



# MELBOURNE METRO RAIL NEWSLETTER

ISSUE 2 | DEC 2015



## CONSULTATION & PROGRESS

It's been a busy few months at the Melbourne Metro Rail Authority as the project gathers pace.

The Melbourne Metro team has been out talking to hundreds of people at information sessions across the project corridor. We've also been collecting input through surveys, research and our website. Thank you to everyone who has provided feedback. We look forward to working with the community as we continue to refine our designs for Melbourne's newest underground rail line.

Meanwhile, geotechnical investigations have been continuing, with the results already informing some of our key design and construction decisions, including the use of tunnel boring machines to excavate twin tunnels under the Yarra River and the move to 'cavern' station construction under Swanston Street.

The team is also now busy preparing the Environment Effects Statement planning documentation, finalising the Melbourne Metro business case and preparing to select construction contractors.

Thank you again to everyone who has joined us on the journey in 2015, and look out for more Melbourne Metro news as work progresses through 2016.

**Evan Tattersall**  
Chief Executive Officer  
Melbourne Metro Rail Authority

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Cover image: Melbourne's City Loop.

## PROJECT TIMELINE

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### 2015 - 2016

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- Site investigations
- Reference Design development
- Planning and environmental assessments
- Update and release Business Case

### 2017

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- Planning and environmental approvals
- Procurement for major construction contract
- Early works before major construction

### 2018

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- Award major construction contract
- Start major construction works



## KEEPING THE CITY MOVING

Melbourne's CBD will keep moving while the city's newest rail tunnels are constructed, with trams, pedestrians and cyclists to remain on Swanston Street while the new Melbourne Metro tunnels and stations are built underneath.

Following further engineering work the Melbourne Metro Rail Authority has confirmed that the twin rail tunnels will pass underneath the existing City Loop tunnels in order to reduce impacts on the busy road above.

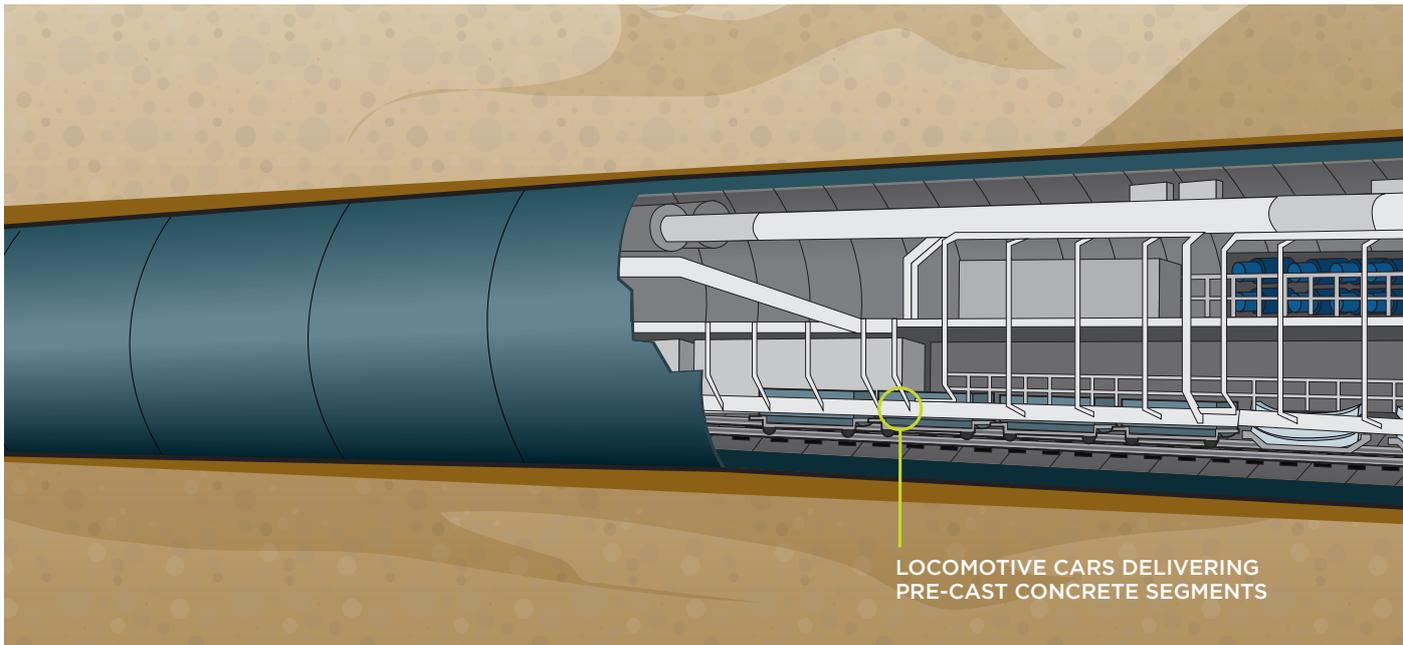
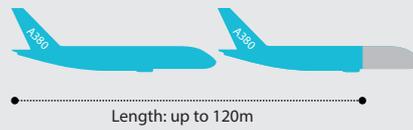
Large pits will be dug next to Swanston Street and the CBD North and CBD South station boxes. The stations will be excavated from underneath via a 'cavern' construction method, while the tunnels connecting the two stations are mined entirely underground.

The use of mined tunnelling and cavern construction techniques will significantly reduce impacts on the city. This will help to ensure thousands of workers, residents and visitors can continue to access the heart of the CBD with far less disruption while construction of the new tunnels and stations continues underground.

CBD North station will be connected to Melbourne Central station via an underground interchange while CBD South station will provide a direct underground interchange with Flinders Street Station and Federation Square.

Find out more about how we're building Melbourne Metro through the CBD. Visit [mmrailproject.vic.gov.au](http://mmrailproject.vic.gov.au).

## HOW BIG IS THE TBM?



## TUNNELLING UNDER MELBOURNE

Tunnel boring machines (TBMs) are likely to be used to build most of Melbourne Metro's rail tunnels, including under the Yarra River.

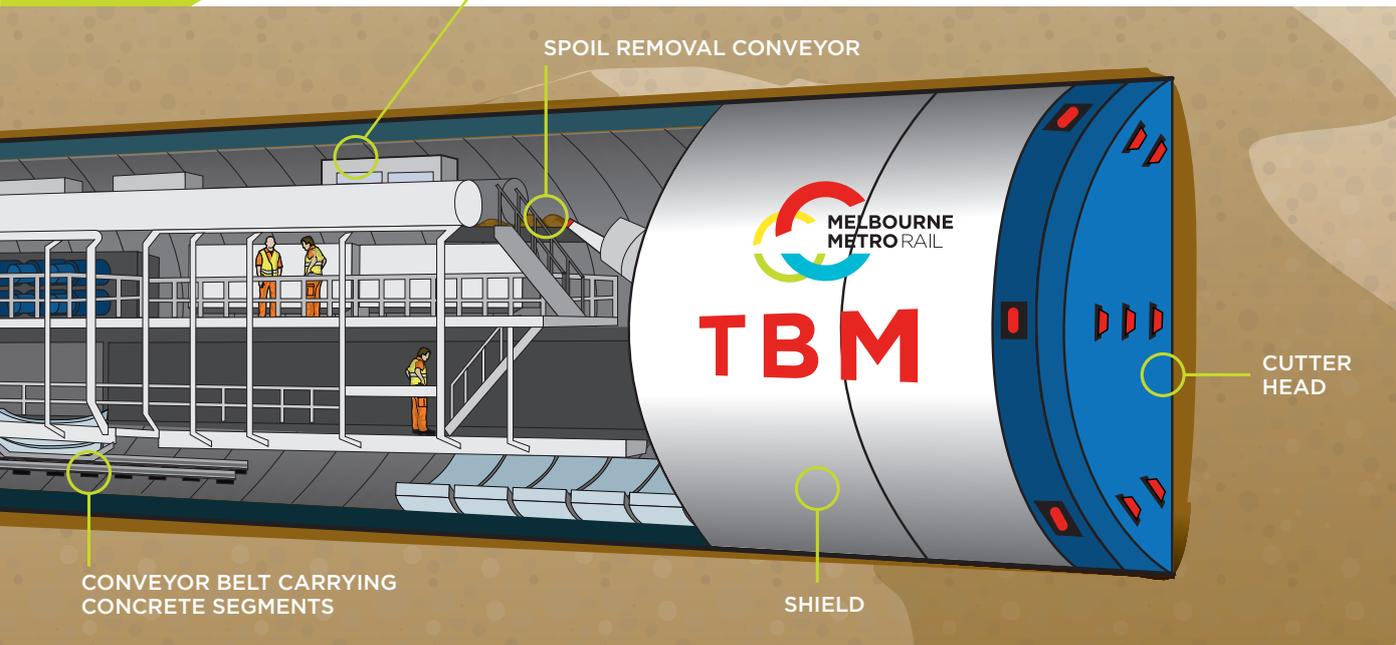
Building twin nine kilometre rail tunnels under busy inner-city Melbourne presents a number of design and construction challenges. However, modern cities around the world routinely build metro systems in densely populated urban areas, demonstrating that these challenges can be overcome with careful planning and smart construction.

The use of Tunnel Boring Machines will reduce the project's environmental impact and limit inconvenience to local businesses and residents.

*Expanding Melbourne's underground rail system will unlock capacity in the busy City Loop and allow for more trains to run more often across the train network.*



**OPERATING ROOM**  
The TBM is operated and monitored from a sophisticated control centre



## HOW DO TUNNEL BORING MACHINES WORK?

TBMs are massive machines that tunnel through ground, progressively installing pre-cast concrete linings to seal and support the excavated tunnel. Excavated soil and rocks are transported through the machine to the surface for removal by trucks.

TBMs are typically used in the construction of long underground tunnels. They are tailored for specific conditions and can be several metres in diameter, more than 100 metres long and weigh up to 1,000 tonnes.

TBMs are widely used on tunnel projects all over the world, and are currently being used to build Sydney Metro Northwest's rail tunnels and London's Crossrail tunnels.

## DID YOU KNOW?

TBMs cost around \$25 million each and can tunnel 300 - 350 metres a month, depending on the ground conditions. They require an expert crew to operate them.



## COMMUNITY INFORMATION SESSIONS

THE MELBOURNE METRO TEAM HAS BEEN REACHING OUT TO THE COMMUNITY IN RECENT MONTHS, TO CAPTURE FEEDBACK ON THE PROJECT, WITH:

- over 1,000 people attending information sessions,
- around 3,000 people taking part in social research, and
- more than 5,000 people visiting the 'Your Say' feedback portal on the Melbourne Metro website.

Community feedback from these activities has indicated broad support for the Melbourne Metro concept. It also focused on potential construction impacts, traffic changes, truck routes and parking, open space, station designs and interchanges with other public transport modes.

This input is now informing the project's Environment Effects Statement planning documentation, which will be available for public comment in mid 2016.

A big thank you to everyone who has participated so far, and stay tuned for further opportunities to have your say as planning for Melbourne Metro continues.

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## ENVIRONMENT EFFECTS STATEMENT PLANNING PROCESS DECLARED

THE MINISTER FOR PLANNING HAS DECLARED THAT MELBOURNE METRO WILL BE ASSESSED THROUGH AN ENVIRONMENT EFFECTS STATEMENT PROCESS.

An Environment Effects Statement is a well-tested, robust and transparent process, and will be used to assess the potential environmental, social and economic effects of the project.

Melbourne Metro's planning process will include a range of technical investigations that will assess the project's environmental, heritage, urban design, traffic and transport, construction, social and other impacts.

Once developed, the Environment Effects Statement will be available for public comment in mid-2016, and stakeholders and community members will be able to make formal submissions on the documentation to an independent assessment panel.

Sign up to Melbourne Metro eNews to receive alerts about planning milestones and opportunities to be involved in the process.

## EARLY WORKS

The first package of works for Melbourne Metro will deliver hundreds of millions of dollars-worth of critical works from 2017 to prepare key sites for the start of major construction in 2018.

Works will include moving and protecting underground services such as gas, sewer and water mains, stormwater pipes and telecommunications cables, the relocation of some tram tracks and other road features and other preparatory works to enable construction sites to be established.

The Melbourne Metro Rail Authority has called for Expressions of Interest from companies with the capability to undertake these works.

Early works will be sequenced and coordinated to reduce disruption to residents, businesses and commuters.

Many will occur within road reserves and public land and are similar to works routinely undertaken by utility providers. The early works will be carried out in accordance with applicable planning approvals.

## KEEPING YOU INFORMED



*The Melbourne Metro Rail Authority (MMRA) is now on **LinkedIn**. You can connect with MMRA for employment opportunities, project updates and milestones.*

### MORE INFORMATION

To find out more about the Melbourne Metro Rail Project and register for future updates:

 [mmrailproject.vic.gov.au](http://mmrailproject.vic.gov.au)

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Mandarin	普通话	Vietnamese	Tiếng Việt
Greek	Ελληνικά	Italian	Italiano
Cantonese	廣東話	Arabic	عربي
Russian	Русский	Spanish	Español
Korean	한국어	Somali	Somali