

A Brief Timeline of the History of Tram operation within Victoria

Compiled by Senior Driver Hugh Waldron

The English word **tram** is derived from a Scandinavian word to denote a beam of wood. As a result, the word **tramways** was used to describe the development from the sixteenth century of rails tied together at the selected gauge by wooden sleepers to prevent carts from sinking in the mud by spreading the load over the foundations of the road. The rails, first just timber, but later the timber had metal strips added to extend their life.

What's the difference between a Tramway and a Railway?

"Tramway" means a system of transport used wholly or mainly for carriage of passengers which:-
Employs parallel rails which provide support and guidance for vehicles carried on flanged wheels.
Is designed to have a significant element of operation which is by line of sight when operating on roads and reserve track, i.e. trams do not require the extensive signaling systems that railways require except when operating in subways or on railway lines where normal trains operate. e.g. Karlsruhe in Germany where a number of the tram routes turn on to the railway line and travel at high speed up to 120 kph along with passenger trains that can do 200 kph. In Victoria trams now only operate on standard gauge (1435 mm), while our suburban electric trains operate on broad gauge (1600 mm) making it unlikely that Melbourne's trams will run over some of our rail lines.

The word tramway can also refer to some narrow gauge railways e.g. the Sugar Cane Tramways in Queensland and some mining and timber tramways. Our list of tramways do not include these except where the lines carried passengers in tramcar style vehicles.

Propulsion for trams over the years have been:- Horse, Steam, Cable, Battery, Electric, (all these types have operated in Victoria) Human, Mule, (even Zebra in Africa), Compressed Air, Gas, Natural gas, Petrol & Diesel (A new version of the diesel tram was built in 1999 in Germany).

Trams have operated or are still operating in Australia in the following places:-

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| New South Wales | Sydney - Horse, opened 27/12/1861 closed 31/12/1866. Sydney's 2 nd opening with Horse, Steam, Cable, Battery & Electric, trams was on 16/9/1879 closed 25/2/1961. Sydney's 3 rd opening was on 11/8/1997 and is about to be extended. At one stage Sydney had the largest tramway system in the Southern Hemisphere. The Sydney system also included isolated systems at Manly, North Sydney, Parramatta, Rockdale, Kogarah, Sutherland, Bexley, Enfield. There is an operating museum line at Loftus, which runs Sutherland - Royal National Park.
Broken Hill - Steam trams, opened 15/2/1902, closed 31/12/1926.
Byron Bay - Petrol. Opening and closing dates not known.
Maitland - Steam trams, opened 8/2/1909, closed 31/12/1926.
Newcastle - Steam & Electric, opened 19/7/1887, closed 12/6/1950 |
| Victoria | Bendigo - Battery, Horse, Steam & Electric opened 14/6/1890, closed 16/4/1972. portion reopened 9/12/1972 as a tourist tramway and still operating.
Ballarat - Horse, opened 21/12/1887, Converted to Electric, 18/8/1905 closed 19/9/1971. A short portion reopened 1/2/1975 as museum tramway.
Geelong - Electric, opened 10/3/1912, closed 23/3/1956.
Sorrento - Horse & Steam, opened 1890, closed 1921.
Melbourne - Horse, 20/12/1884-4/11/1923, Cable, 11/11/1885-26/10/1940, and Electric, 14/10/1889-6/1/1896 & from 7/5/1906.
Queenscliff - Petrol. Opening and closing dates not known.
Port Welshpool - Horse & Petrol, opened 26/6/1905, closed 1/1/1941.
Port Albert - Horse. Opening and closing dates not known.
Portland - Diesel (Replica Cable) operated Tram Line, expected to open in 2001. |

Tasmania

Port Arthur - Convict Power, with coasting down hills, opened 1836, closed 1877.

Launceston - Electric, opened 4/8/1911, closed 13/12/1952.

Hobart - Electric, opened 21/9/1893, closed 24/10/1960.

Zeehan - Steam, Opening & closing dates not known. 1893 - 1919

Waratah - Horse, Steam & Electric, opened 1876, passenger service closed 3/1/1921.

The horse trams became steam trailers, then electric trailers as electric locomotives used for the mines were also used for pulling the trailers on the passenger services. This was the only place in Australia where this unusual working occurred. The line continued to be used for mineral traffic till 1939.

Queenstown - Steam & Petrol. Opening & closing dates not known.

South Australia

Goolwa to Port Elliot - Horse Tram, 18/5/1854. Was extended to Victor Harbour

4/8/1864 and to Strathalbyn 23/4/1869 making the line 50km the longest Horse tramway in Australia. Later replaced by a Steam railway, Strathalbyn to Goolwa 17/12/1884 & Goolwa to Victor Harbor 1/4/1885

Victor Harbor - Granite Island - Horse, Opened 27/12/1894 closed 6/1954.

Section on Granite Island worked during 1955/1956 season then all tracks removed. Reopened as a tourist attraction 14/6/1986.

Moonta - Horse, opened 1/3/1878. Closed 30/4/1931

Port Broughton - Horse & Petrol, opened 11/3/1876. Closed 3/8/1942

Port Germein - Steam. Opening and closing dates not known.

Gawler - Horse, opened 1879. Closed?

Adelaide - Horse & Electric, opened 10/6/1878. One line Glenelg still operating.

Port Adelaide Horse, Steam & Electric, opened 1879, closed 27/7/1935.

Western Australia

Leonora - Horse, Steam, Electric & Petrol, opened 1903 closed 1921.

Kalgoorlie - Electric, opened 10/5/1902, closed 16/3/1952

Fremantle - Electric, opened 30/5/1902, closed 16/3/1952.

Perth - Horse, closed 1900 & Electric, opened 25/9/1899, closed 19/7/1958

Carnarvon - Horse & Steam, opened 8/1898, closed 1965.

Derby - Horse & Petrol, opened 1886, closed ?

Broome - Steam, opened 20/12/1902, closed due to damage caused by Japanese bombing in 1942 during World War 2, reopened with a petrol railcar in 1946. Closed 1954.

Wyndham - Steam, opened 5/7/1915, closed 1/10/1941 due to wartime difficulties

Esperance - Horse & Steam, opened 18/2/1898, closed 26/4/1926.

Collie - Steam, opened 27/4/1897, closed 1/6/1929.

Onslow - Horse & Petrol, opened 20/2/1903, closed 1/1/1940 due to WW2.

Roebourne - Steam, opened 21/6/1887 closed 1913.

Bunbury - Steam, closed 1918

Karridale - Steam, closed 1914

Pemberton - Diesel, opened 1987. Well worth a ride if visiting WA

Queensland

Rockhampton - Steam trams, opened 15/6/1909 closed 24/6/1939.

Brisbane - Horse & Electric, opened 10/8/1885, closed 13/4/1969

Currently there are plans for building a new tram system in Brisbane.

Port Douglas - Steam & Diesel, Still operating as tourist attraction. Port Douglas is a cane tramway of which there are a considerable number of lines, throughout Queensland, however Port Douglas is the only one operating in passenger tramway mode at present.

25 th March 1807	First Horse Tram in the world to carry passengers operates in Wales on the Swansea and Mumbles Railway. Converted to Steam in 1878 using conventional steam locomotives and then to Electric on 2/3/1929 using the worlds largest double deck electric trams ever built seating 106 passengers. Buses replaced the Electric Trams on 5/1/1960.
26 th November 1832	First Street Horse Tramway opens in New York with the trams pulled by horses. The Americans call it a Street Railway and the tram a Streetcar.
During 1833	New York experimented with Steam Trams.
From 1835	Experiments of battery powered vehicles commence. None were successful.
March 1836	Australia's first tramway, powered by convicts, opens at Port Arthur closed 1877 Passengers or goods were conveyed in small wagons with four convicts pushing the vehicles and riding on them when going down hill.
18 th May 1854	Australia's first Horse Tramway opens between Goolwa and Port Elliot.
12 th September 1854	At 12.20pm first train departs Flinders Street Station for Sandridge (Port Melbourne) First Steam operated rail line in Australia. This line closed during October 1987 and was reopened as a tram line on 18 th December 1987.
December 1861	Australia's first street tramway, a Horse Tram along Pitt Street Sydney opens. This line closed on 31/12/1866, due mainly to complaints regarding the track which was not flush with the roadway, causing occasional damage to horse drawn vehicles crossing the line.
23 rd March 1869	Horse buses commence operation in Melbourne.
1 st August 1873	Andrew S. Hallidie (1836 - 1900) successfully invents Cable traction on tramways beginning with the opening of the Clay Street Line in San Francisco California USA. Cable trams still run today in S. F. on three routes along with electric trams on six routes.
1879	Ernest Werner von Siemens (1816-1892) operates the first electric line at the Berlin Industrial Exhibition on an oval track over less than one kilometer long, drawing power from a centre track The Siemens Company is still in business, and still constructs trams.
12 th May 1881	Siemens opens the first electric tram service in the world at Lichterfelde near Berlin with electric power being drawn from the rails. Unfortunately a number of horses and pedestrians received electric shocks when crossing the tracks, resulting in a change to twin overhead using a four wheel trolley, that was dragged along the two wires and connected to the tram by a flexible wire.
3 rd August 1883	Volk's Electric Railway opens in Brighton England, the first successful electric operation using the track to obtain its power supply. Later a third rail was added to supply the power. The line still operates today along side Brighton's beach.
20 th December 1884	Melbourne's first tramway opens. Operated by horses along Station St. Fairfield. Closes after a short operating period on 8/8/1890
11 TH November 1885	Cable Tram service opens Richmond (Hawthorn Bridge) to Spencer and Bourke Sts. Richmond Depot facade still in position, where the new Rydges Hotel now stands
21 st December 1887	Horse tramway opens in Ballarat. Converted to Electric operation 18/8/1905 & closed on Sunday 19/9/1971. A short portion was reopened as museum tramway on 1/2/1975.
7 th January 1888	Frank Sprague (1857 - 1934) finally develops the first successful overhead electric power system for tram operation in Richmond Virginia USA. Using a trolley pole to collect the electricity from the overhead wires to operate the tram Although it took till May 1888 to perfect the system, the future of electric traction was now assured. Electrification of tramways around the world could now proceed.
1 st August 1888	Australia's first Electric Tram featured (not long after it was perfected) at the opening of Australia's Centennial Exhibition at Melbourne's Exhibition Building in Carlton operating on a short section of track.
14 th October 1889	The Box Hill to Doncaster Electric Tramway opens using the tram from the Centennial Exhibition, and becoming Australia's first electric tramway.

14 th June 1890	Bendigo opens with Battery Trams however they are not a success and were withdrawn after only thirteen weeks. Horses were required to return the trams to the depot on many occasions. Steam trams quickly replaced the battery trams. Electric trams commenced 8/4/1903. Entire system was closed on 16/4/1972 however, Central Deborah Mine to North Bendigo reopened 9/12/1972 as a tourist tramway and still operating.
During 1890	The Sorrento to Sorrento Back Beach Tramway opened. This line was worked by horses during the quite periods and in Winter, while at busy times a steam engine was used to haul the tramcars. The line connected with steam ferries that operated from Port Melbourne. The falling patronage caused by the motor car and the reduced number of passengers on the Bay Steamers made the tramway lose revenue and resulted in its closure on the Sunday after Easter in 1921.
6 th January 1896	The Box Hill to Doncaster Electric Tramway closes due to a land dispute and low patronage beginning a ten year gap of electric traction in Melbourne. Tram Road in Doncaster was named as a lasting remembrance of <u>Australia's first electric tram</u> .
5 th May 1906	The Victorian Railways open a new Electric Tramway from St. Kilda to Elwood. This line is finally extended to Brighton Beach but closes 28/2/1959.
11 th October 1906	The North Melbourne Electric Tramway and Lighting Company opens their Essendon Tram Lines, still part of Swanston Trams network on Routes 57 & 59.
10 th March 1912	Geelong opened its Electric Tramway, closed 23/3/1956.
18 th January 1916	The Tramways Board assumes control of the Cable tramways from the MT&O Co. Ltd.
1 st November 1919	The Melbourne and Metropolitan Tramways Board (MMTB) was formed with Alex Cameron its first chairman. Assumes control of Tramways Board cable lines.
1 st February 1920	The MMTB takes over control of Northcote Cable Line, Prahran & Malvern Tramways Trust, Hawthorn Tramways Trust, Melbourne, Brunswick & Coburg Tramways Trust, Fitzroy, Northcote & Preston Tramways Trust & Footscray Tramways Trust.
1 st August 1922	The North Melbourne Electric Tramway and Lighting Company is purchased by the State Electricity Commission (SEC) and its tramway interests given to the MMTB making the Essendon Lines the last privately owned Melbourne tramway to pass into Government ownership. This commences a 77 year period when all trams in Melbourne are operated by the Government, either by the MMTB or up to 1959 by the Victorian Railways. After mid 1934 when the SEC took over Bendigo from a private operator, all tramways in Victoria now came under Government control.
1923 - 1956	Commencing with the "W" class in 1923 and ending with the "W7" class in 1956, a total of 11 different varieties of "W" class trams were built. "W", "W1", "W2", "SW2", "W3", "W4", "W5", "SW5", "SW6", "W6" & "W7".
4 th November 1923	Vandals set fire & destroy Royal Park Tram Depot and four Horse Trams during a Police strike ending Melbourne's last Horse Tram line. This line was not replaced.
26 th October 1940	Last Cable Tram operates at 9.17pm. Clifton Hill & Nicholson Street Cable Lines close. Replaced by buses. Line closed due difficulty in obtaining the wire cables required, from USA, due to restricted shipping caused by World War 2
15 th January 1951	La Trobe Street tram line opened becoming a valuable line for redirecting services during parades & demonstrations. Now also part of the City Circle Tram service.
16 th January 1951	Numbered tram stops introduced. Initially on Routes 70 & 74 extended to full system
26 th June 1955	Electric Trams replace buses in Bourke Street which had replaced the Cable Trams during 1940. The trams operated through to Northcote and on to East Preston. This route was extended four times in 1983, 1985, 1987 & 1995 ultimately to Bundoora RMIT.
8 th April 1956	East Brunswick buses are replaced by Trams. The buses that had replaced the Cable trams in 1940. This completed the replacement of the Bourke Street bus routes with trams. Buses had not coped with the loadings in Bourke Street.

- 5th November 1956 Sandringham - Black Rock tramway closes marking the first of several closures during the 50's & 60's in Melbourne. These included, the final closure of the truncated St. Kilda - Brighton Beach in 1959, closed in three stages from 1957, Point Ormond 1960 & the three Footscray local lines in 1962. A swing back to trams in the late 70's, 80's & 90's saw the threat of further closures rejected.
- 22nd November to 8th December 1956 Olympic Games held in Melbourne. All leave canceled in order to operate additional services.
- 30th April 1975 Ceremony at Preston Workshops to mark the first "Z1" class trams. Between 1975 & 1984 "Z1", "Z2" & "Z3" class trams were built.
- 30th June 1975 First five "Z1" class trams enter service at North Fitzroy Depot. This brought a new era of new trams for Melbourne.
- 20th July 1978 First East Burwood extension opened. This extension heralded the re commencement of building new extensions to tramways in Australia. The previous being a short connecting track in 1961 in Brisbane and the 1956 opening of the East Brunswick line in Melbourne. On 4/7/1993 East Burwood was again extended.
- 13th June 1984 The "A1" class commence to run in service attached to Kew Depot.
1984 The "B1" class, our first articulated and pantograph equipped trams, commence operation. Also fitted with both poles as only a small section of overhead was converted for pantograph operation at this stage. Only two "B1" class built.
- 16th December 1985 The "A2" class trams becomes the first pantograph only equipped trams.
1987 The "B2" class trams, the first air conditioned trams, enter service. 130 built.
- January 1990 Trams blockade the City for five weeks during dispute on one person operation.
- February 1990 Driver only operation begins on Route 70 from Camberwell Depot at certain times.
- 28th April 1994 Official Opening of City Circle free tram service after construction of new line in Spring Street and new curves at Nicholson Street & Victoria Parade..
- 1st October 1997 Tram system split in two. Tram routes from Brunswick, Essendon, Malvern & Glenhuntly Depots become Swanston Trams. While tram routes from Camberwell Kew, Preston & Southbank Depots become Yarra Trams.
- 23rd May 1998 Last Day of Conductors in Melbourne. Last one finished at 2.30am on 24th May.
- 24th May 1998 First Day of complete One Person Operation on all trams in Melbourne.
- 30th May 1999 National Express the soon to be owner of Swanston Trams opens it first tramway between Birmingham & Wolverhampton in England. The opening, continued a world wide trend of reintroducing trams to Cities that had previously replaced their trams with buses. Cities that have recently reintroduced trams include:-
Los Angeles, St. Louis, Dallas, San Diego, Paris Sheffield, Manchester and London.
- 6th July 1999 Last day of "Z3" class trams in traffic fitted with poles. Z3" 205 arriving at the Workshops at 3.25pm completed the conversion to pantograph operation in Melbourne. This conversion of overhead and trams commenced in 1984 and leaves the "W" class as the only trams operating with poles in regular service.
- 29th August 1999 At 3am Government passes ownership of tramways to National Express (Swanston Trams) and Metrolink (Yarra Trams). Last Government tram to run in Victoria was "SW6 929 that entered Malvern Depot at 2.41am on an Australian Electric Traction Association tram tour. The last Government service tram was "Z1" 93 (selected to commemorate 93 years of direct Government involvement in tram operation) at 2.30am
The first ex Government Privatised tram to run out of a tram depot was "SW6" 929 that ran out of Malvern Depot at 3.48am on the AETA tram tour. The first privatised former Government service tram, operated by National Express to run out of a depot was "Z1" 1 that ran out of Glenhuntly Depot at 6.10am on GH 10 run.
- 10th August 2001 First four "C" class trams are unloaded from MV Edamgraft at 4 Webb Dock.

The Golden Age of Tramways Charles Klapper 1961	The Australian Tramway Album J. Richardson 1950?
Tram to Sorrento A. P. Winzenried 1984	Electric Tramways of Essendon J. Richardson 1956
Australian Trams Larkins & Howard 1978	Australia's First Electric Tram J. K. Moir 1940
The Tramways of Australia Samuel Brimson 1983	The Victor Harbor Horse Tram 1996
The Time of the Trolley William D. Middleton 1967	Light Rail Review 8 1998
Tramcar Treasury Denis Gill 1963	Destination City N. Cross, D. Budd, R Wilson 1993
Destination Subiaco J. Richardson 1957	Light Rail Review 8 Platform 5 publications 1998

Questions for Students

- 1) Why was it necessary to cancel all leave For tramway staff in late November, early December 1956? A 1956 Olympic Games which was held in Melbourne.
- 2) Who presently owns Swanston Trams? A National Express Group since 29th August 1999.
- 3) What date did National Express Group first operate a tramway? A. 30th May 1999 in Birmingham England.
- 4) Name the most recent Capital City in the world to reintroduce trams? A. London May 2000.
- 5) Name the countries that make up Scandinavia? A. Denmark, Finland, Norway & Sweden.
- 6) Douglas the Capital of the Isle of Man still operates Horse trams as one of its main form of City transport. Look up your Atlas and locate the Isle of Man.
- 7) St. Petersburg in Russia has the largest tramway system in the world. (Melbourne comes in at 10). During 20th Century St. Petersburg was for a time known by two other names. What are they? A. Petrograd & Leningrad.
- 8) Why was tram 93 selected to be the last Government service tram. A. The Government had control of some or all of the tramways in Victoria for 93 years, between the opening of the Victorian Railways line in 1906 to 1999. The Government controlled the Victorian Railways (VR), The Melbourne & Metropolitan Tramways Board (MMTB), The State Electricity Commission (SEC), The Metropolitan Transit Authority (The MET) and The Public Transport Corporation (PTC). Only between 1935 & 1972 in Country Victoria & 1922 to 1999 in Melbourne were all tramways under Government Control
- 9) Which Australian tramway was partly destroyed by bombing during World War 2? A. Broome
- 10) What motive power operated Australia's first tramway? A. Convicts at Port Arthur Tasmania.
- 11) Cable trams finished in Melbourne in 1940. Why was the line closed during petrol restrictions brought on by World War 2? A The Steel rope was unable to be imported from the USA due to enemy attracts on shipping.
- 12) Which is the only large City in the world still operating Cable Trams? A. San Francisco in California USA. Llandudno Wales (UK) also operates a Cable Tram up to the Great Orm
- 13) Which city in Victoria is about to operate a diesel powered replica of a Cable Tram? A. Portland.
- 14) The first Horse Tram service in the world (opened 1807 in Wales) went on to operate the largest double deck trams in the world. How many passengers did these double deck trams sit? A. 106 passengers.
- 15) The Horse Tram service to the Zoo suddenly stopped on 4th November 1923. What occurrence indirectly led to its closure? A. The police strike.
- 16) Australia's first Horse Tramway (in Sydney) only lasted five years what was the reason for it's closure. A. The wrong tracks were delivered resulting in the track not being flush with the roadway causing damage to vehicles pulled by horses when attempting to cross the tracks.
- 17) Tram Road in Doncaster was named to commemorate what event in Australia's history? A. Australia's first electric tramway. The tramway only operated between 14th October 1889 and 6th January 1896.
- 18) Which country in the world has the largest number of tramway systems. A Russia with 72 operating systems.
- 19) The tramway system in Grozny Russia is currently not operating. Why? A Due to fighting between Russia and the Chechen rebels, who want independence from Russia.
- 20) Which Year did pantograph operation begun in Melbourne. A 1985.

This list was compiled 25th November 1999 (updated July 2000) by
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