



The Bellcord

Journal of the Melbourne Tram Museum

Number 52 – December 2021

Front cover

Refurbished B2 class 2096 at Springvale Road, Vermont South inbound to Central Pier Docklands. The Vermont South terminus is at the top of the rise in the background (2021).

Photo: Geoff Brown

Museum News

The museum will reopen to visitors in January. Dates and other details will appear on our website and social media accounts in the coming weeks.

Seasons greetings

Merry Christmas and Happy New Year to all museum members and supporters. Thank you to all who have supported the museum during 2021. We hope to see many of you in the new year.

Museum shop

The museum shop will be open on Saturday 11 December, between 10 am and noon for gift shopping. Details are available under the [News](#) tab on the museum website.

Museum committee 2021-22

This year's committee members are:

Rod Atkins (<i>Chairman</i>)	Shana De La Rue
Kevin Taig (<i>Deputy Chairman</i>)	Warren Doubleday
Mike Ryan (<i>Secretary</i>)	Russell Jones
Carolyn Cleak (<i>Treasurer</i>)	Alan Scott

From the editor

This is my last issue as editor. After 5½ years, I am standing down due to increased commitments.

My thanks to all who have assisted me with articles, photos, research and proofreading. I've enjoyed working with contributors and sharing our knowledge on various topics.

The Bellcord will continue next year with a new editor.

Geoff Brown

Looking for tramway history?

The museum website contains numerous articles on tramway history, which can be located under the Articles or Bellcord tabs on the museum homepage.

Alternatively, use the Search tab in the lower right corner of the homepage, which searches all website content including all issues of *The Bellcord*.

[Melbourne Tram Museum website homepage](#)

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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



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Editing & layout: Geoff Brown

Project to digitise plans

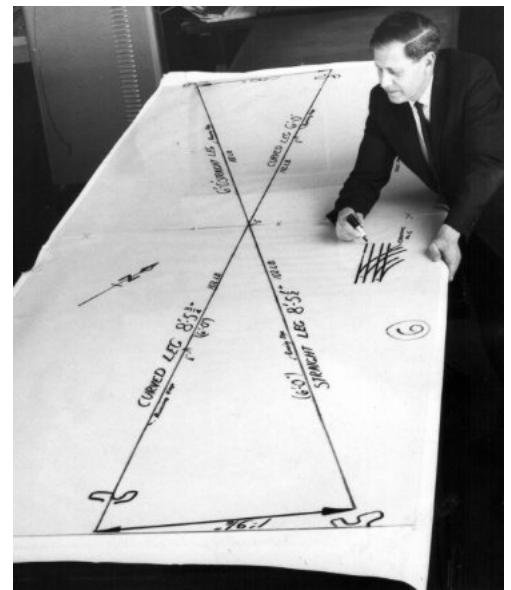
The museum holds a huge collection of original tram and bus plans and drawings, most being between 50 and 120 years old. They cover the period from cable cars, early electric trams and classic W class trams to 'modern' Z, A and B class trams of the 1970s and 1980s. The bus drawings cover the government ownership period from the 1920s to 1980s.

These plans are recognised as being of state significance, however many are extremely fragile and run the risk of damage if handled. In the days of the tramways our drawings would have been the masters, and copies would be taken for work projects.

We are currently liaising with the Public Record Office Victoria (PROV) on a project to digitise the drawings prior to depositing the originals in PROV's archives. The digital copies are to be kept securely using both local and cloud storage, which will ensure that the documents are preserved and the digital versions are accessible to the public.

Museum members who would like to assist with this project should contact Kevin Taig at kevin.taig@trammuseum.org.au or 0418 314 456 for further information.

Many thanks to VicTrack for the funding to purchase a large format digital scanner for the project.



Draughting plastic templates for designing special trackwork (1966).

Official M&MTB photograph, Melbourne Tram Museum collection

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Promises, promises: Building the East Burwood and Vermont South extensions



ABOVE: Pouring concrete at the new terminus east of Middleborough Road (March 1978).

M&MTB crew are wearing white overalls, coats and helmets, while contractors are in shirts and jeans.

Photo: Gary Davey

Melbourne's longest routes

Route 75: 24.1 km*

Route 86: 22.3 km

Route 16: 20.4 km

Route 109: 19.3 km

Route 6: 19.1 km

Route 58: 18 km

**The Docklands terminus is 600 metres beyond the last passenger stop at Central Pier.*

Source: Network Planning, Public Transport Victoria (October 2021)

The Central Pier Docklands to Vermont South tram route is currently the longest in Melbourne at 24.1 km (see adjacent box). It connects the waterfront on the CBD's western edge to the leafy eastern suburb of Vermont South.

Today's route is a variation of the Princes Bridge to Burwood line opened by the Hawthorn Tramways Trust in 1916. The original route has been altered and extended at both ends several times since 1965.

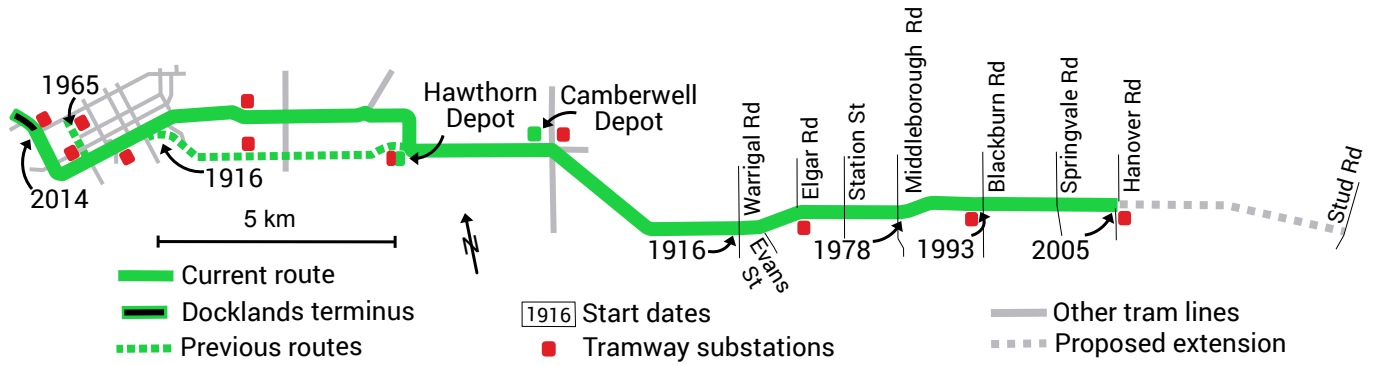
As two-thirds of the route is along shared roadway subject to traffic congestion, the current passenger journey time varies considerably – from under 60 minutes after midnight to nearly 90 minutes during peak hours.

A previous article looked into the story behind the planning of the first eastern extension to Middleborough Road, East Burwood.

This article focuses on the construction of that first extension and the two further extensions through to Vermont South.

Two Part Series

This article is the second in a two part series. The first, *Planning the East Burwood Extension*, appeared in the September 2021 edition of *The Bellcord*, which is available on the museum website.



Central Pier Docklands to Vermont South – Route 75

ABOVE: The current Central Pier Docklands to Vermont South tram route showing previous route variations and termini.

Electoral popularity

One notable characteristic of all three extensions along Burwood Highway is that they were promised by a state government or opposition party looking for electoral support.

The promise of new tramlines has been popular with Melbourne voters for over a century. Although most electors now choose the comfort of their private motor vehicles over tram travel, many continue to see a tramway in their suburb as an amenity available for others to use.

This popularity of local tramlines has presented an opportunity for politicians – an opportunity that has increased since 1970. From that year tramway deficits required an annual government subsidy, giving the incumbent government increased influence over tramway capital works.

In 1983 when the semi-autonomous tramway and railway authorities were consolidated into the Ministry of Transport, the state government gained further influence over transport budgets. This influence underlies the story of the extensions to East Burwood and Vermont South.

Extension 1: Middleborough Road, East Burwood (1978)

As outlined in the previous article, the extension to Middleborough Road and the first Z class trams were promised by a state government highly criticised for its freeway development plans. These promises and their subsequent delivery are thought to have assisted the Hamer Liberal government to retain office at the 1973 and 1976 state elections.

The Labor opposition also supported this extension. During the 1976 parliamentary debate of the *Melbourne and Metropolitan Tramways (East Burwood Tramway) Act*, Labor member for Melbourne, Barry Jones, noted:

The Labor Party is pleased to support this Bill ... We campaigned for it long before 1976 when we spelt out ... [that] we will extend the Burwood Highway tramway as soon as possible east of Warrigal Road to Blackburn Road, and if the demand is great enough, ultimately to Springvale Road. (*Victorian Hansard*, 10 November 1976)

Changing route number

This route has displayed several route numbers:

Route B (for Burwood): from 1918

Route 18: from 1921

Route 74: from 1934

Route 75: from 1978

Source: *What tram do I catch?*
Russell Jones, museum website

RIGHT: Erecting overhead poles west of the new Starling Street stop at the top of the hill (25 November 1977).

Note the absence of protective barriers between the work crew and the roadway.

Photo: Colin Hirst



Funding

The 1976/77 state budget allocated \$26.9 million as an annual subsidy to the Melbourne and Metropolitan Tramways Board (M&MTB). While the cost of the extension was not itemised, it appears some funds were allocated to the design, preparatory works and ordering of materials.

In March 1977 negotiations with the Hoyts Drive-In Theatre on Burwood Highway secured a 750 square metre site at a cost of \$25,000 for the new tramway substation. This site at the corner of McIntyre Street was rezoned and tenders advertised in June.

In the 1977/78 budget speech, Premier Rupert (Dick) Hamer announced a 50% increase in funds for the M&MTB's capital works program of new trams, buses and the East Burwood extension.

The program funds totalled \$14.3 million – \$9.2 million of which included semi-government borrowings and funds from the Commonwealth's *States Grants (Urban Public Transport) Act*. The budget noted that the state government's direct subsidy of the M&MTB in that year totalled \$30.5 million. (*Victorian Hansard, 7 September 1977*)

RIGHT: Track laying across Middleborough Road to the new terminus (March 1978).

Photo: Gary Davey



RIGHT: Track laying in Burwood Highway with Burwood Primary School on the right, Presbyterian Ladies College (PLC) on the left and Elgar Road beyond the crest of the road (April 1978).

At PLC the existing median strip and roadway were widened for the tramway, while the roadway in the foreground was excavated for the track. This was also the point where the span wires transitioned to poles.

*Photo: Weston Langford
[colour correction]*



Construction

In October 1977 earthworks commenced at the western side of Middleborough Road and progressed toward Warrigal Road. The decision to start from this point appears to have followed a concern that any last minute funding cut could shorten the extension's length. Track laying and pole installation began in November.

The M&MTB's design included a separate right-of-way for most of the extension, traffic light priority, stops on the departure side of intersections and passenger safety zones with shelters at all stops. The existing pedestrian underpass between Gillard Street and the education precinct was to be connected to the tram stop by installing a set of stairs.

Construction work reached Station Street by late November, Elgar Road by January and crews returned to Middleborough Road in March to construct the terminus and lay track across the intersection.

Works commenced at Warrigal Road in April on 400 metres of track between the original terminus and Evans Street. This length of roadway was a traffic bottleneck and the three month construction phase only added to this.



ABOVE: Z class 25 taking on passengers at the Gillard Street stop which is accessed via the stairs behind the concrete wall (22 July 1978).

The stairwell was added to the existing pedestrian underpass that connected residential streets on the south side with the education precinct on the north side.

Photo: Colin Hirst

RIGHT: Track construction between Evans Street and Warrigal Road, which is out of sight to the right of the photo (May 1978).

Photo: John Ward





ABOVE: Track laying in Burwood Highway looking east from Warrigal Road toward Evans Street (April 1978). Note the trolley wire already in place.

*Photo: Weston Langford
[colour correction]*

ABOVE RIGHT: Track laying across Warrigal Road looking south (June 1978). Note the retired half cab bus used for crew amenities.

Photo: Colin Hirst



The span wires for the first 700 metres between Warrigal Road and Parer Street were installed and then the centre of Burwood Highway was excavated and rails laid. In June the Y terminus in Toorak Road was removed and tracks laid across Warrigal Road. By the end of June all track laying along the extension had been completed.

Delay

Construction of the new substation began in November 1977. However an industrial dispute with the Electrical Trades Union (ETU) delayed the installation of the electrical equipment, which pushed back the opening to 19 July 1978. Continuing delays saw deployment of a mobile substation for the official opening and first week of tram operations.

The dispute also delayed the installation of the overhead wiring to the poles from Parer Street to beyond Elgar Road.

This industrial action by the ETU was part of the union's campaign to achieve a line-worker disability allowance. The ETU represented electrical workers in many government authorities and the M&MTB's new showcase tramway extension provided an opportunity for leverage.

An ETU member from that time recalls the action being initiated from a nearby SECV depot, adopting the practice of creating a dispute to encourage employers to negotiate improvements. The dispute achieved the union's objective.

RIGHT: Installing trolley wire to booms adjacent to Burwood Primary School and PLC (June 1978).

Photo: Gary Davey



RIGHT: Tramway substation under construction (18 December 1977) and mobile substation required because of the delay in completing this substation (22 July 1978).

Photos: Colin Hirst



Overhead engineering

The method of connecting trolley wire to booms developed over decades. In 1978 the trolley wire for the East Burwood extension were fixed to the horizontal boom using a short rigid 'ear and hanger' (see photos adjacent and below). This did not allow vertical movement of the wire as the trolley pole or pantograph passed underneath, causing metal fatigue to the wire.

When pantographs were first trialled along the extension from late 1984 using B1 class 2001 and 2002, the pantograph arms would be forced to rapidly contract under each boom flexing the trolley wire, then would rapidly expand causing pronounced wave-like movement along the wire.

In the years that followed, new methods were deployed. The 'double pendulum' uses dual 500 mm drop wires connected by short hanger rods, with the lower rod holding the trolley wire clamp. This method suits both trolley poles and pantographs. It allows vertical flexibility while ensuring that the clamp remains vertical so as not to foul the trolley shoe as it passes underneath. It also permits a staggered path for the trolley wire to spread wear across the top surface of a pantograph. This was deployed in the second extension to Blackburn Road in 1993.

A more recent method includes a horizontal steady arm and is used exclusively with pantographs. It combines vertical flexibility while more effectively maintaining the required staggered path. It was deployed when constructing the Vermont South extension.



ABOVE: Three different fittings used along Burwood Highway to connect the trolley wire to booms.

From the top – ear and hanger, double pendulum and steady arm.

Opening

Trams began using the new crossover at Evans Street 400 metres east of Warrigal Road on 12 July 1978. This event was marked by a very early gathering of locals and enthusiasts (see photo page 15).

RIGHT: Inbound Z class 26 approaching the Gillard Street stop during the first week of tram operations (23 July 1978).

Note the use of the ears and hangers to connect the trolley wire to the booms.

*Photo: Weston Langford
[colour correction]*



Victorian Transport Study (Lonie Report) 1980

Recommended line closures with bus replacement:

Tramway

*Camberwell
Footscray - Moonee Ponds
Kew - St Kilda Beach
North Richmond - Prahran
South Melbourne Beach
South Melbourne/St Kilda Beach
West Maribyrnong*

Railway

*Alamein
Altona
Eltham - Hurstbridge
Port Melbourne
Sandringham
St Kilda
Upfield
Williamstown
All regional trains, except
Geelong*

Outcome: *Only 8 regional rail lines closed.*

Source: Victorian Transport Study 1980

RIGHT: B1 class 2001 adjacent to the tramway substation at McIntyre Street outbound to East Burwood (c1985).

Note the dual height doorways to permit passenger entry from ground or platform level.

Official photograph PTC, Melbourne Tram Museum collection

With the overhead wiring completed, the 3.4 km extension was officially opened by Premier Hamer on 19 July with regular services to the city commencing early the next morning. Passengers who boarded along the new line in the following four days enjoyed free travel.

The M&MTB allocated additional Z class trams to Camberwell Depot before the opening date so that all services on the East Burwood line would be operated by its newest trams.

After the first year's operation, patronage on the extension greatly exceeded expectations. The feasibility study had predicted close to 30,000 passengers per week with the actual figure in excess of 40,000 passengers.

Storm clouds

At this time, economic and political storm clouds were gathering over Victoria. Increased unemployment and industrial unrest challenged the Hamer government ... and threatened Melbourne's tramways.

To reduce the ever increasing transport subsidies, in 1979 the government commissioned the Victorian Transport Study into passenger and freight transport. It was headed by retired General Motors and BHP executive, Murray Lonie, and the Country Roads Board head, Robin Underwood.

The study's September 1980 report recommended the deregulation of transport markets along with the closure of seven tram lines, seven suburban rail lines and most country rail services (*see adjacent box*). It also recommended fare increases to eliminate the 50% subsidies provided to transport operators.

The report drew such severe criticism that the government was forced to reject most recommended closures with only eight regional rail lines closing. The gloss was wearing off the Liberal government after 27 years in office. Premier Hamer resigned in June 1981, 10 months before the April 1982 state election.



New Feasibility Study (1982)

During the late 1970s the M&MTB was researching options for extending the tramway beyond Middleborough Road. Its feasibility study was first presented in October 1981, then again after the election with updated financial figures.

The *East Burwood Tramway Extension (Beyond Middleborough Road) Feasibility Study, September 1982* was a 40 page proposal that examined three options for a future extension – to Blackburn Road, to Springvale Road or to Vermont South Shopping Centre at Hanover Road.

The study gathered data on land use and population densities, sizes of schools and businesses and details of current public transport. It provided estimated patronage and revenue figures along with construction and operating costs for each option. The table on the next page draws together some of the key figures from the study.

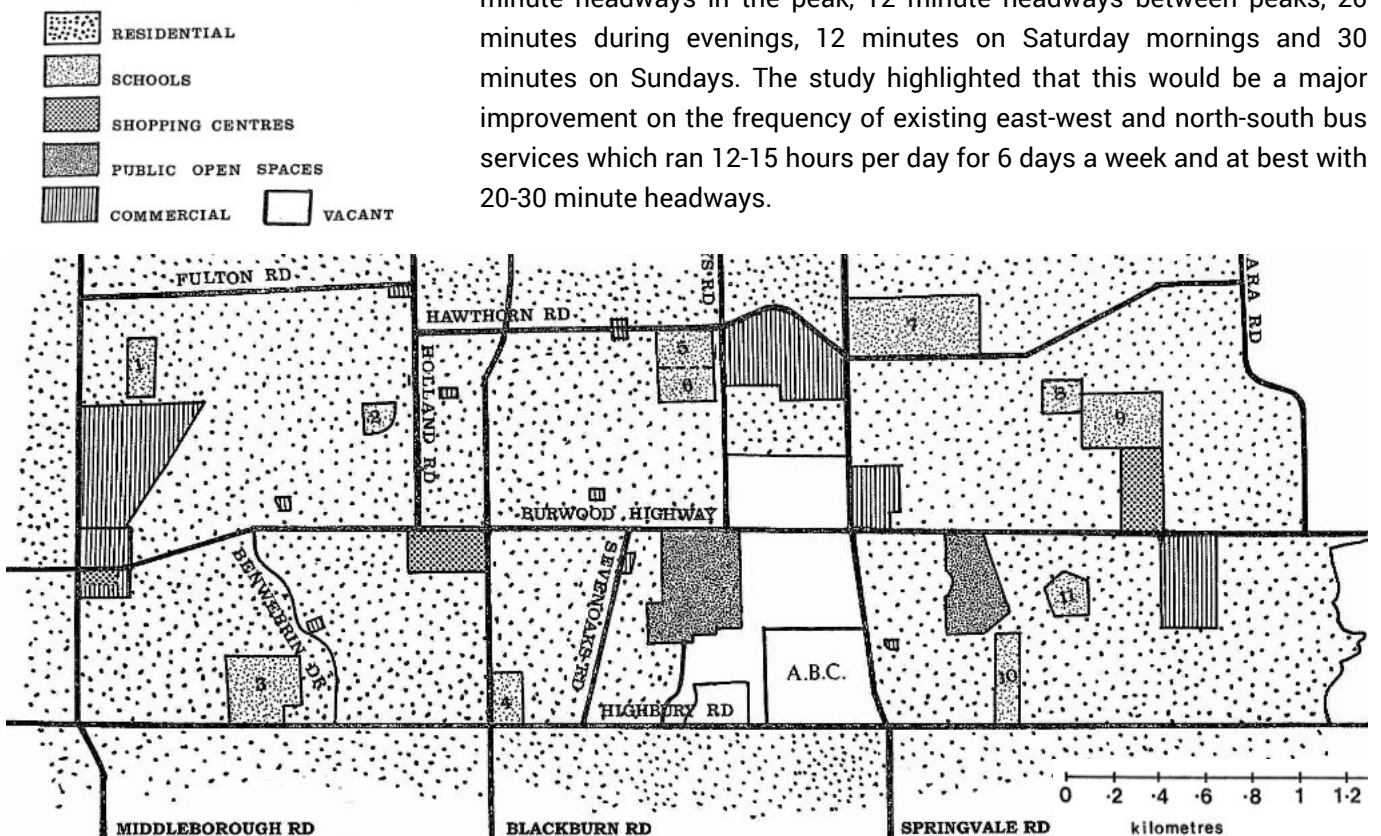
Patronage

To estimate patronage, the study assumed the principal area of influence of each option would extend 800 metres either side of the route and 800 metres east of the terminus. It used data from the completed Middleborough Road extension as well as a home interview survey undertaken in June 1979 between Middleborough Road and Springvale Road.

The tram frequency for each option would be the same as for the Middleborough Road extension – 15-19 hours per day, approximately 4 minute headways in the peak, 12 minute headways between peaks, 20 minutes during evenings, 12 minutes on Saturday mornings and 30 minutes on Sundays. The study highlighted that this would be a major improvement on the frequency of existing east-west and north-south bus services which ran 12-15 hours per day for 6 days a week and at best with 20-30 minute headways.

BELOW: Land use adjacent to Burwood Highway through East Burwood and Vermont South (late 1970s).

Source: M&MTB East Burwood Tramway Extension Feasibility Study (1982), Melbourne Tram Museum collection



RIGHT: Key figures included in the feasibility study.

Source: M&MTB East Burwood Tramway Extension Feasibility Study (1982), Melbourne Tram Museum collection

	Blackburn Road	Springvale Road	Vermont South
Length of extension	1.7 km	3.3 km	4.6 km
Construction costs	\$2.9 m	\$5.9 m	\$8.3 m
Extra trams @ \$0.49 m each	\$0.98 m	\$1.96 m	\$2.45 m
Capital service @ 16% p.a.	\$0.620 m	\$1.260 m	\$1.720 m
Direct operating costs (p.a.)	\$0.205 m	\$0.410 m	\$0.525 m
Total cost (p.a.)	\$0.825 m	\$1.670 m	\$2.245 m
Population (1976 census)	9,900	14,436	18,178
Patronage (daily in first year)	2,900	4,200	5,100
Revenue (first year)	\$0.420 m	\$0.675 m	\$0.845 m
Loss (first year)	\$0.405 m	\$0.995 m	\$1.400 m

Costs

To estimate the capital and operating costs, the study assumed that the extension would be financed by loans undertaken by the M&MTB at a maximum interest rate of 16% pa. Each option would require a government subsidy of 49% or greater.

To justify such subsidies, it attempted a cost benefit analysis that included a number of less tangible benefits from a tramway extension. These included reduced traffic congestion, collisions and pollution, improved east-west access, development of improved public transport across the area and development of employment opportunities.

Recommendation

The study concluded that over a 30 year period the cost of the shortest extension to Blackburn Road could be seen as providing an equal or possibly higher value benefit to locals and those visiting the area. Whereas the costs of the two longer extensions to Springvale Road or Vermont South may or may not provide value equal to the investment. The study's conclusions appeared indecisive.

The analysis is particularly sensitive to certain key assumptions which are difficult to predict ... From the study it appears that the logical limit of an extension would be to Springvale Road ... The area beyond Springvale Road would appear to be more appropriately suited to an upgraded bus service rather than a tramway extension. (*Feasibility Study, Conclusion*)

The study was not examined by a Parliamentary Public Works Committee as had been the established practice because major legislative changes to state transport authorities were imminent. No subsequent appraisal has been located.

History shows that the longest option was eventually constructed more than 20 years later.



ABOVE: Burwood Highway looking east to Blackburn Road during earthworks (16 November 1992).

Photo: Gary Davey

Suburban tramway extensions since 1956*

1978: East Burwood

(Middleborough Rd)

1983: East Preston

(Boldrewood Pde)

1985: LaTrobe Univ (Kingsbury Dr)

1987: Bundoora (Settlement Rd)

1987: St Kilda LR conversion

1987: Port Melb LR conversion

(1992: Proposed Upfield LR conversion lapsed)

1992: Airport West

1993: East Burwood

(Blackburn Rd)

1995: Bundoora RMIT

2003: Box Hill

2005: Vermont South

* Does not include track relocations, eg Park St, Queens Way, Batman Ave, or CBD/Docklands extensions.

RIGHT: Track laying near the new Blackburn Road terminus (10 April 1993).

Photo: Gary Davey

Extension 2: Blackburn Road, East Burwood (1993)

The Cain Labor government won 49 of 81 seats in the lower house in April 1982 and quickly funded a three-stage extension from East Preston to Settlement Road, Bundoora. This had been legislated in December 1978 and was the subject of frequent parliamentary questions by the local member for Bundoora (now Premier), John Cain, in the years before the election.

But an extension of the East Burwood line was not on the agenda. Repeated questions to the new Minister for Transport and member for Knox, Steve Crabb, brought the response that the M&MTB's feasibility study was yet to be considered. Once the Bundoora extension was underway, government focus was on new rolling stock and the proposed light rail (LR) conversions of three low patronage rail lines (*see adjacent box*).

Administrative reform

The new government had been elected on a platform of social and administrative reform. This led to the closure of the M&MTB, Victorian Railways Board and Country Roads Board and the creation of new transport organisations under the Ministry of Transport.

Prior to the October 1988 state election, the Labor government announced an ambitious public transport plan, *MetPlan*, which included a promise to extend the East Burwood tramline from Middleborough Road to Knox City at Stud Road. While it retained government, the ensuing economic decline in Victoria meant the Knox City extension was unachievable – a broken promise that opposition parties regularly highlighted.

In May 1991 the Labor government announced \$6.5 million from the Federal Urban Public Transport Program to construct the first 1.7 km of the extension between Middleborough Road and Blackburn Road. As Labor's prospects for re-election sank, the opposition said they would honour this project – but its taunts of broken promises continued.



Kennett Gov't Reforms (1993)

Proposed bus replacement after 8pm on these lines:

Tramway:

Camberwell
East Malvern
Kew - St Kilda Beach
North Richmond - Prahran
Wattle Park
West Coburg
West Maribyrnong

Railway:

All remaining suburban lines (except two)

Proposed line closures with bus replacement:

Tramway:

Footscray - Moonee Ponds

Railway:

Alamein
Upfield
Williamstown
Many regional lines

Outcome: *Only 4 regional rail lines closed.*

Source: Herald Sun, 7 January 1993

Change of government

The Kennett Coalition government won office in October 1992 and set about implementing major economic and structural reforms, including a proposal to significantly cut public transport (*see adjacent box*). While many of these cuts did not eventuate, driver-only trams and trains and the privatisation of the tram and rail networks were implemented by 1999.

The new government honoured its commitments to build the extensions to Blackburn Road, East Burwood and Bundoora RMIT using Federal government funds negotiated by Labor.

However the focus of the new government was on the redevelopment of central Melbourne and no further extension towards Knox City was proposed. Rather it allocated funds for the city circle tram loop, the Batman Avenue tram relocation and the Flinders Street West extension. The Box Hill extension was included in the franchise agreement with Yarra Trams.

Construction

Earthworks and relocation of underground utilities along the route commenced in November 1992. In January the track laying crew that had recently completed the Airport West extension was assigned to track construction along the Burwood Highway.

Construction followed the specifications of the earlier extension. These included track laid in concrete to the rail head, an upgrade to traffic signals and the widening of the outbound roadway with new kerbing and footpaths to accommodate new right turn lanes at intersections. The last of these required a repositioning of the track at the Middleborough Road terminus.

Although not included in the 1982 feasibility study, a new substation was required. After difficulties locating a suitable site, it was built at the northwest corner of the shopping centre car park at Blackburn Road.

Opening

The accidental rupturing of an underground feeder cable during the erection of a pole set back the original June opening date to 8 July 1993. The extension was officially opened by the new Transport Minister, Alan Brown, at a ceremony featuring a parade of trams between Middleborough Road and Blackburn Road. These included the three heritage trams T class

RIGHT: Construction of the 'Old Burwood Highway' stop looking west toward Middleborough Road (24 April 1993).

Photo: Gary Davey



RIGHT: Z3 class 191 at the newly opened terminus at Blackburn Road, East Burwood (July 1993).

Photo: David Kemp



180, W class 380 and V class 214, which are now on display at the Melbourne Tram Museum. Regular services commenced around midday the same day.

Mystery plaque

In 1998 a commemorative plaque was placed at the Blackburn Road tram terminus. It acknowledged the life and achievements of Michael Fraser, “including the planning and construction of the East Burwood tram extension”. No attribution or insignia was included.

Approaches to local history societies, local political party branches and the transport department have not provide further details of Michael Fraser. However the photo below shows Michael Fraser in front of SW5 class 857 carrying a flag and lantern.

The occasion was the first service car to cross Warrigal Road on the new track to Evans Street early on the morning of 12 July 1978. The spectators and passengers were locals and members of the Australian Electric Traction Association (AETA). Mr Fraser may have been an AETA member.

The plaque now sits on the ground next to the Blackburn Road in-bound platform.



ABOVE: Commemorative plaque placed at Blackburn Road terminus on 29 November 1998.

Photo: Michael Costello

RIGHT: First service car to cross Warrigal Road (12 July 1978).

Photo: Herald and Weekly Times, Gary Davey collection



RIGHT: Burwood Highway looking west to Springvale Road as earthworks progress (4 December 2004).

Photo: Gary Davey



ABOVE: Burwood Highway, Vermont South looking east as earthworks begin. The blue signage announces the 'Scoresby Integrated Transport Corridor', i.e. tram extension with bus link (16 November 2004).

*Photo: Weston Langford
[colour correction]*

Extension 3: Vermont South (2005)

During the 1990s, Victorian Labor struggled to rebuild itself and most thought it had little chance of winning the October 1999 state election. Its platform for this election promised a tramway extension to Knox City by 2003 with a budget of \$19 million over three years. The Bracks Labor government narrowly won the election with the support of many regional voters and two regional independents.

Labor inherited a healthy budget surplus courtesy of the major cost cutting and asset sales of the Kennett government, but it did not follow through with the promised extension to Stud Road. Instead Labor's transport focus was on the Regional Fast Rail Project and the redevelopment of Spencer Street Station, the regional rail terminal.

Broken promise

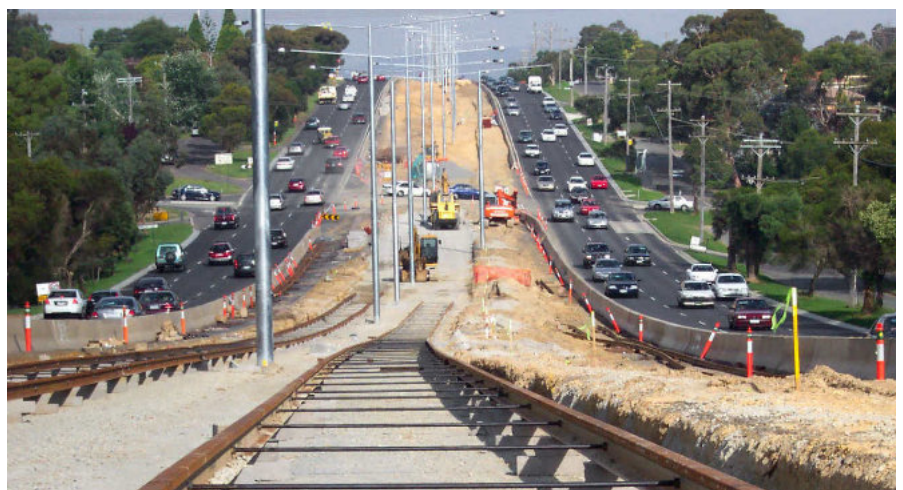
After repeated questioning about the Knox City extension, in October 2001 the government announced it would build the tramline to Vermont South and connect it to Knox City with a frequent bus link. Labor won the November 2002 election in a landslide, including several electorates close to the proposed tramway extension. But it did not reinstate the earlier promise of a Knox City extension.

A month after the election the state budget took a major hit when National Express walked away from its contracts to operate half the tram and

RIGHT: Track laying from Springvale Road toward the new terminus at Vermont South (15 December 2004).

Note the curved path of the rails and poles to permit landscaping between the track and roadway.

Photo: Gary Davey



RIGHT: Construction of the Stanley Road platform stop with Vermont South terminus at the top of the rise (1 July 2005).

Note the use of tension weights on the side poles – an uncommon sight on Melbourne’s tramways.

Photo: Gary Davey



metropolitan rail networks and the regional passenger service, Vline. This left the government scrambling to find an extra \$400 million each year for the transport budget.

Construction

The prime contractor for the design and construction was Thiess Pty Ltd with construction of the 3 km extension to Vermont South beginning with earthworks in November 2004.

BELOW: The scissor crossover at Vermont South terminus, which allows trams to berth either side of the island platform (26 October 2006).

The \$42.6 million project included widening the Burwood Highway median strip to accommodate the track, safety zones and landscaping, and the upgrade of traffic signals. It also included construction of a new tramway substation and a tram/bus interchange terminal at Vermont South.

BELOW RIGHT: E class 6001 on a test run at the southern platform of the Vermont South terminus; B2 class 2049 at the northern platform (24 October 2013).

Over December and January many of the overhead poles and rails were placed in position. A new substation was built on the southern side of Burwood Highway at the entrance of the Australian Road Research Board, 150 metres east of the terminus.

Photos: David Kemp

A feature at Vermont South is the double track terminus with island platform and scissor crossover. Since its construction, similar



RIGHT: B2 class 2024 in the Yarra Trams livery of full white with green and blue strips departing the Vermont South terminus via the scissor crossover (26 October 2006).

Photo: David Kemp



arrangements have been installed at several other suburban termini. This is markedly different to the single track terminus built at Blackburn Road in 1993 (see photo page 15).

Opening

This extension and the Knox Transit Link bus service were opened on 23 July 2005 by the Minister for Transport, Peter Batchelor and the CEO of Yarra Trams, Hubert Guyot. The pair had opened the Box Hill tramway extension only two years earlier in May 2003.

Regular tram services to Vermont South with connecting Transit Link buses commenced the next morning and still operate in much the same manner today. The Vermont South extension remains Melbourne's most recent.

RIGHT: Knox City bus at the Vermont South bus/tram interchange with a B2 class tram at the terminus in the background (2021).

Photo: Geoff Brown



Further Extension

Several campaigns for a further extension of the tram line to Knox City have been undertaken. The City of Knox has been a prominent promoter of the benefits of such an extension for the northern part of its municipality. The tramline has featured alongside its calls for the long-promised Rowville heavy rail line through the southern areas of Knox.

Meanwhile in April 2018, while not addressing the Burwood Highway extension, the state Labor government announced a new 18 km tramway from Caulfield to Rowville via Chadstone Shopping Centre and Monash University. A budget of \$3 million was promised for a preliminary study.

However, this has been overtaken by a further promise. In November 2021 the federal Labor opposition pledged \$6 million to plan this route for a trackless tram rather than conventional tramway.

It seems that the promise of new tramlines, whether they be on rails or rubber tyres, might still be popular with Melburnians.

Acknowledgments

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Geoff Brown

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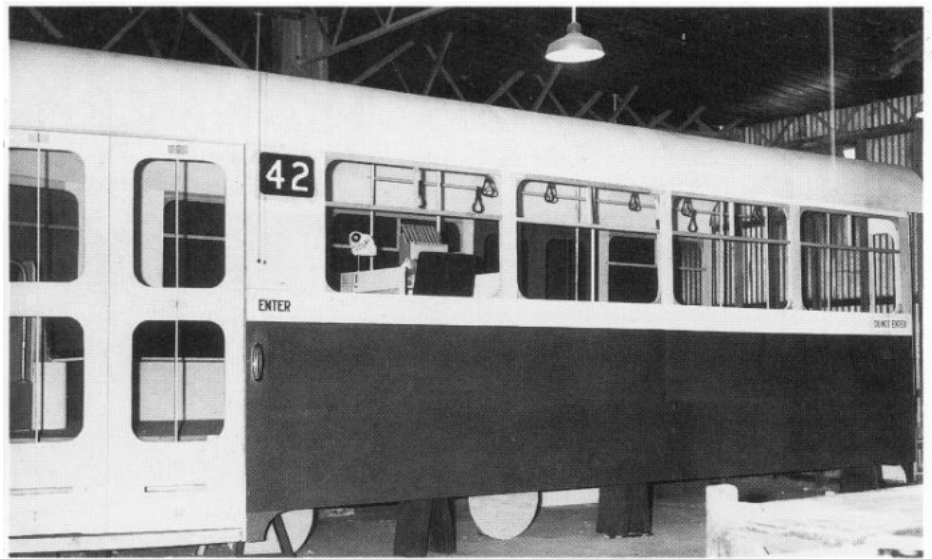
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Silent Trams



ABOVE: Timber mockup of the front and middle sections of what would become tram 1041, Preston Workshops (1966).

Photo: Public Transport Corporation, Dale Budd collection



By the 1960s a large proportion of Melbourne's trams were beyond their design life and had become increasingly expensive to maintain. Passengers found them uncomfortable and noisy.

Various options for new rolling stock or the replacement of the network with buses were considered by the Melbourne and Metropolitan Tramways Board (M&MTB). Its representatives travelled to North America and Europe to investigate.

The promise of quieter trams using electric brakes rather than air brakes had been made several times from 1949. When Transport Minister Meagher announced in October 1965 that Melbourne would spend \$6 million on 100 new 'silent trams' by 1967, there was some scepticism. The Board described them as 'all-electric tramcars' rather than silent trams.

Lampooned

Keith Dunstan, a widely read Melbourne journalist, wrote:

[W]e were first promised 'silent' trams back in April 1949. Indeed, one did arrive from the U.S. In 1953, experimental tram 964 ... with rubber wheels and all ... seemed to make the same noises others trams made.

In 1954 we were told 60 'quiet' trams would be gliding around Melbourne within 18 months ... But 'gliding' seemed far too strong a term ...

Could one hope that the new, possibly non-silent 'silent trams' are rather more silent than the non-silent 'silent trams' we have had these past few years? (*The Sun*, 12 October 1965)

Cartoonist John Frith drew a humorous sketch for *The Herald* on the same day. It too lampooned these frequently promised trams – one bouncing on oversized springs, a second gliding along a frozen track on oversized skates and a third suspended below a single rail dubbed a monorail.

Tram 964

When PCC class 980 was constructed in 1950, it was compared in noise level tests with the newly completed SW6 964. 964 was later fitted with the first set of double helical gears for further noise level comparison.

Source: Norm Cross notes

Copyright rules prevent the cartoon's reproduction here but it can be viewed at the Trams DownUnder page tdu.to/i/73930. Firth's final panel depicts Board Chairman Robert Risson hypnotising a waiting passenger with the words: "Say after me - our trams don't make any noise."

Financial constraints

The Minister's 1965 announcement followed the news that the M&MTB had reported a further 8% reduction in passenger numbers and a loss of over \$860,000 for the previous financial year. The minister added:

The Board has to finance its own operations ... There is no plan to cover losses by increasing fares ... One reason for the fall in tram passenger numbers is movement of the population to outer suburbs.

In May 1966, Transport Minister Meagher announced that the new trams might be delayed, dependent on how much loan money the Federal Government allowed Victoria. Australia's financial markets were highly regulated at that time with strict limits on overseas capital. The same restrictions had also prevented previous tramway proposals.

Design

That year a timber mockup of two-thirds of a tramcar was built at Preston Workshops. Assistant Works Manager Ken Hall recalled :

It was completed in one week – we worked around the clock on it. The Board approved it with one suggestion: increase the distance between facing seats by one inch (*Comeng: A History of Commonwealth Engineering, Vol 3, p196*).

Investigations in North America and Europe by Chief Engineer (later Chairman) F R Kirby and his predecessor had resulted in the view that the Swedish tramcar was the best they had seen. These recommendations strongly influenced the design of Melbourne's new tramcar.

In August 1966 the M&MTB advertised for tenders but no contract was signed. It was not until 1973 that the all-electric prototype 1041 entered service after Kirby had become chairman of the Board, a post he held from 1970 to 1976.

Acknowledgement

Thanks to Dale Budd for his assistance and access to the details included in his recent article, *Some Melbourne Mysteries*, in the August 2021 edition of *Trolley Wire*.

Geoff Brown

Wombat Creek Tramway

RIGHT: The Wombat Creek Bank and Gold Exchange, which resembles a well known Melbourne landmark.

Photos: Claus Ellef



Museum guide, Claus Ellef, has used Melbourne's extended lockdowns to progress his model tramway – while holding down a full time job.

Claus began model building at a young age in Denmark. His father was a railwayman and his family home was close to a mainline railway. After he moved to Australia with his wife some years ago, the Wombat Creek Tramway was born – a project designed to fit the space in their home.

While several of the buildings in Wombat Creek may resemble Melbourne landmarks, this is not a replica of Melbourne. Rather it is a fictitious, long-established Victorian gold mining town set in 1963.

Claus explains that this fictitious town was so prosperous it could afford a tramway. It was the project of an influential mayor and his son who thought that a tramway would improve their town's prestige.

At a major intersection sits the Bank and Gold Exchange, resembling Flinders Street Station, with a hat shop to the right of its main entrance. On an adjacent corner is the Duncan and Fraser Hotel, resembling Melbourne's Young and Jacksons.

RIGHT: Close up of the City Hatters store located under the verandah on the right of the above photo. Note the selection of hats on display.



RIGHT: Duncan and Fraser Hotel, tram depot and a birds-eye view of the model layout.



Further along is the tram depot, resembling the now demolished Elwood Depot.

More photos and construction details can be viewed on Claus's website wct.payne-ellef.dk

When the Melbourne Tram Museum reopens, visitors will have a chance to chat with Claus about his modelling – as well as Melbourne's tramway history.

Geoff Brown