



MELBOURNE
TRAM MUSEUM

The Bellcord

*Journal of the Melbourne Tram Museum
Number 53– March 2022*



Front cover

M&MTB L class 103 with original door layout in the body shop at Preston Workshops, c1925-30. We believe this to be an M&MTB official photograph. From the Gary Davey collection.

Museum news

Many thanks to Geoff Brown for his editorial efforts with *The Bellcord* over the past five and a half years. An impressive achievement, creating a considerable challenge for me, as new editor, to live up to the standards he has set.

When will the museum re-open?

After two long years, we are finally preparing to re-open the museum. We haven't been idle during that time: installing new signage, designed by our friends at Nuttshell, preparing a large workspace for our digital imaging project, some major housekeeping tasks and enhancing our back office processes.

We are returning to our normal open day schedule on the second and fourth Saturday each month, starting on 12 March, subject to any further lockdown restrictions. If you are planning to visit us, we recommend that you first check our website or social media to confirm the date.



Kevin Taig demonstrating the large format digital scanner at the Melbourne Tram Museum, 18 February 2022. The original timber plan drawers hold the plans and drawings we will be scanning in our digital imaging project, in conjunction with Public Record Office Victoria.

Melbourne Tram Museum
8 Wallen Road
Hawthorn Vic 3122

Postal address:
PO Box 6172
Hawthorn West Vic 3122

E-mail:
editor@trammuseum.org.au

Website:
www.trammuseum.org.au

The Bellcord is published by the Melbourne Tram Museum Inc, A0048167Z, ABN 11 293 508 607.

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Editor: Noelle Jones

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Digital imaging project underway

There was much excitement at the museum over the installation of our new large format scanner and computing facilities. Funded by VicTrack, these are being used to digitise the museum's huge collection of tram and bus plans and drawings.

These beautiful documents, covering the period from cable cars until the 1980s, are of state significance – once they have been digitised, the originals will be deposited with Public Record Office Victoria (PROV). We are liaising with PROV throughout the project, being advised by its Collection Team and ensuring that our processes follow best practice.

With somewhere between 4000 and 5000 original documents to digitise, it is going to be an enormous task. We would welcome any assistance with this important project.

Interested in participating? For more information contact Kevin Taig at kevin.taig@trammuseum.org.au or 0418 314 456.

New at the museum shop

Volume 3 of the authoritative reference on New South Wales tramcars is now available at the museum shop. Note that museum members receive a 10% discount on new books. We also have a few secondhand copies of Volumes 1 and 2 for sale. Contact shop@trammuseum.org.au for more details.

A CENTURY OF NEW SOUTH WALES TRAMCARS Volume Three The Electric Era 1908 to 1961



by Ian Saxon, from the records of Norm Chinn and Ken McCarthy

New from the Sydney Tramway Museum, this collector's book effectively completes a series which began in 1962. It gives information on the 1285 passenger-carrying trams built from 1908 onwards and which continued in use until final closure of the Sydney system in 1961.

Details of each type of tram – design, construction and operation

- Tabulated data for every individual tram
- 224 pages, art paper, A4 hardback
- More than 200 black-and-white and colour photographs, and 41 drawings, diagrams and maps
- Recommended retail price \$75

Available from:

- Melbourne Tram Museum, or order from <https://www.trammuseum.org.au/shop>
- Sydney Tramway Museum, or order online at bit.ly/CenturyNSWTrams
- For more information, email: enquiries@sydneytramwaymuseum.com.au



M&MTB W2 407 has been restored by the Melbourne Tramcar Preservation Association to 1970s appearance. The tram is currently on loan to Ballarat Tramway Museum, where it is pictured in service, 22 November, 2021. Photograph by Mal Rowe.

Fiddling with the middle

Changes to drop centre seating in Melbourne's classic trams

The 'drop centre' design was the dominant type in Melbourne's tram fleet for over 50 years – from the first W class tram in the early 1920s until the arrival of the Z class trams in the mid-1970s. The origin of the design dates from a decade earlier in July 1912, when the [Prahran & Malvern Tramways Trust](#) (PMTT) began work on what it initially called the 'drop frame' design. Eleven of these trams were built by Duncan & Fraser of Adelaide in 1913.

The trams were designed by a staff member of the PMTT. In his annual report to the PMTT board in 1913, the Trust's Engineer and Manager, Mr Harry S Dix (b. 1871), said: "The type of bogie carbody which has been adopted as standard, was designed by a member of my staff, and possesses several features which recommend it, both from a public and an operating point of view, such as low steps, short saloons, and absence of sliding doors in the semi-open portion in the centre". It is likely that the designer was Mr Robert Lormer (1886-1985), who went on to become a rolling stock engineer with the Melbourne & Metropolitan Tramways Board (M&MTB) and retired in 1951.

At that time, the drop frame (drop centre) design was not common – probably because the frame was expensive to build and added weight to the tram. Its advantage is the lower step heights for passengers. For Melbourne, the step heights of PMTT's first bogie electric trams, which were similar to an Adelaide D class tram, compared badly with its early cars – the California Combination cars and the easy-to-access cable tram dummies, with similar step height to a modern low floor tram.

The early drop centre trams usually had open sides where smoking was permitted. Smoking on trams was eventually banned in the 1970s.

There were some experimental cars in the United States. Christchurch (New Zealand) had 28 drop centre trams designed by its engineer (Scott Symington) and built by the local firm of Boon & Co between 1906 and 1910. It is very likely that the PMTT designer was aware of and influenced by the Symington design. PMTT managed to achieve a significantly lower step height – mainly due to its choice of Brill 22E trucks.

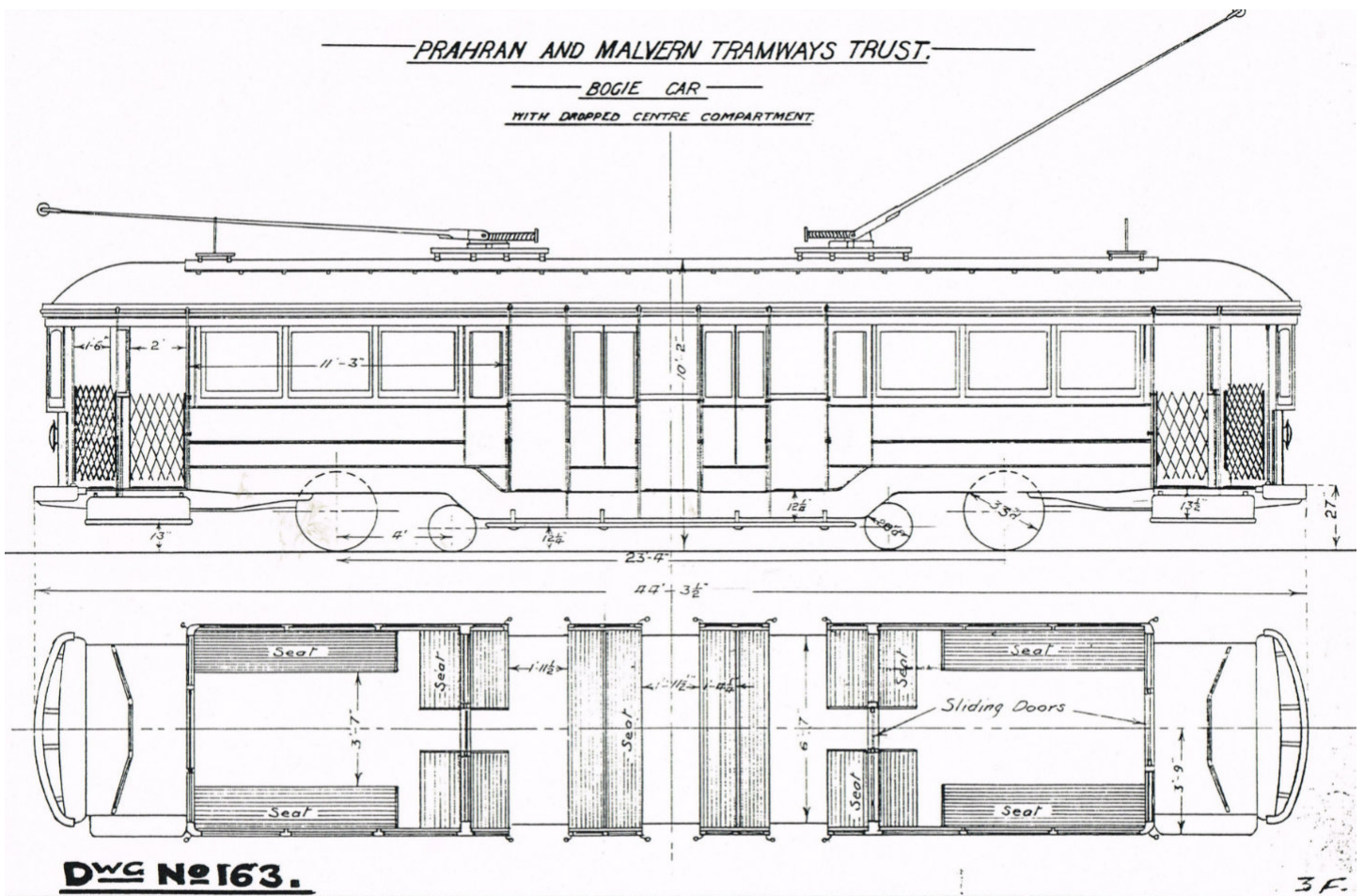
The design was adopted widely by other tramways: the Hawthorn Tramways Trust, the Victorian Railways, The Municipal Tramways Trust in Adelaide, Dunedin Corporation Electric Tramways, the Brisbane City Council tramways, the Launceston Municipal Tramways and to a limited extent by the New South Wales Government Tramways in Sydney.

The initial Melbourne design

The initial 11 PMTT drop centre trams built by Duncan & Fraser of Adelaide (numbers 25 to 35) were assembled at the PMTT workshops in Coldblo Road, Malvern. They had full-width cross bench seats in the centre and transverse seats against both sides of the bulkhead separating the drop centre from the saloons. PMTT used two conductors on these bogie trams, one at each end.

It was a congested layout which would have been slow to load and unload. The trams had a dropped platform at each end to improve access to the saloons.

PMTT liked the design but made a minor change when it placed a second order for ten trams later in 1913. The transverse seats inside the saloon were removed and the longitudinal seats now ran the full length of the saloon.



An original PMTT drawing showing the drop centre design. It includes the various step heights – an important feature of the design. From the collection of the Melbourne Tram Museum.



Hawthorn Tramways Trust No 32 has been restored to near original appearance by Bendigo Tramways. It is pictured here at Charing Cross in March 2006. Photograph by Mal Rowe.

The Hawthorn Tramways Trust modification

Hawthorn Tramways Trust (HTT) commenced operations in 1916 and was obviously impressed by the PMTT drop centre trams. HTT ordered ten for its opening plus a further eight in 1917-18. HTT made several design changes including moving the bulkhead between saloon and drop centre to the edge of the drop centre frame and changing the doorways so that two narrow doorways at the edge of the drop frame gave access to the saloons and two slightly wider doorways gave access to the full width cross bench seats in the centre. The cross bench seats all faced toward those two centre doorways.

Victorian Railways adopts the design

By 1917 the Victorian Railways (VR) tramway from St Kilda to Brighton Beach was struggling to cope with the passenger traffic. Its solution was to build large bogie trams. VR had been given plans of the PMTT drop centre trams and was clearly influenced by the HTT variation of the design. It built a large heavy version with four-motor trucks and eliminated the end platforms, thus requiring all passengers to load via the drop-centre.

By replacing the narrow side panels of the HTT design with pillars, VR made the doorways appear wider, but the seats still restricted the width.



VR also provided a walkway between the transverse seats – allowing passengers and conductor to move throughout the tram.

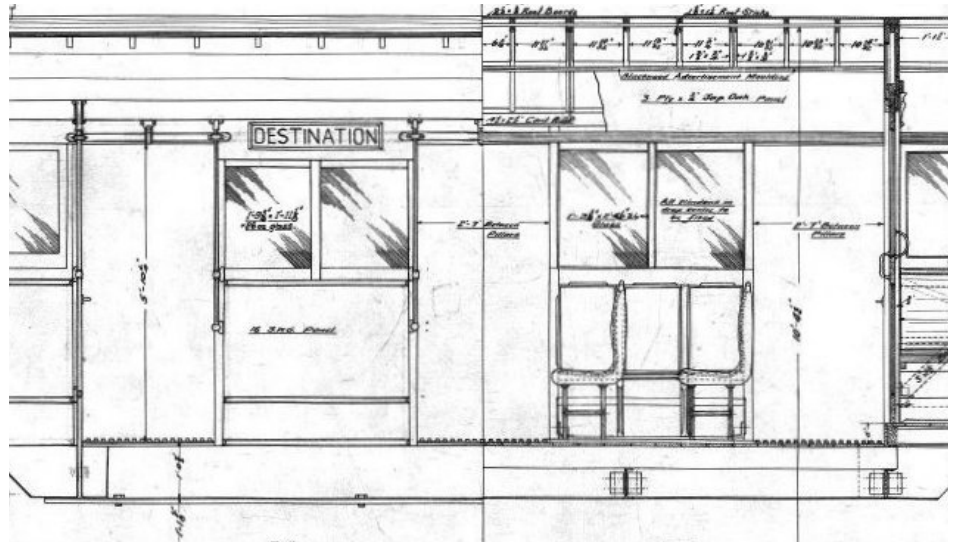
PMTT has one more go

As the PMTT era approached its end with the impending merger into the M&MTB, the PMTT designed one more drop centre tramcar (see cover photograph). This was a four-motor car clearly influenced by the VR design.

It adopted the HTT layout for the drop centre and deleted the end platforms as had the VR. Like the VR, it provided a walkway through the centre, with the transverse seats seating two on one side of the walkway and three on the other. This was enabled by extra width, another feature of the design, and by the average person in the 1920s being a lot smaller than in 2022. The design featured equal width doorways. It entered service after the end of the PMTT in 1921 as the M&MTB L class.

Victorian Railways drop centre tram number 41 has been restored to the appearance as built by Melbourne Tramcar Preservation Association. The stanchion gives an impression of a wide entrance, but the seat and seated passengers reduce the effective width. Photograph by Mal Rowe, 14 September 2014.

M&MTB official drawing number R996 shows the drop centre layout for the W class with door spacing like the early PMTT drop centre design, but with seats facing to the centre. Plan from the collection of the Melbourne Tram Museum.



The initial M&MTB W class design

When the M&MTB took over the former Trust tramways in 1920, the senior management was largely drawn from the former PMTT. The M&MTB continued to prefer bogie drop centre trams, leading to the design of the W class by T.P. Strickland (1875-1955), the M&MTB's Chief Engineer, who had joined the organisation from the NSW Government Railways and Tramways.

The W class was a much simpler design than the L class, having mostly straight panels and frame. It had three equal width doorways. Like the L class, there were no end loading platforms or doors. As a concession to lessons learnt with the HTT design, the centre seats all faced towards the centre so that the legs of seated passengers did not obstruct the doorways leading to the saloons. The centre seats had a walkway between them – but with two and two seating as the W was not as wide as the L class. Two hundred of these trams were built between 1923 and 1927.

The W1 – an oddity

In the mid-1920s the conversion of the cable system to electric tramways was underway. There was quite a strong campaign to keep at least some of the cable trams going and it is possible that the W1 design was an attempt for a new electric tram to emulate the experience of riding in an open cable tram dummy.

The W1 had the same pillar spacings as the W, with an open drop centre. It was fitted with longitudinal seats, like cable car dummies. Thirty were built between 1925 and 1927.

The W2 – the iconic drop-centre tram

The W design proved to be slow at loading and unloading due to the narrow doorways leading to the saloons. Re-arrangement of the doorways and panels in the drop centre in a minor re-design saw the two doorways leading to the saloons widened and the centre doorway and panels



M&MTB W1 class number 431 has been restored to original layout and is part of the Melbourne Tram Museum collection. The centre seats are seen in the 'summer configuration'. In winter they would be tipped over to face inwards and the three central doorways would have the blinds lowered. 431 is seen at Docklands on its way back to Hawthorn after a special run on 12 February 2005. Photograph by Mal Rowe.

Iconic?

“Iconic” is a term that is overused; however, the outline of a drop centre tramcar is indeed worthy of the term, being the icon used in Australian standard road signs involving trams across the nation.



reduced in width (see the photograph of M&MTB W2 407 on page 4). The seats were also changed to the original back-to-back PMTT layout.

Standardising the drop centre design

The W2 drop centre layout became the M&MTB’s standard design. All of the W and W1 trams were converted to the W2 layout over the latter part of the 1920s and the first half of the 1930s. Some of the late W1 conversions had sliding side doors fitted at the same time. Even the original PMTT drop centre trams were converted to this seating layout by moving the bulkhead panels to the edge of the drop centre section and eliminating the seats backing onto that bulkhead. The L class trams were altered, but not the ex-HTT trams.

The W3, W4, CW5 and W5 designs all used the same layout. The W4s and W5s had a wider body, but two and two seating was retained to give a wider walkway for the passengers and conductor.

The wide body of the W4 sat on a narrow car frame – the same width as a W2 or W3 – so passengers sitting in the doorway of the drop centre had to crook their leg in to rest it on the floor, as shown in the image on the next page.

With the arrival of the SW6 (and later W6) class trams, driver-controlled sliding doors were introduced and the centre doorway was eliminated. The central seating layout remained the same, but upholstered seats were gradually phased in. The drop centre area had always been the smoking section. With the introduction of sliding doors at the entrances and the elimination of sliding doors between the drop centre and the saloons there was no longer effective separation of smoking and non-smoking areas.

Final innovations

The last of the W class trams was the W7, built for the new electric tramways running from Bourke St. from the mid-1950s. The Board decided to finally solve the problem of passengers’ legs obstructing the entrances by installing longitudinal seats in the drop centre. This also increased space for standing passengers. The layout had been tested earlier – in 1949/50 on SW5 840 and the experimental PCC tram number 980. The latter was not, strictly speaking, a drop centre tram as the floor level in the centre was raised to fit in control equipment and motor ventilation fans.



The three pictures above illustrate the evolution of the drop centre layout in the W class. W2 510 at left has the standardised layout of the W2 – note the narrow centre walkway. W5 774 has a much wider centre walkway enabled by the extra width of the car body. W7 1040 – the last W – opens up the drop centre by using longitudinal seats. All photographs by Mal Rowe at the Melbourne Tram Museum, January 2022.



The curved sides in the drop centre of the W4s were due to the wide body being built on a narrow frame. W4 673 is seen at Princes Bridge in the early 1950s, with a passenger having to crook his leg at an odd angle to rest his foot on the floor. Photograph by Noel Reed.

In the mid-1980s the remaining W5s in service were converted to SW5 class trams, including changing the layout of the drop centre area to the W7 layout.

The final change came with the refurbishment of W class trams to be retained for heritage service on Melbourne's City Circle. The layout has transverse seats on one side and longitudinal seats on the other, with a gap for a ticket vending machine. With the 2009 decision to not install 'myki' ticket vending machines on trams the gap was no longer needed, but it continued to be incorporated into all W8 conversions.

Other drop centre trams in Australasia

The influence of Melbourne's drop centre trams spread.

- The Municipal Tramways Trust in Adelaide built the F class trams from 1921. They bear a strong resemblance to the original layout of Melbourne's L class – including the two and three seating and general layout of the drop centre. Like Melbourne's W class they were a much simpler body design for mass manufacture.
- Dunedin Corporation Electric Tramways had 12 drop centre trams built by the Meadowbank Manufacturing Co in Sydney in 1921. They were probably mostly influenced by the early Christchurch Boon design.
- Brisbane City Council tramways built two series of drop centre trams. The first series, starting in 1925, were designed in Sydney. Their features reflect both Sydney and Melbourne influences, with the first series looking a little like the contemporary Melbourne W1s. The second series, dating from the mid-1930s, shows

evidence of being influenced by the Sydney R class design.

- Launceston Municipal Tramways built three drop centre trams with the same layout as the Melbourne L class.
- The New South Wales Government Tramways in Sydney long persisted with crossbench trams with multiple doorways. These trams were fast loading but provided little space for standing passengers and were uncomfortable in inclement weather. The R class design of 1935 was influenced by Melbourne design and tram technology. It had a drop centre but only two entrances at the centre and retained entrances at each end. The later R1 had only one centre entrance. Both had all transverse tip-over seats – in a Sydney tradition of making seating a priority over total passenger capacity that continues to this day.
- After World War II the three Victorian Provincial Tramways – Ballarat, Bendigo and Geelong – inherited drop centre trams originally built for the PMTT and the HTT.

Acknowledgments

My thanks to Warren Doubleday for helpful suggestions for improvements to an earlier version of this article, to Brian Weedon for additional advice and sharing the results of his research over many years, including reports by PMTT's Harry Dix and the name of the likely designer of the original PMTT drop-centre tram, and to Noelle Jones for raising questions and making suggestions as an editor should.

Mal Rowe



MTOC cable tram, Sydney Road, Brunswick, c1910. Photograph by C.A. Ratten, in the collection of the Melbourne Tram Museum.

The story behind the photograph

This fine photograph of a cable tram and trailer is in the collection of the Melbourne Tram Museum, with another copy held by [State Library Victoria](#). We were recently asked to provide more information about the photograph and after a joint research effort we were able to track down its location and date.

The sides and fronts of Melbourne's cable tramcars were colour-coded, painted to indicate routes and route names. Our photograph shows a Melbourne Tramway & Omnibus Company cable tram on the Brunswick route, which travelled from the Elizabeth Street terminus at Flinders Street, along Sydney Road to the terminus at the corner of Moreland Road.

Bogie trailer cars, with two sets of wheels, were only ever used on this Sydney Road route. Many of these trailer cars, such as the one in the photograph, were made from recycled horse trams. Two six-window horse tram trailers were spliced together, indicated by the wider strut between the two middle windows.

And pinpointing the location and date? Signage of the building just behind the tram is key to the solution. According to the Sands & McDougall directories, A.C.F. Lewellin's premises were at 841 Sydney Road, Brunswick over just a short period, 1909 to 1911. At that time a chemist, James Francis Hughes, was located in the

building to the right of the photograph, a building which is still standing. This is just north of the cable car shed, which was replaced in 1935 by the current Brunswick Tram Depot, around 25 years after the photograph was taken.

The magnificently named Alfred Charles Farquharson Lewellin was an electroplater, manufacturing bicycles at his Sydney Road premises. His bicycle factory subsequently moved to 368 Lonsdale Street, between Elizabeth and Queen Streets, in central Melbourne.

Tragically in September 1915, an industrial accident resulted in Lewellin's death. One of his employees dropped a four gallon (about 18 litres) earthenware jar. The jar broke and its contents – highly corrosive nitric acid – spilled over the factory floor. Lewellin and two employees worked frantically to neutralise the acid, but in the process his lungs were severely damaged by the fumes. Twelve days later, at his home in East Brunswick, Lewellin died as a result of his injuries. He was 52, survived by his wife and twin daughters.

Many thanks to Gary Oreo, Russell Jones and the resources at Births Deaths and Marriages Victoria, Public Record Office Victoria, State Library Victoria and Trove (National Library of Australia).

Warren Doubleday and Noelle Jones



The button donor in her M&MTB bus conductress uniform, 1949. Photograph courtesy of Robyn Caddy.

Bright as a button

The story of an M&MTB bus conductress

This is an updated version of an article that originally appeared in the Journal of The Victorian Button Collectors Club, issue no 52, August 2018. The author, Robyn Caddy, is a co-founder of the club.

Every family has a tin of buttons! And The Victorian Button Collectors Club is often contacted by members of the public asking for advice or information about the contents of their button tins.

The Club was formed in 1996 following increased local interest in collecting antique and vintage buttons – including uniform and military buttons. At that time button collecting clubs had been well established in the United Kingdom and United States.

In 2018 the Club was contacted by a member of the public who had a large tin of old buttons she wished to donate. I visited her home in Ascot Vale to collect the buttons, and looked through the collection with her. We tipped the buttons out on her kitchen bench and among them were six buttons with “TB” on the front. This was the monogram of the Melbourne & Metropolitan Tramways Board, which was also used on badges and other items. These buttons had been on her uniform when she worked as a conductress in 1949. There were two different manufacturers’ names on the back – Stokes & Sons, Melbourne, and Buttons Limited, Birmingham. It seems that the M&MTB re-used old buttons, or replaced lost ones from a common pool.

At that time, all uniforms were made at the M&MTB’s own [clothing factory](#) which had been established in unused offices at Hawthorn Depot in 1940. Then in 1941 [the first conductresses](#) were appointed by the M&MTB, in response to manpower shortages due to World War II.

Her husband had worked for the M&MTB as a bus driver, stationed at Bay Street, Port Melbourne. It would have been convenient for her to work on the same line, however there were no women at the Port Melbourne bus depot, only men – something about no suitable facilities for women!!

Women had to be 21 before they could work on the tramways and buses. She applied for a job as a conductress even though she was only 19 at the time, however they didn’t ask for proof of age – maybe they assumed she was 21 because she was married.

She was stationed at the Scotchmer Street, North Fitzroy bus depot. One bus route was Nicholson Street depot to Spencer Street via Bourke Street, back to Brunswick. Another route was Johnston Street down Russell Street, Flinders Street to Port Melbourne and Garden City, and to Kew. The buses were called drop-enders as the entrance was at the back. The [double-deck buses](#) serviced High Street Northcote, Smith Street, and Bourke Street to Spencer Street. Shifts

By the beginning of the 1900s the city of Birmingham in the United Kingdom had long been a major button-making centre. **Buttons Limited of Birmingham** was formed in 1907 by the amalgamation of three large button-making firms – Thomas Carlyle Ltd, Harrison Smith Ltd and Plant, Green and Manton Ltd – to combat increased competition from abroad. Buttons Limited was the largest of the Birmingham button-makers and produced uniform and military buttons. Its mark continued to be used up to the 1960s.



M&MTB buses at the Central Bus Garage, North Fitzroy, 1940. Official M&MTB photograph from the collection of the Melbourne Tram Museum.

were early mornings, late afternoon, or split shifts. Conductresses were paid the same wages as male conductors and unlike some other jobs at that time, married women could work on the buses and trams. She also said being a conductress on a bus was considered as having higher status than working on a tram!

She worked as a conductress for eighteen months until the Victorian Railways strike of 1950, when she and her husband resigned from the M&MTB and went to live in the country. She gave her uniform back at the end of her employment, as was expected, however she kept the buttons!

Robyn Caddy

Stokes & Sons was a long-established Melbourne firm well-known for producing buttons, badges and commemorative medals. Stokes was first registered as a business in 1856 by Thomas Stokes (1831-1910), a Birmingham-born die-sinker and button maker. He migrated to Victoria in the 1850s gold rush, but lack of success on the goldfields soon saw him return to his original trade in Melbourne. Over the period 1875 to 1895 Thomas' three sons joined the business, which was renamed Stokes & Sons in 1896. During the First World War, Stokes produced badges, insignia and other items for Australian and New Zealand soldiers. From the 1950s onwards the company diversified, branching into electrical appliances and lighting. In February 2013 the company's buttons and badges division was sold to a NSW-based company, and two years later Stokes closed its Melbourne-based manufacturing operations, to focus on the technology sector: audio-visual, lighting, communications and IT.

M&MTB uniforms and their buttons: a brief history

Up until 1975 M&MTB traffic staff wore military style uniforms – navy blue for drivers and conductors and brown for conductresses. Elaborate monogrammed nickel-plated buttons fastened their woollen jackets and greatcoats – the latter being very welcome during a Melbourne winter. The winter greatcoats had four buttons, while the jackets originally had three buttons, which we believe was reduced to two buttons in the late 1960s or early 1970s. Much smaller monogrammed buttons were used on the sides of caps.

Traffic officers, including inspectors and depot starters, wore green uniforms with brass monogrammed buttons. Jackets were double-breasted, rather than single breasted, and the uniform also included waistcoats and caps, both with small buttons.

The "TB" monogram was first used in 1916-17 by the interim Tramway Board, the predecessor of the M&MTB, which was formed in 1920.



Female section of a two-part Stokes die for an M&MTB button. From the collection of Robyn Caddy.



Driver Allan Dacey, Conductress Dot Rango and Depot Starter Ben Opie at East Preston depot, 1964. Note that Mr Opie's uniform includes a waistcoat and a double-breasted jacket rather than the single-breasted jackets worn by the driver and conductress. Official M&MTB photograph, in the collection of the Melbourne Tram Museum.

Nickel plated (left) and brass (right) M&MTB buttons, both manufactured by Stokes & Sons. From the collection of the Melbourne Tram Museum.

The majority of the M&MTB buttons in the Melbourne Tram Museum's collection were manufactured by Stokes & Sons. The collection also includes several buttons of the same design made by K.G. Luke Australasia Ltd, which would date them from 1953 onwards, after the firm became a public company. These are chrome-plated and are slightly larger than the Stokes buttons.

In 1975, coinciding with the launch of the orange Z class trams, M&MTB uniforms were completely redesigned, reflecting a more contemporary style. The new brown uniforms had brass buttons manufactured by Stokes, using the same "TB" monogrammed design as the earlier nickel-plated buttons.

These brass buttons continued to be used until the early 1980s when the M&MTB, suburban railways and Government bus operations were merged into the Metropolitan Transit Authority ("The Met"). Staff were kitted out in new uniforms, with The Met logo on brass buttons, again manufactured by Stokes.

After the Met became the Public Transport Commission (PTC) in the early 1990s we understand that monogrammed metal buttons were no longer used.

Acknowledgements: Australian Dictionary of Biography, Melbourne Museum, Museum of Applied Arts & Sciences, Stokes (Australasia), Trove (National Library of Australia).

Noelle Jones



Port Melbourne-born **Kenneth George Luke** (1896-1971) was a self-made man. Apprenticed to an engraver in a silver factory at the age of 14, in 1921 he became a partner in a small metal-spinning and silverware business in Carlton. By 1925 he was the proprietor, and over the next few years expanded the business with a larger factory in Fitzroy and new product lines. From 1935 to 1945 K.G. Luke supplied the Australian military with buttons, badges and other items. Registered as a public company in 1953, K.G. Luke minted the medals for the Melbourne 1956 Olympic Games. By the 1960s its five Victorian factories, plus another two in NSW and one in Brisbane, produced silverware, stainless steel hospital, hotel, café and kitchen equipment, as well as being toolmakers for automotive, plumbing and electrical industries. The company was acquired by National Consolidated Pty Ltd in 1983.



MTOC cable tram at the corner of Victoria Parade and Brunswick Street, c1891-7. The cable tram set (sometimes called a "train" in official documents) comprising dummy and trailer car illustrate the earliest signwriting scheme adopted by the Melbourne Tramway & Omnibus Company Ltd. On the car, both the large number on the end dash panels and the full company name on the rocker panels

(immediately above the wheels) on the car were subsequently replaced with painted destination signs. On the dummy, the small rectangular flip-over destination signs on the roof ends of the dummy were also later superseded by larger fixed upwardly-curved rectangular panels showing the destinations. Photograph by J.W. Lindt, courtesy of State Library Victoria.

A relic of Melbourne's cable trams

The foundations and tunnels of the former cable tram engine house on the corner of Victoria Parade and Brunswick Street, Fitzroy are of interest again. The Museum has recently assisted with two queries about this location, which is of great historical significance in the history of Melbourne tramways.

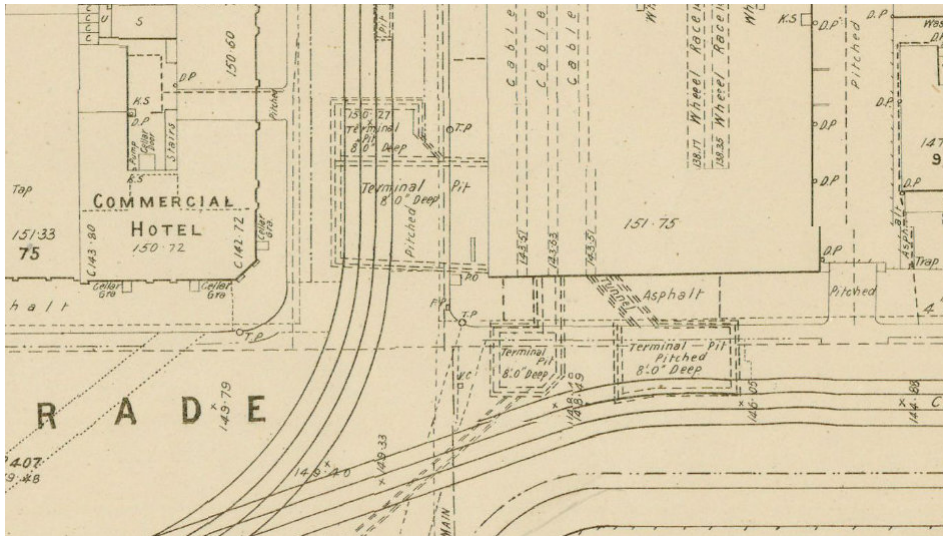
CitiPower is planning to install a power cable from a Collingwood substation to St Vincent's Hospital to serve new buildings now under construction. It was seeking details about possible former cable tram assets in Victoria Parade.

We were able to provide CitiPower with some information about the former cable sheave pits in Victoria Parade, sourced from an early Melbourne & Metropolitan Board of Works (MMBW) plan. We understand that the former cable tunnel that crosses under the intersection for the Collins Street cable may still be in use by Yarra Trams for a feeder cable from the nearby Young Street substation.

A site visit on Sunday 9 January 2022 found that the cable tram pit in Victoria Parade, nearest the corner, had been marked out with a hole dug in one corner and a second nearby. It is most likely CitiPower would have been searching for underground services to plan the cable route to pass under the active Brunswick Street tram line. So far, we are yet to hear back what was discovered.



Markings denote the site of the cable tram pit in Victoria Parade, 9 January 2022. Photograph by Warren Doubleday.

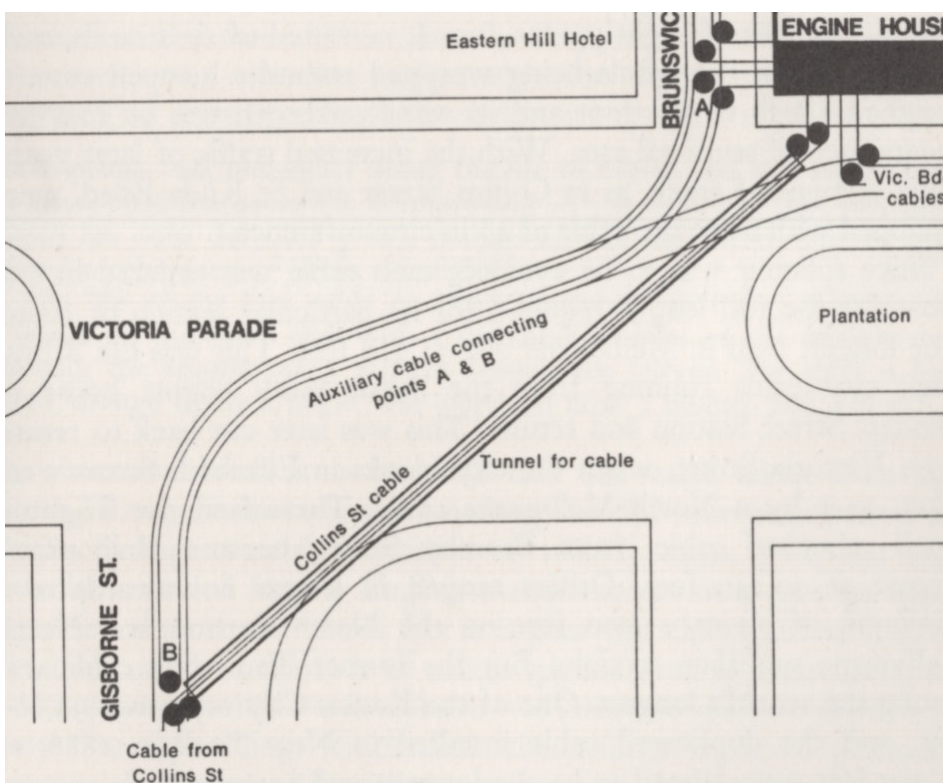


1898 Melbourne & Metropolitan Board of Works plan of the corner of Brunswick Street and Victoria Parade. Courtesy of State Library Victoria.

Photographs of the marked-out area show cracking in the road surface that outlines the pit, suggesting that something is still there or else rubble fill has consolidated inside the brick walls that possibly remain. There is no obvious cracking in the pavement around the second sheave pit to the east.

The cable tram engine house, the second in Melbourne's cable tram system, was built in 1886. Designed by Alexander Davidson and built by Martin & Peacock for the Melbourne Tramways Trust. The Trust was responsible for the provision of the engine houses and cable infrastructure which was used by the Melbourne Tramway and Omnibus Company to operate the cable tram system. The building provided the power to propel cable trams along Collins Street to Spencer Street, Victoria Parade to Victoria Bridge and Brunswick Street to North Fitzroy. There was also an auxiliary cable for the intersection itself.

The North Fitzroy cable ran until July 1930 when the Brunswick Street line closed. The Collins Street and Victoria Street cables ceased in July 1929.



Intersection layout at Victoria Parade Junction. The Collins Street cable bypasses the curve which is served by an auxiliary cable. Diagram from John Keating, *Mind The Curve* (available at the Melbourne Tram Museum).



ACU building on the corner of Victoria Parade and Brunswick Street, 12 January 2022. Photograph by Warren Doubleday.

Our second query regarding this location was from a firm of heritage consultants engaged by the Australian Catholic University (ACU). In 1935 the former cable tram engine house was sold to Penfolds Wines who used it as a wine store and distribution centre until 1982. The original building has gone but the external bluestone foundations remain in position.

The ACU has since taken over the site. It received a town planning permit for some temporary building works during 2014. ACU is currently undertaking work on a new building further east along Victoria Street and is considering the future of the cable engine house site along with its other assets in the area.

Heritage Victoria has registered both the location of the engine house foundations (H7822-0984) and the remnants of the infrastructure in the street precinct outside the building (H7822-2223).

Heritage Victoria's Archaeological Statement of Significance for the street precinct describes the location:

The remains in the tram track precinct are highly significant as they display how Melbourne's cable tram system operated. This place is included on the Victorian Heritage Inventory, for its potential to contain historical archaeological remains associated with the settlement and growth of early Melbourne. Under the terms of the Heritage Act 2017 there is protection for all historical archaeology sites and objects in the state.

The precinct in the streets outside the former cable tram engine house buildings has potential to contain significant 19th century archaeological remains (such as double tram tracks, wood blocked and/or stone setts paving, deep concrete cable tunnels centred under each track, inspection manholes and cast-iron covers, large brick pits for the horizontal sheaves, and possibly small traces of equipment). They are less likely to be intact for sites where the cable tramway was replaced by an electric tramway because the cable tram infrastructure was unsuitable for electric trams and was generally removed for construction of the electric tracks.

The cable tram track in Victoria Parade ran on the north side of the central reservation whereas the electric tram track runs within the reservation. The cable tracks remained in position until 1963 and many of us can tell stories of how our fathers would avoid driving along that part of Victoria Parade because of the roughness of the road surface.

The author will be keeping an eye on developments at this location as he drives past on his way out to Hawthorn.

Acknowledgements: Heritage Victoria, City of Yarra Town Planning permits, MMBW plans held by the State Library of Victoria, John Keating (1970), *Mind the Curve*, Melbourne University Press.

Warren Doubleday



1963 reconstruction of the northern side of Victoria Parade, between Brunswick Street and Smith Street. Part of the cable tram lines can be seen at the edge of the work. From the February 1963 issue of *Royalauto*, in the collection of the Melbourne Tram Museum.