has been absent for a few months due to pressure of other heritage works. We are assured that he should soon be returning to complete the timber restoration on this car.

Grinder 3 passes Melbourne Y1 611 on a wet 2 December afternoon, one day after it arrived back at Loftus from Auckland.
Scott Curnow





Barry Cole and Graham Wright.



Bob Hodges and John Binns

Our Launceston team at work.



Allan O'Byrne with the tram they are making good progress on, Launceston 14.

Quentin Manning.

The use of **Ballarat 37** on a number of trips on Members Day was in part a preparation for the introduction of this tram into regular service now that most of the traffic staff have been retrained in the operation of manual lap brake valve type cars.

Ballast motor 42s has been running with a defective motor cut out and a spare GE1000 motor was selected for a motor swap. The spare motor has been stripped down by the Wednesday crew and the armature was removed. The two bottom field coils had to be re-taped and the motor has been thoroughly cleaned, painted and re-sprayed with air-drying insulating varnish.



A general overview of work to date on Launceston 14 is very pleasing, thanks to the enthusiasm of our Friends in that city. Ceilings now completed and undercoated in readiness for their top coat. Bulkhead No. 2 is now completed and awaiting final varnish coatings.

Windows to No. 1 and 2 ends are fitted and likewise have been undercoated and are awaiting their top coat. All seat end plates for cross seats are fitted and seats completed.

Seat backs are under construction. Huon Pine side paneling has been repaired and coated with a clear finish to display the golden richness of this timber.

Voids on No. 2 front panel have been filled, ready for undercoating. A visit from Leon Colgrave and advice on the finish paint of extra panels was welcomed.

R car 1808

R car 1808, now identified by the number 1888, entered service on the Christchurch city tramway on Christmas Day. It is in everyday service and is popular with the public and tram drivers alike.

The car had been at Ferrymead since August 2017, being refurbished by a team comprising Heritage Tramways Trust (HTT) staff and Christchurch Tramway Ltd (CTL) staff, with assistance from Clinton Pearce from Auckland. A high presentation standard suitable for use on the Christchurch tourist tramway was stipulated. The tram has been repainted to a high gloss finish with light blue on the fascia and lower side panels with cream lining. The car has a black waist line and black skirts with a grey roof.

The car was rolled out for test running on 5 December. The logic of the renumbering became apparent when the tram arrived in the town area at Ferrymead. A Chinese couple in traditional wedding attire were at the chapel for their ceremony and were delighted to have some of their photos taken alongside the tram bearing the 'lucky number 1888' – no doubt a good marketing strategy for operations in the city.

On 6 December at 6:00am the tram was unloaded at Cathedral Square, poles were refitted and it was driven to Cathedral Junction and transferred to the pit road at the depot for inspection and maintenance work on the undergear. Crack testing was carried out on the brake rigging and consequently some items were sent to an engineering firm for rectification works.

For city tourist use the canvas centre door blinds have been removed. Due to regulatory requirements, folding steel concertina gates painted black have been fitted to each doorway, as for street operation seats must not be fitted facing an open doorway.

A set of authentic internal Sydney advertising signs, printed on vinyl by Snap Kirrawee, were delivered and most have been fitted within the car, to the delight of staff and management at CTL.

1888 has been leased by STM to CTL for an initial six year period at commercial rates, including 3-year CPI adjustments, with 3 six-year renewal periods provided (i.e. a total period of 24 years). Rectification costs have been paid by CTL and will be refunded to CTL from rental monies until recouped.



Christchurch 1888 (ex Sydney R 1808) waits beside Birney 16 at Cathedral Square during trial running on 21 December 2017.

David Hinman

Sydney P 1729 and PR1 1573

Works on the assembly of the three trucks for these cars are progressing well at Ferrymead. The fitting of brake rigging and hangers has commenced. All the motors have been overhauled, with some now fitted in

the trucks. A spare motor case with an unusable motor was sourced from MOTAT, Auckland and the necessary end plates and motor mountings will be removed to replace those stolen at Ferrymead some months ago. A couple of motor mounts suitable for bolting to the bogie bolsters remain to be sourced.

ST KILDA

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA) INC

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Colin Seymour

Salisbury plays at St Kilda Day

Every couple of years Salisbury Council holds a free community event at the Playground. In recognition of the annual support that the Council provides to the AETM, the Museum provides free tram rides for the event, which for 2017 took place on 26 November with rides commencing at 11:00 am. Naturally, this means a busy day. The Council took a low key approach to publicity this year which meant that two tram crews were sufficient.

Trams used on the day were 264, 294, 381 and 1971. For much of the day trams ran in convoys with a total

of 25 individual tram trips being made. Cars 264 and 1971 ran in convoy with alternate trips being run with cars 294 and 381. Later in the afternoon we went green with Melbourne W2 294 and Sydney R1 1971 running one trip in convoy.

Bib & Bub cars 14 & 15

Work on our Bib & Bub set, cars 14 & 15 is finally nearing completion. It is planned to launch this set some time this year.



Trams 1971, 264, 294 and 381 on the depot fan at the start of Council Day operations. Once convoys commenced, trams in each convoy shared the same depot track when they returned to the Museum, thereby simplifying tram movements.

Colin Seymour

Adelaide drop-centre tram F1 264 heads back from the Playground on 26 November, while a kite flying exhibition takes place in the Playground park.

William Adams



Recent work from Bruce Lock and Charlie Rodgers has seen the shaping and fitting of the eight Tasmanian Oak barrier rails to both cars.

Replacement of sleepers

Four trackwork Saturdays were held during November 2017. We successfully trialled using our contractor, North Eastern Demolitions, to excavate trenches for new sleepers making the job of sleeper replacement much easier. Saturday 18 November went well, with twenty sleepers being inserted and spiked. Only remedial packing and backfilling is required to finish the task.

Museum archives

In sorting through the Museum's archives last year, it was a matter of one step forward and two steps back. Things were progressing well until we received some 40 extra cartons of materials from the families of late members. Much time was taken sorting through these items.

The opportunity was taken to ensure that the Museum has one complete set of a number of journals and that we retain one copy of each Australian and New Zealand tramway book. Items that are surplus to requirements or not within our collection policy are sold as second hand books in our bookshop.

Going green: Sydney R1 1971 and Melbourne W2 294 ran one trip together in the late afternoon.

Colin Seymour



VALLEY HEIGHTS

STEAM TRAM AND RAILWAY PRESERVATION SOCIETY

PO Box 571, Springwood, NSW 2777

Peter Stock

Rolling stock report

B cars 72 and 93

As previously noted in Trolley Wire (May 2017), the steam tram collection (motor 103A and trailers 72B and 93B) were listed on the NSW Heritage Register from 29 September 2016.

Earlier this year, a grant application was submitted to the Office of Environment and Heritage for the first phase of the restoration of the two trailer cars. The application was successful, and a grant of \$23,500 will be provided on a dollar-for-dollar basis for:

- replacement of the axles and wheels on car 93B, and
- the purchase of timber for the first stage of re-building car 72B.

Timber for car 72B is expected to arrive on site shortly. In the meantime, all metal items including handrails, door slides, brackets for aprons and beading for seat ends have been assembled and are ready for sandblasting and painting.

In work completed so far, the wooden sub-frame of 72B has been substantially replaced, as have most of the wall studs. These measures will ensure stability of movement when the car is fully restored.

In relation to the wheels and axles for tramcar 93B, the wheels of bogie No. 1 were recast and machined in the past and new axles were made. The grant just received will allow the society to upgrade No. 2 bogie to a similar standard.



Checking the fit of new up-rights and top sill on 29 December 2017.

Peter Stock

Ironmongery assembled on 72B ready for sandblasting. Note completed door frames for the LV van at the far end of the tramcar.

Peter Stock

The LV van

Following the receipt of a grant to rebuild the LV 4-wheel louvre van, considerable work has taken place.

One side has been dismantled. This has enabled de-scaling then priming and painting of the van's sub-frame and its smaller parts. Frame materials have been

shaped ready for placement, louvre spacing blocks have been progressively installed, and suitable louvres – either new or re-conditioned – have been manufactured. Signage has been prepared and lettered, matching that found in old photos of the van when in service. New timbers have been purchased and intermediate side posts have been manufactured.

Once the van is completed it will be added to the consist of our Valley Heights mixed train.

A different approach to repainting the LFA car

Car LFA 179 has been part of the Valley Heights mixed train for some time. Together with locomotive CPC 2 and the 4-wheel S-truck, it usually operates on the fourth Sunday of the month. The train represents the side-of-road operation that replaced the original steam tramways in rural areas.

According to its works history, the carriage received a full repaint in 1963, with a half-repaint in 1972. The latter probably relates to the interior, which remains in presentable condition. Unfortunately the carriage lost its tongue and groove cladding long ago when it was replaced by Masonite sheeting. With more urgent work currently being progressed on other rolling stock it is envisaged that any replacement of the Masonite sides will be at least ten years away.

To refresh the carriage's appearance we decided to engage a firm of commercial painters to repaint the car's exterior. The final coats have now been completed and authentic lettering is being applied. Having seen the result, we believe commercial painting is certainly



Preparing the end of the LV van for painting on 14 October 2017.
Peter Stock

The painting of the exterior of the LFA has been completed and is pictured with the S-truck. The S-truck shows off its new signage whilst the LFA is awaiting its turn for attention by the sign writer. December 2017.

Peter Stock





The team in dress-up in front of the 'Spooky Express'.

Steam Scene

A reminder of the steam tram's early Sydney reputation

Steam Scene

an expeditious way of getting a job done when years might otherwise elapse before volunteers can undertake the work.

The opportunity to present the LFA to visitors will not be available until perhaps late February; the tramway was not expected to be in operation during our usual annual maintenance period in January. During most of February the entire forecourt of the roundhouse will be dug up and removed. New trackwork then be installed and the whole area re-surfaced.

Halloween - one hell of a time

An extra Museum Open Day was arranged for Sunday 29 October 2017, being the inaugural Halloween Party at The Valley. Several weeks went into the preparation of this event with members from the Steam Tram and Railway Preservation Society and the museum transforming the depot into one big Halloween party which involved setting up smoke machines, spider webs, spiders hanging from ceilings and other terrors.

Any *grave doubts* as to the success of the day were dispelled. Both local advertising and mentions on radio extolling the *Dracula Experience* ensured the day's success. The trammies and museum volunteers lined up early for face painting and dressed in appropriate clothing to enjoy their new role.

Museum visitors rode the *Spooky Express* (alias the Valley Heights mixed train) past the last known resting place of *Trainosaurus*, ending at the *Dead End* after passing a real *Ghost Train* with its resident ghost at the cab window. And there even was *The Great Pumpkin Bowl* for the children.



Not to be outdone, the steam tram motor, though not in steam on the day, and the trailer car were pressed into serving in the role of *Tram of Terror*. This referred to the days of yore where steam trams were described as being 'manglers'. With this historical association in mind, a sign saying *Mangling Done Here* adorned the apron of motor 103A.

We congratulate all those who helped contribute to the success of this event.

Santa and his elves signalling the steam tram driver to stop and pick them up to go to the roundhouse. Peter Stock



Santa's annual visit

Santa Claus, no stranger to the Valley Heights Steam Tramway, visited the tramway on 9 and 10 December. Dressed in his red and white suit, he was accompanied by two elves.

Santa again parked his sleigh and let the reindeers graze and rest near the top gate. Once there the great man signalled the tram driver to stop so his party could board the steam tram. After greeting youngsters on board the tram, Santa was helped into the rear compartment and then transported to see other visitors waiting near the museum entrance.

Dozens of excited boys and girls gave Santa a most hearty welcome. They then followed him and his elves to Santa's Christmas tree and the Santa-throne in the roundhouse to whisper in each other's ear those things known only between Santa and his admirers.

The Santa visits were a successful conclusion to the year's operations. So popular have these visits become, they are now part of the tramway's annual program and are eagerly anticipated by wide-eyed young fans.

Santa being assisted by the conductor and elves to gain entry to the end compartment of the steam tram. Peter Stock



Santa in session with his admirers on 9 December 2017.

Peter Stock



WHITEMAN PARK

PERTH ELECTRIC TRAMWAY SOCIETY (INC)

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Michael Stukely

Achievements recognised

Each year the Whiteman Park administration team hosts a social function to recognise the work of volunteers in the Park. In 2017 the event was held at Mussel Pool on International Volunteer Day, 5 December.

Usually achievements of the various groups are acknowledged during a speech by the Park Manager. This time there were speeches recognising the success of the Park in winning the WA Tourism Council's Gold Tourism Award (Category 1 – Major Tourist Attraction) for the second successive year, and the importance of the contributions that all volunteers make to the Park.

Four special awards were then presented to volunteer groups by Hon. Rita Saffioti MLA, WA Minister for Transport; Planning; Lands. PETS received two of the four awards – one in recognition of the WAGT (Perth) tram E 66 Centenary in 2017, and one to mark 25 years of service in the Park of restored Fremantle tram 29.

Traffic operations and service cars

Spring produced generally good levels of patronage on the trams, and passenger numbers in the October school holidays, with services on seven days per week as usual, were consistently high.

Melbourne W7 1017 and W2 329 were the regular service cars in September, with 1017 continuing in October and November. Fremantle 29 also saw some service in September and October, with Perth E 66 also running in October and November. Our Tram Heritage Days, including Carbarn tours, were held during spring on the fourth Sunday of each month, with one WA tram and one Melbourne tram in service.

Tram restoration

Restoration work on WAGT (Perth) A class tram 130 is continuing steadily. The original side panels, removed to allow detailed internal inspection, were found to be



in poor condition. However, the main structural timbers of the saloon are generally in excellent condition. The replacement steel panels have arrived and have been stored. Graham Bedells has been stripping old weathered paint from the window frames, and repairing minor body frame holes on the northern side.

On the eastern end platform, the bumper bar, apron and all platform floor timbers have been removed. Pressing out a large dent in the middle of the bumper bar was

carried out by Bill Allnutt, Brian Hossack and Olivia Hartley Turner, and painting was done by Roy Winslow.

When the end-platform supporting beams were exposed it could be seen that two of them had serious splits and needed to be cut back to enable new timber to be spliced in. This work, along with the replacement of all floor timbers on the platform, is progressing.

Summer colour in Whiteman Park: W2 329 in service on 15 December, approaching Farmgate Curve after leaving Mussel Pool, with WA Christmas Tree (Nuytsia floribunda) in full bloom. Michael Stukely



For several months in the second half of 2017 our weekday workers have been joined by Olivia Hartley Turner, a student from The University of Notre Dame (Fremantle). Olivia has been working with us, initially on an internship as part of her studies for her degree. On joining the restoration team, Olivia's first job on her first day was to cut off eight $\frac{3}{4}$ -inch bolts under the end platform of 130. She had cut six of the bolts with an angle grinder, but could not reach the last two. Brian Hossack then showed her how to use the cutting torch — and she made short work of removing the last two bolts. Olivia's help has been greatly valued and appreciated.

New level crossing and tramway upgrade

The new Whiteman Park Fire Escape Link Road, including the new level crossing over the tram line at the Village Junction Station end of the Village Junction Curve (see Trolley Wire, November 2017), was opened to road traffic on 5 December. However, the associated tramway upgrading works on our Village Junction Curve are still to be completed, and all services have continued to use the temporary tram terminus at the far end of the Village Mall near the Lolly Stop.

The remaining trackwork adjacent to the crossing has been completed and the site cleaned up, with all surplus materials returned by the contractor to our storage area. For the overhead, whilst the eight new spun concrete poles had been installed, collars are yet to be attached to them to enable the correct running-wire height to be attained. Pull-off attachments will then be fitted to the new poles. Final alignment and adjustment of the overhead on the full curve will then be undertaken.



The end platform of WAGT A class 130, on 22 October, with flooring and apron removed and work proceeding on repairing the platform supporting beams. New floor timbers to support the controller are also in position.

David Brown



Olivia Hartley Turner using the cutting torch to remove the last two of eight bolts beneath the end platform of A 130, with Brian Hossack supervising. Bill Allnutt is standing by with a water bucket [which was not needed] and a camera.

Bill Allnutt

The track team replacing deteriorated timber sleepers with steel sleepers on the Bennett Brook North Curve on Saturday 11 November, a 38-degree day – Lindsay Richardson (L), Trevor Dennhardt, Ben Lawrence, and Roy Winslow, with Nick Tsiaglis on the Toyota.

Michael Stukely



Track

On the trackwork days on 11 November and 9 December, the track team installed fifteen steel sleepers on the Bennett Brook North Curve to replace deteriorating timber sleepers. The remaining timber sleepers at that location will be replaced later this year. Further lifting and packing was carried out between the cattle grid and the Village road crossing.

Roy Daley has continued refurbishment work on the Gemco sleeper puller machine. This project involves a number of tasks including the fitting of four new axle-bearings; machining the four wheels to tramway profile; installing a new brake cylinder and calliper, and fitting a new battery and various leads.

Promotion - become a tram driver

The Society's newest tram was unveiled at the Annual General Meeting, in July. The last tram built for Perth was number 130. However the next car in the sequence, 'No. 131', is a somewhat less than life size front view of what the hypothetical next tram might have looked like, had it been built.

Graham Lees has extended his tram painting talents to a larger than usual scale, producing this compelling free-standing portable model, about 1.5 metres high, in which there is a cut-out space for the driver's face.

It has been used during Carbn Tours on our regular Tram Heritage Days, and can be taken to our other external events such as the AMRA Exhibition. Already it has proved very popular — children, and the young-at-heart of many ages (if sufficiently flexible) have rushed to stand behind it and have their photograph taken as a Perth tram driver. Probably many of these end up on social media — great on-going publicity for PETS.



A popular new feature at the Society's displays – the free-standing, portable model front of Perth tram '131' made by Graham Lees, with a cut-out space for the driver's face.

Shane Parsons



Former Sydney R class car 1808 has been transformed into Christchurch Tramways 1888. It is seen soon after leaving the Heritage Tramways Trust's paintshop at Ferrymead on 5 December 2017

David Hinman



Sydney freight car 24s in storage at Randwick Workshops in 1957, shortly before it was acquired for preservation by the fledgling Australian Electric Transport Museum at Loftus

Noel Reed