100 Years of Melbourne Trams

The tram began its life in industry as an aid to the transport of heavy loads, when miners discovered that it was easier to move a cart mounted on rails than to push it over uneven ground. Tramways spread through industry, the carts – or trams – sometimes pushed or pulled by manpower, sometimes drawn by horses.

As the industrial revolution advanced, so did transport technology and, in 1869, a significant improvement on the horse tram was developed in San Francisco. It was there that the idea came to English-born Andrew Hallidie, a manufacturer of steel wire rope, that a tram could more steadily and more safely be hauled by means of a cable. Hallidie patented the inventions that made cable traction possible and the world's first cable tram system came into operation in San Francisco in 1873.

This invention and the progress of the San Francisco system had been closely watched by an American transport entrepreneur and Melbourne businessman, Francis Boardman Clapp, and in 1869 he set up the Melbourne Omnibus Company with William McCulloch and Henry Hoyt. The company brought Melbourne its first organised street public transport, with a scheduled service of 11 horse-drawn buses taking passengers from the city railway stations via Bourke Street to the Birmingham Hotel on the corner of Smith and Johnson Streets in Fitzroy. The threepenny fare was cheaper than a cab ride and soon services were operating to Richmond, Carlton and North Melbourne. In 1877, Clapp bought the Victorian patents of Andrew Hallidie's inventions and changed the name of his company to the Melbourne Tramway & Omnibus Company.

Spurred on, perhaps, by tramways development overseas, and the introduction in Sydney of steam trams, the colonial government in 1883 eventually passed the Melbourne Tramway and Omnibus Act. Under this Act, the local councils whose streets would become part of the proposed network, set up the Melbourne Tramways Trust to build the tracks and powerhouses. Once complete, the whole cable system was to be leased to the Melbourne Tramways & Omnibus Company to operate regular services until the year 1916.

The first cable tramway, the Spencer Street-Richmond line ran from the corner of Bourke Street down Spencer Street, along Flinders Street, Wellington Parade and Bridge Road to Hawthorn Bridge. It opened on 11 November 1885. The road had to be excavated to a depth of nearly four feet and tunnels constructed to house cables running in both directions. Here, large steam engines powered a 24,870ft rope (as the cables were called) to the city, and a 14,754ft rope to Hawthorn Bridge.

The cables consisted of six strands of seven steel wires with a hemp core. Threading of the cable called on the resources of an army of men and a team of horses, and to drag it up to Jolimont Hill the number of horses had to be increased to 25.

Over the next six years, many city streets and suburban thoroughfares saw similar upheavals and feats of engineering, and by 1891 Melbourne had 44 miles of double track cable tramway, powered by 11 engine houses. Cable lines ran along every main street of the city (except King, William, Russell, Exhibition, Spring, Queen and Latrobe Streets) and along all major exit roads.

THE CABLE TRAM

Cable trams came in sets or 'trains' – the open 'dummy' at the front and the closed car behind. The dummy contained the 'grip' mechanism which attached or detached the tram set from the moving cable below the road. Melbourne's first tram cars were imported from New York but all later rolling stock was built at the company's workshop at Nicholson Street, North Fitzroy.

The trams were small and light. The cars weighed 2.5 tons, with room for 22 passengers seated inside and licensed to carry 34 standing. The dummies were a little heavier. They had seating for 20 and were licensed to carry 22 standing. Services were frequent, coming as often as at two minute intervals on the busiest lines at the busiest times.

Conductors collected fares using a bell punch. Fares paid were recorded not by issuing tickets to passengers, but by punching a small hole in the long cardboard trip slips the conductor pinned to his uniform. At the end of the day, the 'confetti' collected in the punch was counted to balance with the amount of money taken.

HORSE TRAMS

Melbourne's first tramway though, was a horse tramway, which opened in 1884 to carry passengers from Fairfield railway station to Thornbury. More were introduced over the next few years, at the time the first cable trams were being developed, but they were not adopted widely, and ran for short distances only. One reason for this was that they had a great disadvantage – the trail of manure and urine they left was considered a public nuisance. Fodder, too, was expensive.

The Melbourne Tramway & Omnibus Company and the Melbourne Tramways Trust built and operated two horse tramways to supplement their cable network. A line opened in 1887 to carry passengers from the Victoria Bridge cable tram terminus to Boorondara cemetery in Kew and, in 1890, a line from Hawthorn Bridge to the Richmond cable tram terminus. The Melbourne Tramway & Omnibus Company also built and operated a horse tramway through Royal Park to the Zoo.

The Kew and Hawthorn lines were electrified during the First World War and the Zoo line, the longest surviving of Melbourne's horse tramways, came to an abrupt halt in 1923 when its depot burned down during a police strike.

THE FIRST ELECTRIC TRAMS

Melbourne saw its first electric tramway as early as 1889 with a two-and-a-quarter mile line from Box Hill to Doncaster. However, this service operated only until 1896, and it was the Victorian Railways who began the serious move to the tram power of the future when, in 1906 it opened an electric tramway from St Kilda station to Brighton. In the same year, a private company, the North Melbourne Electric Tramway & Lighting Company Limited, started a line from Flemington Bridge to Essendon and Maribyrnong.

The following year, Prahran and Malvern councils applied for authority to construct tramways and, by 1910, as the Prahran & Malvern Tramways Trust, they were ready to go into service with 13 cars on two routes. Over the next ten years, the system grew to almost 100 trams and over 35 route miles, extending to St Kilda, Caulfield, Glenhuntly, Hawthorn, Kew, Camberwell and Mont Albert.

Other local councils followed their lead. The Hawthorn Tramways Trust began operations in 1916, as did the Melbourne, Brunswick and Coburg Tramways Trust and the Fitzroy, Northcote and Preston Tramways Trust. Of the council tramways, the Prahran & Malvern Trust's system was by far the most developed, and laid the foundations for Melbourne's future tramway network.

THE MELBOURNE & METROPOLITAN TRAMWAYS BOARD

In the 50 years since the establishment of the Melbourne Omnibus Company, Melbourne's public transport had grown through unplanned, unco-ordinated private and pubic enterprises, stimulated by the land boom, depressed by economic recession and world war. It was becoming clear that a more orderly approach was needed.

It was therefore timely that the Melbourne Tramways & Omnibus Company's lease to operate services on the cable tramways expired on 30 June, 1916 and a decision be made on a tramways plan for the future.

It took some time to resolve what should be done, and temporarily, ownership and operation of the cable lines was vested in the Melbourne Tramway Board. However on 1 November, 1919, the Melbourne & Metropolitan Tramways Board was established to operate the system, with its first chairman, the energetic Alex Cameron, former chairman of the successful Prahran & Malvern Tramways Trust.

The Board inherited a cable system that was carrying a volume of traffic for which it was never designed and whose rails were wearing out. It also inherited a patchwork of modern electric tramways. The long term plan was to electrify cable lines or convert them to bus routes, and link up and extend the whole tramways network. In the short term, however, the Board had to construct new cable trams and carry out engineering works on tracks and at powerhouses to keep services running.

Soon the life of Melbourne and its suburbs was disrupted and this continued throughout the 20s, as workers began to rip up the old cable system and install new tracks and overhead power lines. On August 29, 1925, the first major cable tramway ended its life with the closing of the Windsor-St Kilda Esplanade line.

To maintain services during the conversion, electric trams were running on temporary tracks or passengers were carried by bus. To provide the bus service, the Board entered the fastest-growing public transport sector of the day – motor bus operation.

This move also enabled the Board to compete in a field of transport that was seriously beginning to erode the business of the tramways. In 1925, the first tramways buses came into operation from LaTrobe Street down Swanston Street and Brighton Road, along Glenhuntly Road to Elsternwick station.

By 1930 most cable tracks had been converted to electricity, but the depression of the early 30s brought further work to a halt. The Second World War provided another stay of execution for the cable tram, but the last one made its run on October 26, 1940 to Northcote.

Along with the cable trams, the bell punch also disappeared in 1922 and the Board began to collect fares by issuing tickets.

The M&MTB had inherited a fleet of some 500 cable cars and 500 dummies, all of which were standardised in design.

However this was not the case with the rolling stock of the various electric tramways. Class 'A' to 'V' of the Board's alphabetical tram classification were taken up with widely differing vehicles which came with the five municipal trusts and the North Melbourne Electric Tramway & Lighting Co Ltd. The Board decided to standardise on a newly designed tram. This became the 'W' class.

The first 'W' class tram was built in 1923 and variations of this class provided Melbourne with its distinctive style trams right through to the mid-70s, until the introduction of the current modern fleet ('Z class').

At first the Board had adopted a chocolate and cream colour scheme for its vehicles, similar to the Prahran & Malvern Tramways Trust livery. The first green tram appeared after the St Kilda Road line was electrified, to blend with the trees lining the route. Gradually, green and cream was adopted throughout the fleet.

After the formation of the Met, a new 'A' class tram was designed, with significant input from passengers and employees, which came into service in 1985. This year also saw the introduction of the 2000 series articulated tram.

THE METROPOLITAN TRANSIT AUTHORITY

In July 1983, Melbourne integrated its three major forms of public transport – trams, buses and suburban trains – to give the people of Melbourne a co-ordinated public transport system. As a result, operations of the Melbourne & Metropolitan Tramways Board were taken over by the Tram & Bus Division of the new body, the Metropolitan Transit Authority – The Met.

At that time, the Tram & Bus Division had 684 trams, 220 km of track, and some 5,000 employees to run the system.

'Tram green' was developed into the distinctive gold and green colour scheme adopted for all Met rolling stock and uniforms, and the Met logo, symbolising the three modes of transport, began to appear on all vehicles and uniforms.

The integration of services allowed a great improvement in the ticketing system. A single ticket could be used on all modes of transport, with fares based on time, rather than distance travelled.

The introduction of Automatic Vehicle Monitoring (AVM) in 1985 was an example of high technology in action. The AVM system, initially installed in the Met's own bus fleet, enabled improved communications with bus & tram crews, improving services by eliminating the bunching of vehicles, and improved scheduling. This created a more secure and publicly responsive transport system.

The high regard with which the emerging Met system was held throughout the world became apparent when, in July 1985, the $200 million contract from the Kowloon-Canton Railway Corporation for a new light rail (tram system), was won by a joint bid from the Met and Leighton Holdings Limited.

The contract for 70 trams, similar to those operating in Melbourne, together with a ticket collection system, workshop equipment and depots, was won against competitors from Japan, Canada, Belgium and the UK. This was a clear indication of the Met's ability to run an efficient, world class transport service.