



# THE MELBOURNE RAIL PLAN 2019-2050

MOVING PEOPLE IN A CITY OF 8 MILLION



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RAIL FUTURES  
INSTITUTE INC.

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# >> WHAT IS THE MELBOURNE RAIL PLAN?

THE MELBOURNE RAIL PLAN is a blueprint for the next 30 years of rail development in Melbourne.

The challenges of population growth require fundamental shifts in strategic transport policy and serious integration of transport and land use planning.

Public transport services have increased in recent years but population growth has been faster.

Improved rail services as part of an integrated transport policy can play a very significant role in terms of the growth and development of Melbourne, consistent with the objectives of the State Government's *Plan Melbourne* and the *Transport Integration Act*.

The *Melbourne Rail Plan* presents a strategy for rail based transport modes within the context of a fully

integrated multi-modal transport system for the future.

It shows how such development, through phased investment, can significantly reduce Melbourne's massive car dependency and benefit the city's liveability, economic performance, social fabric and environmental sustainability.

These outcomes also require other complementary policies and programs. In particular, Government needs to take a strong strategic lead in planning policy; and new mechanisms found for funding public transport.

The *Melbourne Rail Plan* seeks to strike the right balance between ambitious and conservative approaches.

This plan has been prepared by Rail Futures Incorporated in the public interest. Rail Futures Inc. is an independent non-partisan group formed to advocate cost effective rail and intermodal solutions for public transport and freight based on sound commercial, economic and social reasoning. Rail Futures members include experienced rail professionals, engineers and economists.

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PO Box 1257  
CARLTON VIC 3053  
[railfutures.org.au](http://railfutures.org.au)

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## THE MELBOURNE RAIL PLAN 10 KEY ELEMENTS

1. Making the existing system and assets work better.
2. Creating a multi-modal grid network of high frequency services.
3. Completing high capacity rail links to the CBD and providing seamless cross-city trunk routes.
4. Maximising potential of the tram network to provide middle and inner suburbs to CBD connections, cross suburban journeys and links to rail interchanges.
5. Extending electrified rail coverage to outer growth areas.
6. Developing new medium capacity (including light rail) cross-suburban transit corridors.
7. Connections to and between National Employment Clusters and major activity centres.
8. Redesigning the bus network to effectively complement rail and trams.
9. Strongly facilitating active transport (cycling and walking) to and from public transport.
10. Improving accessibility of services to less able people meeting DDA compliance.

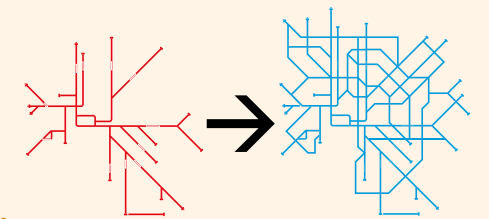
### >> THIS PLAN WILL DELIVER:

- >> 6 major cross-city mass transit rail routes and a dedicated Melbourne Airport rail link
- >> 8 extensions of rail electrification for Metro services to serve outer growth suburbs
- >> New connections to National Employment Clusters and Major Activity Centres
- >> 5 new cross-CBD tram routes
- >> 3 cross-suburban non-CBD tram routes
- >> 20 cross-suburban via CBD tram routes
- >> 13 extensions of existing tram routes
- >> 15 potential Medium Capacity Transit routes

This Plan will be supported by SmartBus routes and rail/tram feeder bus services.

### FROM RADIAL >> TO GRID

The keystone of the Melbourne Rail Plan is to transform the current radial network into a connected cross-city grid network.



Melbourne's train and tram networks evolved as a radial system focussed on the CBD. But if Melbourne is to become significantly less car-dependent the radial network must be transformed into a connected cross-city grid network.

A well structured grid network with friendly interchanges and frequent service levels will maximise the range of places one can reach with just one transfer and be an attractive alternative to a car trip.

The ideal spacing between parallel routes in the grid is about 1km, so no-one needs to walk more than 500m to catch a service. The huge area that Melbourne covers is a challenge to achieving a grid network, but our flat terrain and grid form of roads provides opportunity to retrofit public transport. Transitioning from a radial to a grid system can be done

but will take many years to fully develop. Getting the network right is more important than choosing between train, tram or bus modes.

The effectiveness of a grid network is highlighted by the current situation, in which:

- >> 88% of the area and 92% of the population of Melbourne's inner area (where there is a partial grid network) is covered by high capacity (rail) public transport.
- >> 41% of the area and 54% of the population of Melbourne's middle area (which has a limited grid network) is covered by high capacity (rail) public transport.
- >> Just 4% of the area and 24% of the population of Melbourne's outer area (which has no grid network) is covered by high capacity public transport... Yet this area contains 44% of Melbourne's population.





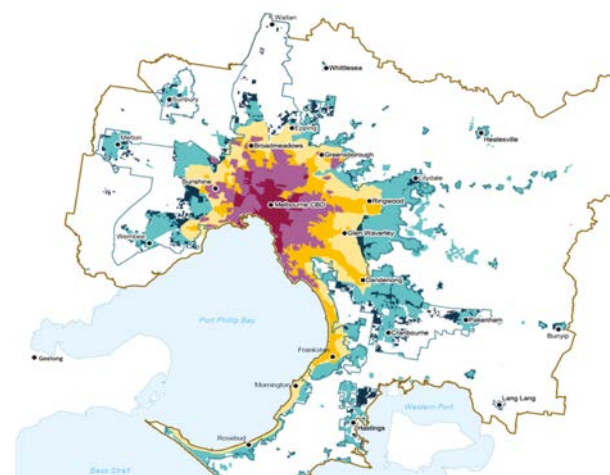
While planning policies propose rebalancing growth from Melbourne to regional Victoria, population projections for 2050 Melbourne show an even higher proportion of the State's population than now.

**Rail Futures InterCity proposals address this issue.**  
See [www.railfutures.org.au](http://www.railfutures.org.au)

# >> WHY WE NEED THE MELBOURNE RAIL PLAN

## >> POPULATION GROWTH

Until the 1950s Melbourne's urban expansion followed train and tram routes. Since then most of the growth has been in areas generally remote from rail and tram lines. Melbourne's population has reached 5 million and current growth rate indicates that the most recent forecasts of 6 million by 2031 and 8 million by 2050 will be reached sooner. Melbourne will displace Sydney as Australia's largest city and be comparable with Paris, London and New York. This scale and pace of growth is unprecedented since the Gold Rush and one of the highest rates of growth in the Western world. Much of the growth will be in the outer growth corridors, with the western and northern regions alone accommodating 3.5 million people by 2050 or sooner. But growth has also returned to the inner and middle suburbs through rapid urban densification, straining an already heavily used radial train and tram network.



>> The scale and pace of growth in Melbourne is unprecedented since the Gold Rush and one of the highest rates of growth in the Western world.

## >> MELBOURNE'S TRANSPORT CRISIS

Melbourne's massive urban spread and population growth has not been matched with an equivalent expansion of the transport network. Symptoms of the transport malaise include worsening congestion, long journey to work times, poor access to jobs, car dependent new suburbs, along with consequential social, health and environmental impacts. Most new outer urban growth is occurring in areas without adequate or planned provision of public transport. Most freeways and major arterial roads are at or near capacity and yet only around 12% of all current trips are made by public transport. Strong population and employment growth in central Melbourne and inner suburbs are placing severe strain on the radial rail and road networks. Melbourne's trams, carrying around 85% of the passenger numbers who travel by train, are overcrowded on many routes. Our trams are among the world's slowest, operating well below their potential. Meanwhile, patronage on the bus network is declining. Much of the transport infrastructure and vehicles are not compliant with Disability Discrimination Act specifications.

A long-term integrated transport plan is essential to maintain Melbourne's liveability and economic competitiveness. Public transport must do much of the future "heavy lifting" if these challenges are to be successfully confronted. The MELBOURNE RAIL PLAN provides the core of a fully integrated transport plan.

While credit must be given to the current high level of transport investment by the State Government, these are mostly "catch-up" projects that should have been constructed years ago. They will be unable to keep pace with Melbourne's growth. Providing for a population of 8 million in Melbourne, while maintaining overall liveability and ensuring the efficient functioning of the city and accessibility to jobs, is a major transport and land use planning challenge.

## >> THE KEY CHALLENGES FOR TRANSPORT PLANNING ARE:

- **Maintaining personal mobility across Greater Melbourne for a much larger population, when the available road space will be unable to accommodate many more vehicles than it does today. Autonomous vehicles will have a place but cannot provide a mass transit solution.**
- **Retrofitting an integrated Public Transport network into Melbourne's existing built form in ways that will significantly reduce car dependency**
- **Maximising opportunities for Public Transport to be a significant city shaping influence on Melbourne's future development**
- **Ensuring public transport services are accessible to all travellers**

**Our transport system has failed to match population growth... but business as usual is simply unsustainable.**

**A long-term integrated transport plan that extends beyond State election cycles is essential to maintain Melbourne's liveability and economic competitiveness. Public Transport must do much of the future "heavy lifting" if these challenges are to be successfully confronted.**

## >> TRANSPORT ACTION & PLANNING POLICY ARE INSEPARABLE

A totally new approach to transport and land use planning is required. There is a desperate need for a comprehensive, long term transport plan integrated with land use planning that extends beyond State election cycles. It needs joined up thinking that achieves outcomes where land use and transport support each other and work towards an agreed vision and outcomes for the city.

Plan Melbourne seeks to expand central Melbourne with major urban renewal precincts, re-shape greater Melbourne from a monocentric to a polycentric city through development of innovation and employment clusters and activity centres, continue extensive outer urban corridor development; and encourage urban intensification across the established metropolitan area.

While planning policy encourages residential intensification near public transport, retail policy encourages ongoing proliferation of car-based centres, resulting in further increased demand for car-based travel.

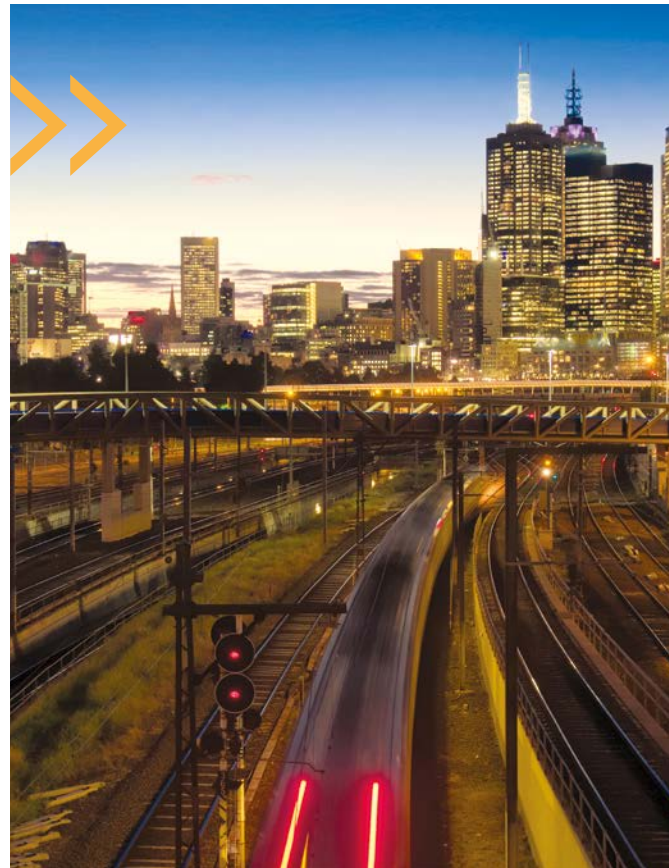
Current growth area planning perpetuates the pattern of car-based, relatively low-density detached housing separated from retail and other services with little local employment. Without specific provision for high quality public transport links to rail stations and major activity centres, ongoing outer urban development will further isolate the 1.5 million new residents located there from employment opportunities and condemn them to ongoing car dependency on increasingly congested roads.

## >> NATIONAL EMPLOYMENT AND INNOVATION CLUSTERS

Intensified polycentric development in National Employment and Innovation Clusters (NEICs) and activity centres has major transport implications. **Three NEICs (LaTrobe, Werribee East and Monash), 27 Major Activity Centres (including some of the largest), 9 future Major Activity Centres and Melbourne Airport - are not directly linked to the rail system, and most are not accessible by tram.**

**If Plan Melbourne is to make NEICs and Activity Centres viable and functional, Melbourne will need a grid network of high capacity public transport corridors allowing both radial and orbital movement between centres.** This will attract higher development intensity and offer residents and businesses far greater locational choices and the connectivity needed for productivity, innovation and liveability.





## INVESTMENT IN RAIL INFRASTRUCTURE IS A POWERFUL CITY SHAPING TOOL

**RAIL WAS A MAJOR INFLUENCE ON MELBOURNE'S EARLY GROWTH AND CAN ONCE AGAIN HELP TRANSFORM MELBOURNE TO 2050 BY:**

- » Providing Melbournians much wider access to employment and opportunities
- » Delivering on the Plan Melbourne polycentric city concept
  - Integrating the metropolitan economy by linking activity centres and boosting the role of National Employment and Innovation Clusters
  - Incentivising transit-oriented developments (TODs) around key rail stations
  - Using the tram network to help shape rapid inner area densification
  - Growing rail capacity to better serve Melbourne's outer growth suburbs
- » Delivering environmental, health and safety benefits.

## GETTING MORE FROM OUR EXISTING ASSETS

Melbourne's existing rail and tram network is a hugely valuable asset. Indeed, to just build the current tram network in today's dollars would need an investment of \$55 billion! Much can be done to make these assets work harder and deliver more services more efficiently.

The Melbourne Rail Plan is not only about building new large-scale infrastructure - it aims to increase the capacity, attractiveness and efficiency of the existing network by:

- » Elimination of network bottlenecks by duplication of remaining single track rail lines.
- » Installing tram track connections and short extensions to provide new tram route options and connect destinations.
- » Electrification of existing rail lines to major growth suburbs.

- » Accelerating procurement of higher capacity trains and trams to make better use of the infrastructure in a transport corridor.
- » Introducing new (but proven) rail signalling technologies.
- » Further segregation of regional from metropolitan rail services through network re-configuration and selective track amplification.
- » Adding turnback locations for trains and trams to better handle shorter distance travel demand.
- » Increasing tram speeds through road space reallocation and tram priority traffic management.
- » Providing fully accessible platform tram stops at all locations to increase safety and speed up boarding and alighting.
- » Providing more dedicated bus lanes.

## CASE STUDY » POOR PUBLIC TRANSPORT STIFLING MONASH UNIVERSITY RESEARCH PRECINCT



Monash University is identified in Plan Melbourne 2017-2020 as a major employment and innovation cluster - 53,000 students and workers seek access to the precinct daily.

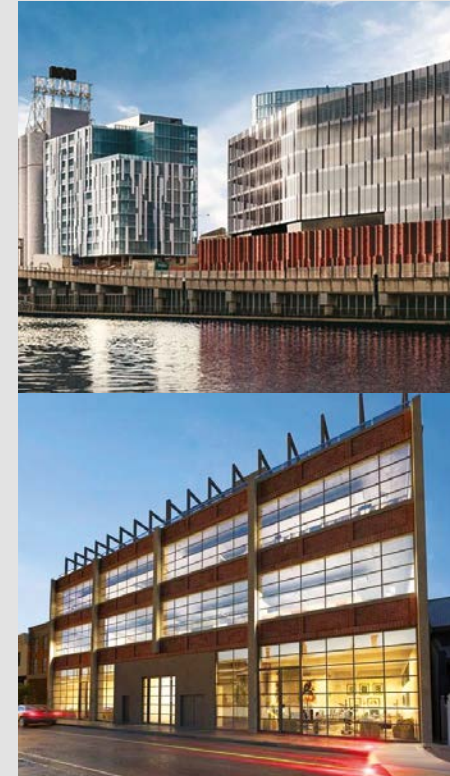
However, poor public transport links are stifling its growth. The bus between the University and Huntingdale Station is now Melbourne's busiest bus route; but it has limited capacity and does not provide a long term solution to accommodate the precinct's growth. With increasing congestion, the Monash precinct will be unable to accommodate as many students and workers in 2025 as it does today - unless its public transport access is very substantially enhanced.

Rail Futures proposes to support the Monash precinct with high capacity train and light rail services.

## CASE STUDY



## PUBLIC TRANSPORT LINKS UNLEASH DEVELOPMENT IN CREMORNE



City fringe locations like Cremorne are attracting significant interest from businesses who previously would have sought CBD office space. The Cremorne/Richmond area is supported by good public transport access with 3 rail stations, 2 tram lines and proximity to major activity centres of Swan/Church/Chapel Streets and the CBD. Lured by these factors, Cremorne is thriving with new businesses including creative, retail and technology companies. It is now one of Melbourne's most attractive commercial markets.

The area's amenity includes some of Melbourne's best cafés and retail strips, good public transport, Yarra River access and parks. Many businesses are avoiding a CBD location to harness the benefits of well serviced inner suburban locations like Cremorne, joining start-ups in key co-working arrangements.

Excellent public transport together with its vibrant character, are key reasons why the Rea Group moved from Victoria Gardens to Cremorne. So too for Red Energy, Seek, and David Jones,

Similar development could be expected along other well located inner areas such as Alexandra Parade if the gap in east-west rail and tram transport was remedied to link with north-south rail and tram lines; and in suburban major activity centres like Doncaster Hill, the Monash precinct, Footscray, Sunshine and others across Melbourne.

**ARTICLE SOURCE:** Good public transport is key to more intense development as has occurred in Cremorne.  
<https://urban.melbourne/development/2018/04/24/icon-and-wood-marsh-combine-600-church-street>

## CASE STUDY



## BIKE/RAIL MODE

**Access to rail stations is a major issue where homes and jobs are beyond station walking distance. With insufficient land for car parking to meet access demand, alternatives are essential.**

Apart from bus interchanges, many cities encourage access to stations by bicycle. This necessitates safe bicycle routes and well located bike parking with direct connections to platforms or the station hall.

These facilities make access to rail stations easy and attractive. Significantly, the cycle catchment to rail stations is 15 times the size of the walking catchment.

In the Netherlands, near 50% of all train passengers cycle to their rail station. Key success factors for the bike/rail combination:

- » safe bike access to reach the station
- » safe, convenient, sheltered bike parking
- » easy public bike rental at stations
- » integrated payment of bike/rail services
- » marketing that bike/rail mode is easy, fast, affordable, convenient and cool

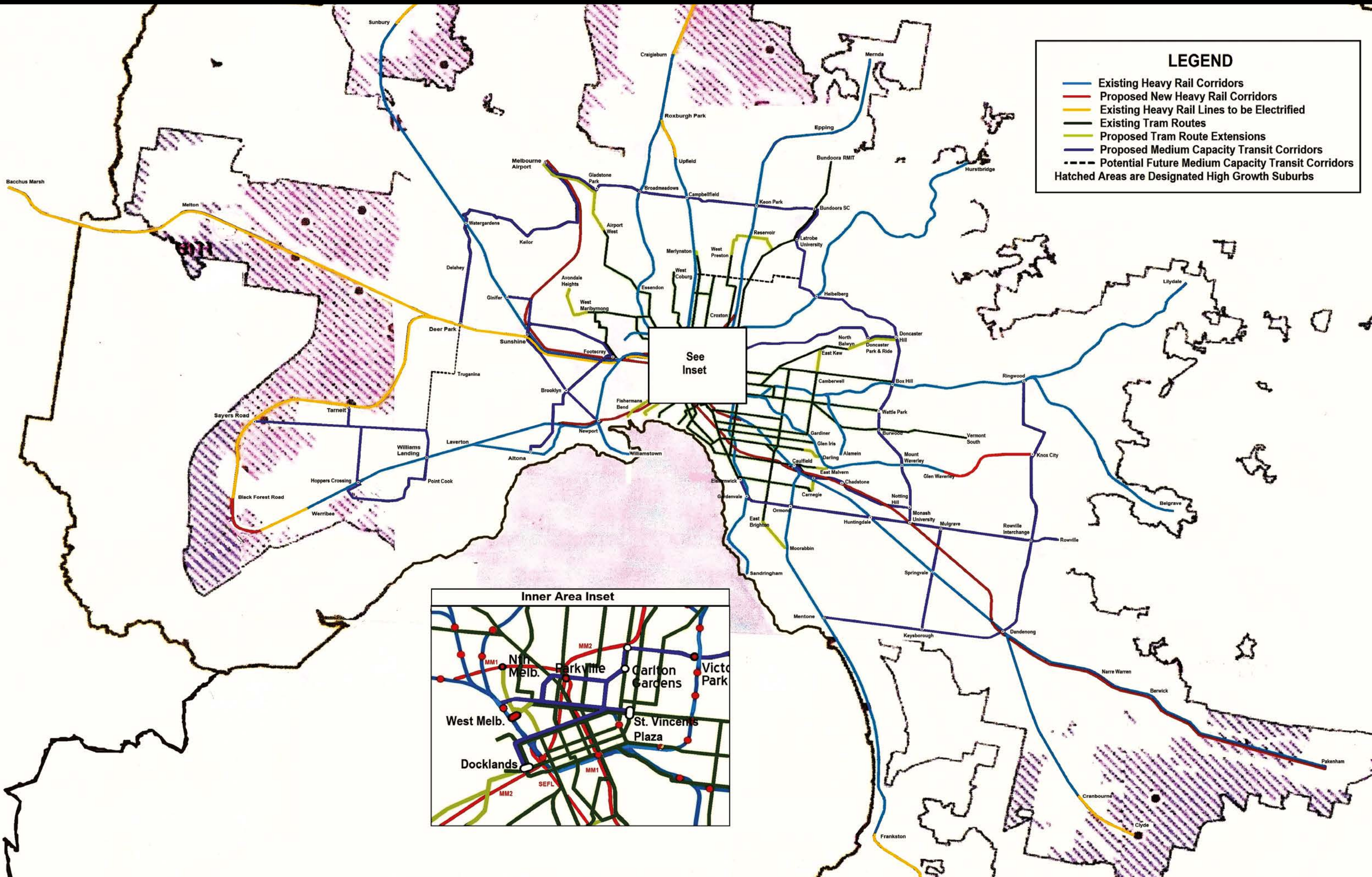


**IMAGE:** Houten Station: population 50,000  
**SOURCE:** Martin Bond / Alamy Stock Photo.

**Combining the rail and bike modes is highly effective being the most energy efficient and sustainable means of mobility in cities, providing seamless door-to-door transport.**



# >> THE MELBOURNE RAIL PLAN FUTURE GRID NETWORK





# THE TRAIN PLAN



## NEW LINES

- **BY 2024: MELBOURNE METRO 1 (MM1) (under construction)** with new stations at North Melbourne, Parkville, State Library, Town Hall and Anzac.
- **BY 2027: SOUTHERN CROSS TO MELBOURNE AIRPORT (AirTrain)** dedicated fast line via Sunshine
- **BY 2030: MELBOURNE METRO 2 - BLACK FOREST ROAD TO MERNDA (MM2)** via Werribee, Newport, Southern Cross, Flagstaff, Parkville and Croxton and new stations at Fishermans Bend and Fitzroy
- **BY 2035: South-East FastLine** Southern Cross, Caulfield, Chadstone, Monash, Dandenong, Pakenham with new stations at Chadstone and Monash.
- **BY 2039: GLEN WAVERLEY TO KNOX CITY** - Underground extension via new station at Wantirna South

## EXTENDED ELECTRIFICATION

Extensions of existing rail lines and/or electrification of inner parts of regional lines to service metropolitan growth areas are an urgent requirement. Eight extensions are proposed:

- **BY 2022:** Southern Cross (platforms 15/16) via RRL lines to Wyndham Vale and Black Forest Road
- **BY 2022:** Deer Park to Melton (Interim solution pending completion of MM1). By 2025: Stage 2 extension Melton to Bacchus Marsh (includes part duplication and quadruplication)
- **BY 2023:** Cranbourne to Clyde (includes re-opening and duplication)
- **BY 2024:** Upfield to Roxburgh Park (includes re-opening and duplication)
- **BY 2025:** Frankston to Baxter (includes duplication)
- **BY 2026:** Werribee to Black Forest Road connection
- **BY 2028:** Craigieburn to Wallan
- **BY 2030:** Sunbury to Clarkefield

## UNTANGLING THE CITY LOOP AND DIRECT CROSS-CITY CONNECTIONS

Transforming Melbourne's metropolitan rail network from its traditional radial configuration into multiple major cross-city corridors intersecting at key stations within Melbourne's extended CBD. This will provide high capacity, high frequency connectivity across Melbourne in addition to improving CBD access. It will also significantly increase capacity across the network. *See lower map on opposite page.*

## DUPLICATION OF FOUR SINGLE LINE SECTIONS

Single-track sections impact service reliability and constrain capacity. Between 2019 and 2026 the following

sections to be duplicated:

1. Dandenong to Cranbourne
2. Greensborough to Eltham
3. Mooroolbark to Lilydale
4. Ferntree Gully to Upper Ferntree Gully

*See top map on opposite page.*

## NEW STATIONS

Twenty-one new stations are proposed to service existing and/or proposed development sites in Melbourne's burgeoning growth areas. *See top map on opposite page.*

## LEVEL CROSSINGS REMOVAL

Between 2019 and 2024 a further 16 locations require priority grade separation of road and rail to improve safety and reliability, and to reduce road delays as rail services become more frequent, including to road-based public transport services. *See listing on opposite page.*



## OTHER INFRASTRUCTURE

Replacement of obsolete and inadequate infrastructure is required on the Melbourne metropolitan network on a significant scale for progressive asset renewal and upgrading over at least a 15-year period. The required work includes drainage and ballast, sleeper, rail and turnout replacement, power supply and overhead upgrading, station rehabilitation, new signalling and communications systems, new maintenance and train stabling facilities.

## NEW TRAINS

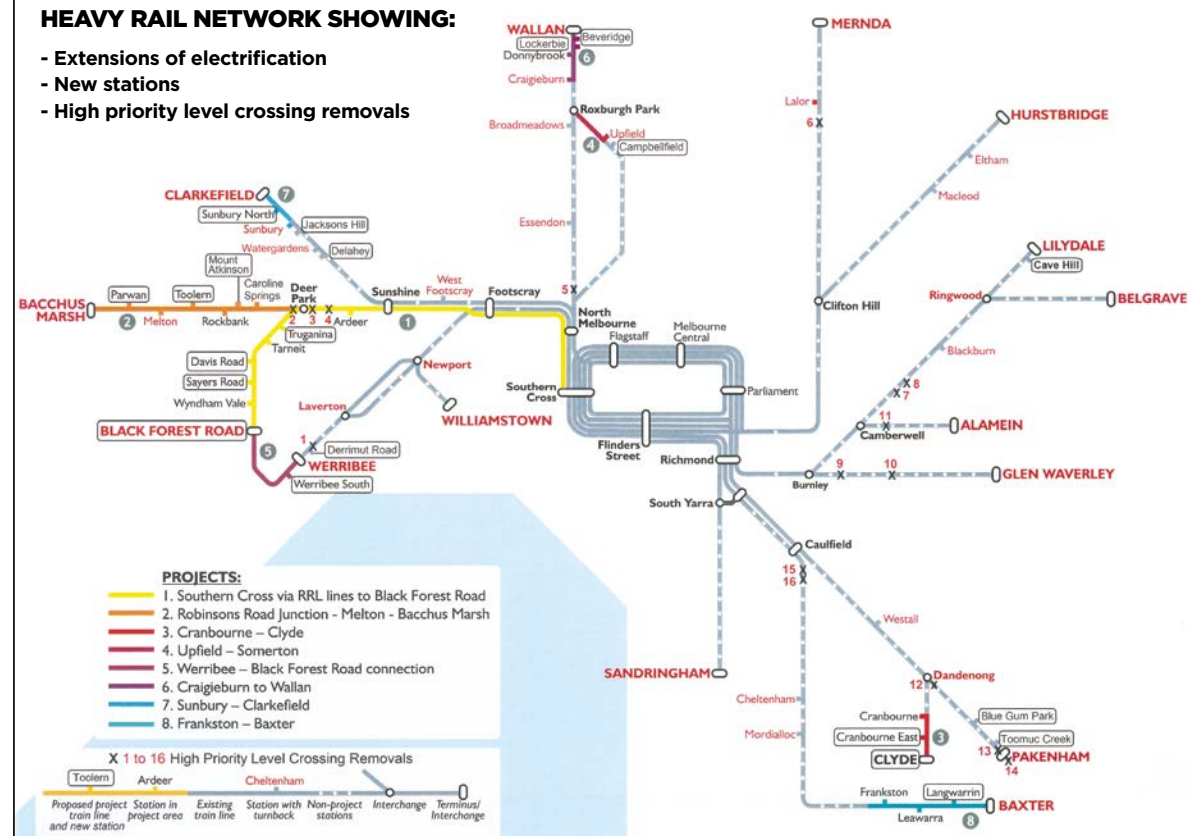
Over the next 20 years, the metropolitan train fleet will need to increase from 219 trains in 2018 to an estimated 332 trains by 2037, a net increase in fleet size of over 50%, to cover increased service frequency, electrification extensions and new lines. 93 Com-Eng trains built during the 1980s will be retired, resulting in the required procurement of 206 new trains by 2037.

## NEW SERVICES

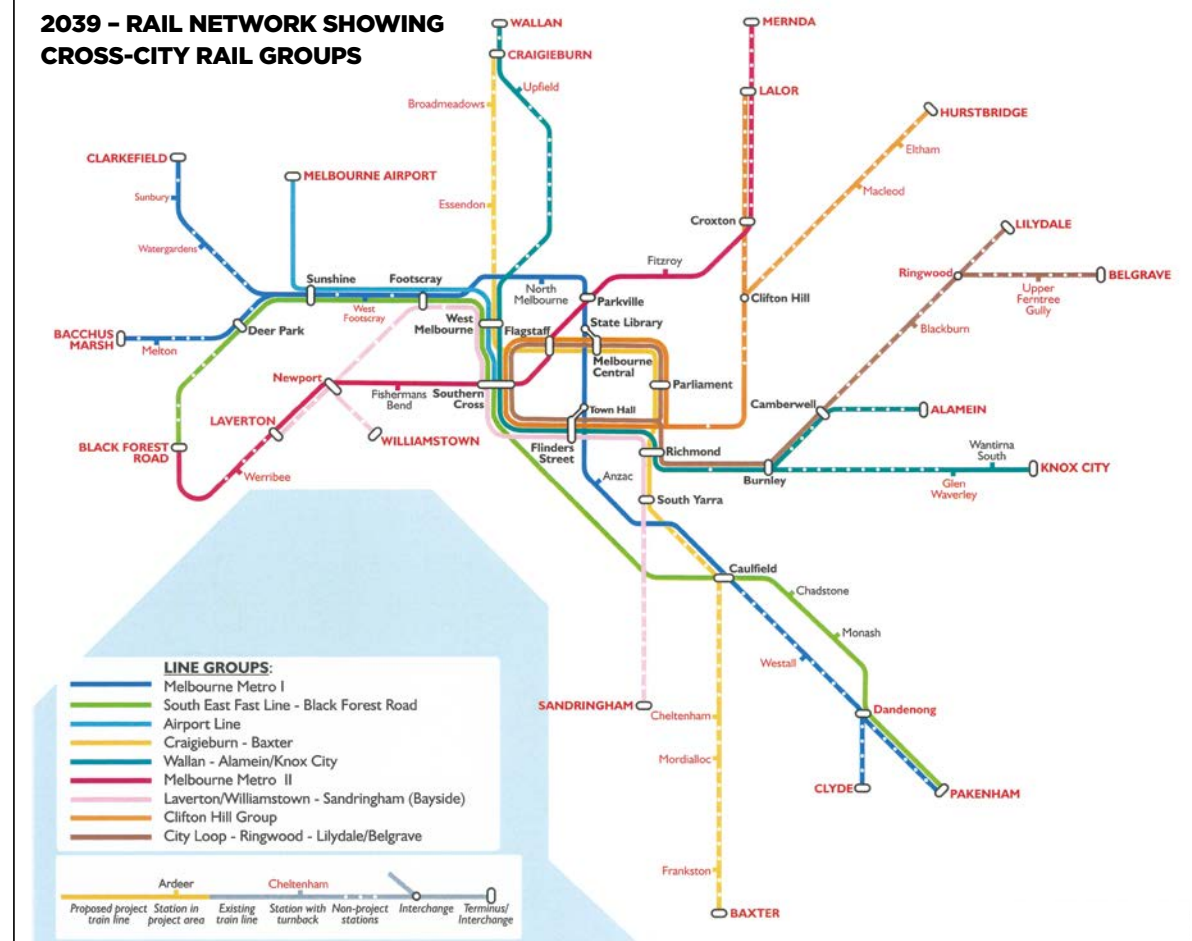
The complete package of works will enable all trunk corridors to have minimum 10-minute frequency services 6am to 10pm on weekdays and 7am to 9pm at weekends with additional peak services to meet demand. Upgraded infrastructure and new trains will substantially improve punctuality and reliability.

### HEAVY RAIL NETWORK SHOWING:

- Extensions of electrification
- New stations
- High priority level crossing removals



### 2039 - RAIL NETWORK SHOWING CROSS-CITY RAIL GROUPS



## LEVEL CROSSING REMOVALS:

1. Old Geelong Road, HOPPERS CROSSING
2. Robinsons Road, DEER PARK
3. Station Road, DEER PARK
4. Fitzgerald Road, DEER PARK
5. Macaulay Road, KENSINGTON
6. Keon Parade, KEON PARK
7. Union Road, SURREY HILLS
8. Mont Albert Rd, MONT ALBERT
9. Glenferrie Road, KOOYONG
10. High Street, GLEN IRIS
11. Riversdale Rd, CAMBERWELL
12. South Gippsland Highway, DANDENONG
13. Main Street, PAKENHAM
14. Racecourse Rd, PAKENHAM
15. Neerim Rd, GLENHUNTLY
16. Glenhuntly Rd, GLENHUNTLY

## TRAIN HIGHLIGHTS

- » Four new lines (MM1, MM2, Melbourne Airport, South-East FastLink).
- » Four line extensions
  - Werribee to Wyndham Vale
  - Cranbourne to Clyde
  - Upfield to Roxburgh Park
  - Glen Waverley to Knox City
- » Untangle city loop and run most lines as cross-city services.
- » Extended electrification on eight lines.
- » Track duplication on four lines.
- » 21 additional stations in outer growth areas.
- » 16 additional level crossing removals.
- » 206 new trains (113 additional, 93 replacement).
- » Replacement of obsolete infrastructure (track, signalling, power supply etc).



The only manageable way of meeting transport demand from the ongoing densification of development in the inner and middle suburbs is to significantly augment Melbourne's tram system.

The system is already struggling to cope with patronage growth and demanding urgent investment.

Some hard decisions will also have to be made about prioritising trams over cars and re-allocation of limited road space.

# THE TRAM PLAN

## MELBOURNE'S TRAM NETWORK

*"The Jewel in the Crown"*

### INFRASTRUCTURE

- Extensions of network to West and North Melbourne Stations, plus Merlynston, East Malvern, Darling, Carnegie, Clifton Hill Stations and Station Pier, Port Melbourne
- Longer distance extensions to Reservoir Station, Lower Avondale Heights, Sandridge, Westgate Park, Moorabbin Station, East Kew and Melbourne Airport
- All stops accessible to all travellers
- Train/Tram interchanges at key inner suburban locations
- Extended Western and Northern CBD Network

### IMPROVED CONNECTIVITY AT:

- ANZAC/Domain, Clifton Hill Station, Parkville Station, St Vincents Plaza, Southern Cross Station, plus 15 Key Inner Stations

### MEETING REQUIREMENTS OF LESS ABLE TRAVELLERS

The Commonwealth Disability Discrimination Act (DDA) specifies a target date of 31 December 2032 for all public transport services to fully comply with the relevant Standards. A vastly accelerated program of tram stop upgrades and new tram acquisitions is required if tram services are to comply with the Act. It will require a concerted commitment of Federal, State and Local Governments to create a tram system that is accessible to all Melburnians.

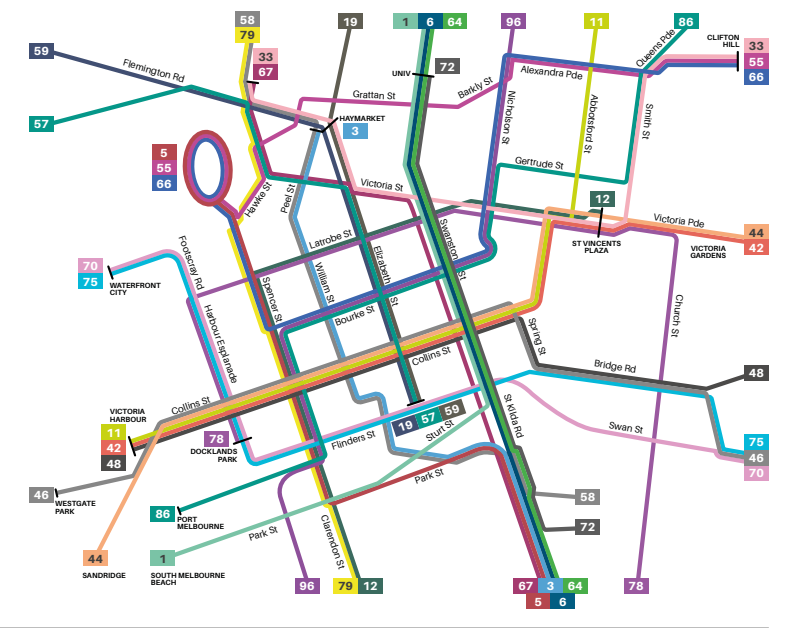
Currently only about one-quarter of tram stops are compliant. (400 of more than 1700 stops) and with only few upgraded each year it will be many decades before the remaining 1300 are fully accessible. A new platform stop would need to be opened every 5 days to meet the 2032 target.

Melbourne still has over 300 older high floor trams with steps. Replacing these to also meet passenger growth will require around 480 new trams - equivalent to more than 30 per annum for the next 15 years, triple the current procurement rate.

## MELBOURNE'S CBD TRAM NETWORK 2034

## COMPLETE MELBOURNE TRAM NETWORK 2034

- 1 South Melbourne Beach - East Coburg
- 3 East Malvern Station - Haymarket
- 5 Darling Station - North Melbourne Station
- 8 Moreland - Glen Iris
- 11 Victoria Harbour - LaTrobe University
- 12 St Vincents Plaza - St Kilda (Fitzroy Street)
- 19 Flinders Street Station - Merlynston Station
- 33 Clifton Hill Station - RCH Parkville
- 35 City Circle Tourist Tram (Not shown)
- 42 Victoria Harbour - Box Hill
- 44 Sandridge - Kew Depot
- 46 Westgate Park - Camberwell Junction
- 48 Victoria Harbour - North Bayside
- 55 Clifton Hill Station - North Melbourne Station
- 57 Flinders Street Station - Lower Avondale Heights
- 58 Toorak - West Coburg
- 59 Flinders Street Station - Melbourne Airport
- 64 Carlton North - Malvern Station
- 66 North Melbourne Station - Clifton Hill Station
- 67 RCH Parkville - Carnegie Station
- 70 Waterfront City - Wattle Park
- 72 Melbourne University - East Kew
- 75 Waterfront City - Vermont South
- 78 Docklands Park - Elsternwick Station
- 79 Malvern Station - Bundoora
- 88 Port Melbourne - Bundoora
- 96 St Kilda (Acland Street) - East Brunswick





# THE MEDIUM CAPACITY TRANSIT (MCT) & LIGHT RAIL PLAN

## WHAT IS MCT?

MCT is a key element of the Melbourne Rail Plan and a new concept for Melbourne.

A significant deficiency in Melbourne is the lack of high quality public transport to facilitate mass people movement on non-radial, high usage corridors. Connectivity with large employment clusters/activity centres can be made along such routes/corridors.

Medium Capacity Transit (MCT) can meet this capacity/service gap. MCT can take the form of rail-based technology such as Light Rail, road-based systems such as "Bus Rapid Transit" (BRT), metro operations e.g. Paris Metro and London Docklands Light Rail, or more recent developments such as very large guided buses in France and China.

MCT is an intermediate step between street-based trams and heavy rail and ideal for new trunk routes where heavy rail would be too costly.



IMAGE: G:link Light Rail / Bus Interchange, Gold Coast Qld

## MCT in Melbourne

MCT can help deliver many objectives in Plan Melbourne, play a key role in changing land use patterns, attract investment along key corridors and activity nodes; and improve urban liveability, amenity and access.

MCT can provide a range of benefits to Melbourne, offering a medium capacity urban public transport solution ideally suited to new trunk routes not requiring the capacity offered by traditional heavy rail systems. MCT can deliver higher operating speeds and greater reliability than trams and conventional buses at expenditure levels closer to regular tram infrastructure and much less than the very high cost of conventional heavy rail.

MCT routes can be located in freeway or wide boulevard medians but can also be installed using elevated structures in suitable thoroughfares or in short underground sections.

MCT would fully complement other modes with all systems interlocking as one network. Interchanges would become natural transfer points to and from all modes.

Permanent infrastructure engenders market confidence resulting in land value uplift along routes and at key nodes. Planning for such corridors needs to start now. It will have long lead times and involve many institutional and physical interfaces. In most cases, high frequency SmartBus or similar services will be a logical transition to MCT in helping to change travel behaviour and prove up potential demand.



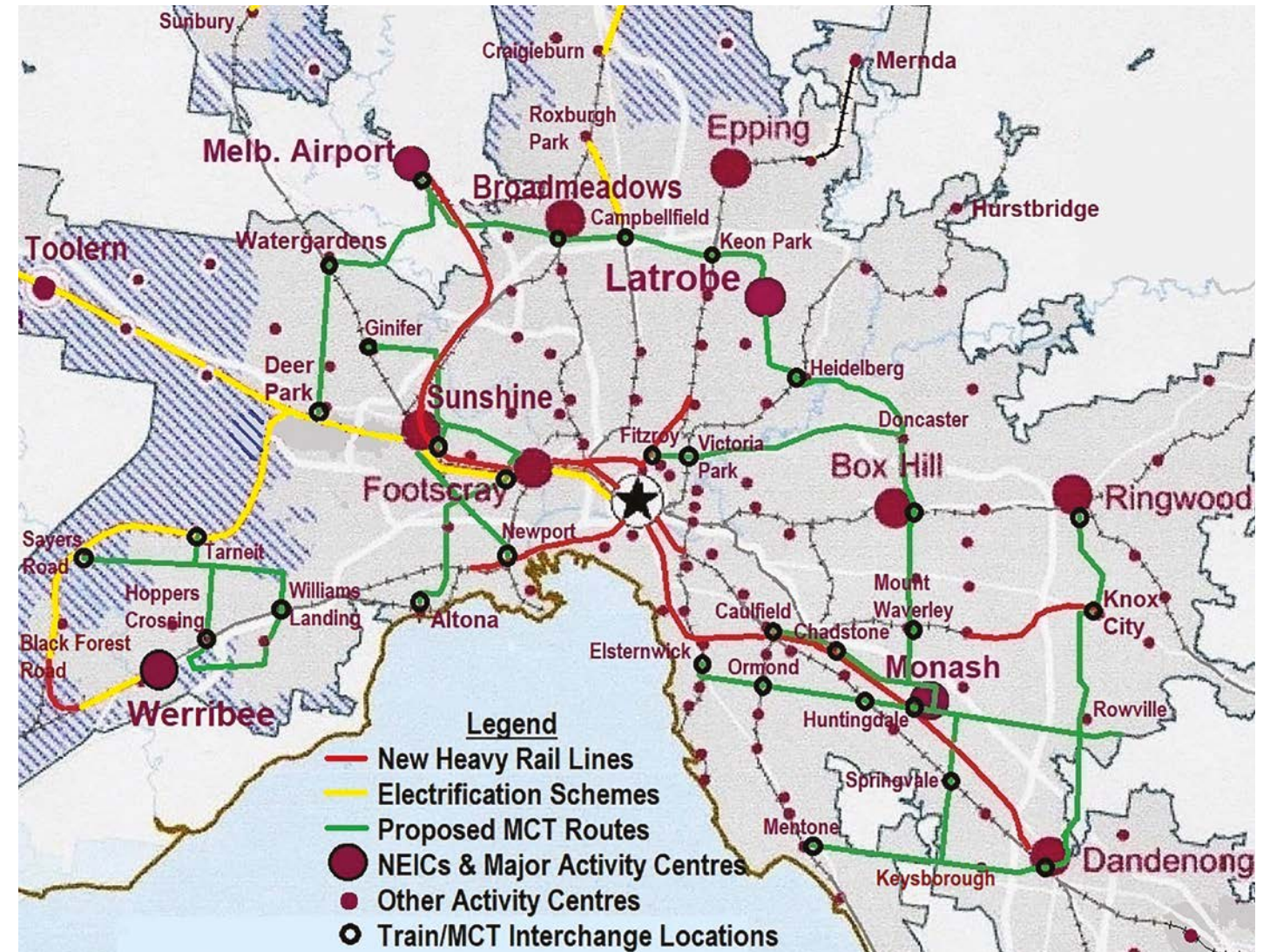
IMAGE: Guided Tramway de Clermont-Ferrand France  
© William Crochet / Wikimedia Commons / CC BY-SA 4.0



IMAGE: G:link, Gold Coast Qld



IMAGE: Manchester Busway, England (Transport for Greater Manchester)



## 15 NEW MCT ROUTES ARE PROPOSED

1. CBD - Doncaster via Victoria Park and Bulleen
2. Williams Landing Station - Hoppers Crossing Station via Point Cook and East Werribee NEIC
3. Hoppers Crossing Station - Tarnet Station
4. Williams Landing Station - Sayers Road Station
5. Deer Park Station - Melbourne Airport via Keilor and Delahey
6. Melbourne Airport - Latrobe University via Broadmeadows and Bundoora
7. Latrobe University - Doncaster via Heidelberg
8. Doncaster - Monash University via Box Hill and Mt Waverley
9. Caulfield Station - Keysborough via Chadstone, Monash University and Springvale
10. Elsternwick Station - Rowville via Ormond, Huntingdale and Monash University
11. Ringwood Station - Dandenong Station via Knox City and Rowville
12. Dandenong Station - Mentone Station via Keysborough
13. Footscray Station - Ginifer via Sunshine Station
14. Footscray Station - Altona Railway via Kingsville
15. Newport Station - Sunshine Station via Brooklyn





IMAGE: St Kilda line Light Rail  
PHOTO: Bob Wilson

## TRANSPORT FUNDING & GOVERNANCE

In addition to significantly larger investment in public transport, a new approach to transport and land use planning is needed. This includes:

- » Bolder use of financial mechanisms to fund public transport investment, including value capture.
- » A range of policies to reduce car dependency.
- » A comprehensive, long term transport plan integrated with land use planning and that extends beyond State election cycles and covers the whole state.
- » Joined up thinking that achieves outcomes where land use and transport support each other and work towards an agreed outcome for the city.
- » A move away from ad-hoc transport project announcements.
- » Acknowledging that investment in quality public transport is a better and less expensive way of incentivising housing supply than continual expansion of land supply on the fringe.
- » Giving the Transport Integration Act 2010 the recognition it deserves as Victoria's principal transport statute.



## WHAT WILL IT COST?

The estimated capital cost of the combined Melbourne Rail Plan initiatives will require an investment of **\$109 billion over a 21-year period to 2040.**



**Heavy Rail infrastructure**  
**\$69 BILLION**



**Medium Capacity Transit infrastructure**  
**\$21 BILLION**



**Tram infrastructure**  
**\$9 BILLION**



**Rolling stock - trains, trams and light rail (and similar)**  
**\$10 BILLION**

*This Plan proposes capital investment totalling \$109 billion over the next 21 years with further expenditure required in subsequent years. This equates to an annual investment of around \$5.5 billion - the minimum needed to meet the principal public transport requirements of a city with population 60% larger than Melbourne today.*

## SO, WHERE DO WE BEGIN...?

### A SELECTION OF URGENT PROJECTS THAT WOULD DELIVER IMMEDIATE BENEFIT:

- » **RRL Electrification Southern Cross - Wyndham Vale - Black Forest Road. BENEFIT:** fixes chronic overcrowding on Geelong & Wyndham Vale services.
- » **Melton electrification Stage 1. BENEFIT:** Fixes chronic overcrowding on Ballarat, Bacchus Marsh & Melton services.
- » **26 additional 3-car Xtrapolis trains to support above electrifications. BENEFIT:** Releases V/Locity trains to address V/Line peak overcrowding.
- » **110 additional E-class trams to allow retirement all Zclass trams. BENEFIT:** Fast increase in peak tram capacity, increased percentage of DDA compliant tram fleet, avoids wasted upgrading of Zclass trams for short lifespan.
- » **Extended Railway from Cranbourne to Clyde (includes duplication).**
- » **Duplicate Greensborough to Eltham.**
- » **CBD Tram Improvement Package: track connections, curve pairs turn backs etc. BENEFIT:** Allows early introduction of new route options and improves utilisation of existing track asset.
- » **Tram extension Spencer Street to West & North Melbourne stations. BENEFIT:** expands tram network into new parts of CBD and complements Melbourne Metro 1.
- » **Light Rail Route Stage 1: Caulfield Station - Chadstone - Monash University.**



**WANT MORE DETAIL?** Visit [www.railfutures.org.au](http://www.railfutures.org.au)

**RAIL FUTURES INSTITUTE INC.**

A0059839B

PO Box 1257  
CARLTON VIC 3053



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