



Looking towards the city through the newest Sydney Metro West tunnel.

# Tunnelling towards CBD from The Bays Station

The NSW Government is delivering Sydney Metro West – a new underground metro railway which will double rail capacity between Parramatta and the Sydney CBD, link new communities to rail services and support employment growth and housing supply.

Sydney Metro West stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street in the Sydney CBD.

Two potential station locations are being investigated west of Sydney Olympic Park, including one at Rosehill Gardens which could support a significant increase in housing.

John Holland CPB Contractors Ghella Joint Venture (JCG) has been awarded the contract to deliver 3.5 kilometres of twin metro rail tunnels between The Bays and Hunter Street and excavate the Pyrmont and Hunter Street metro stations.

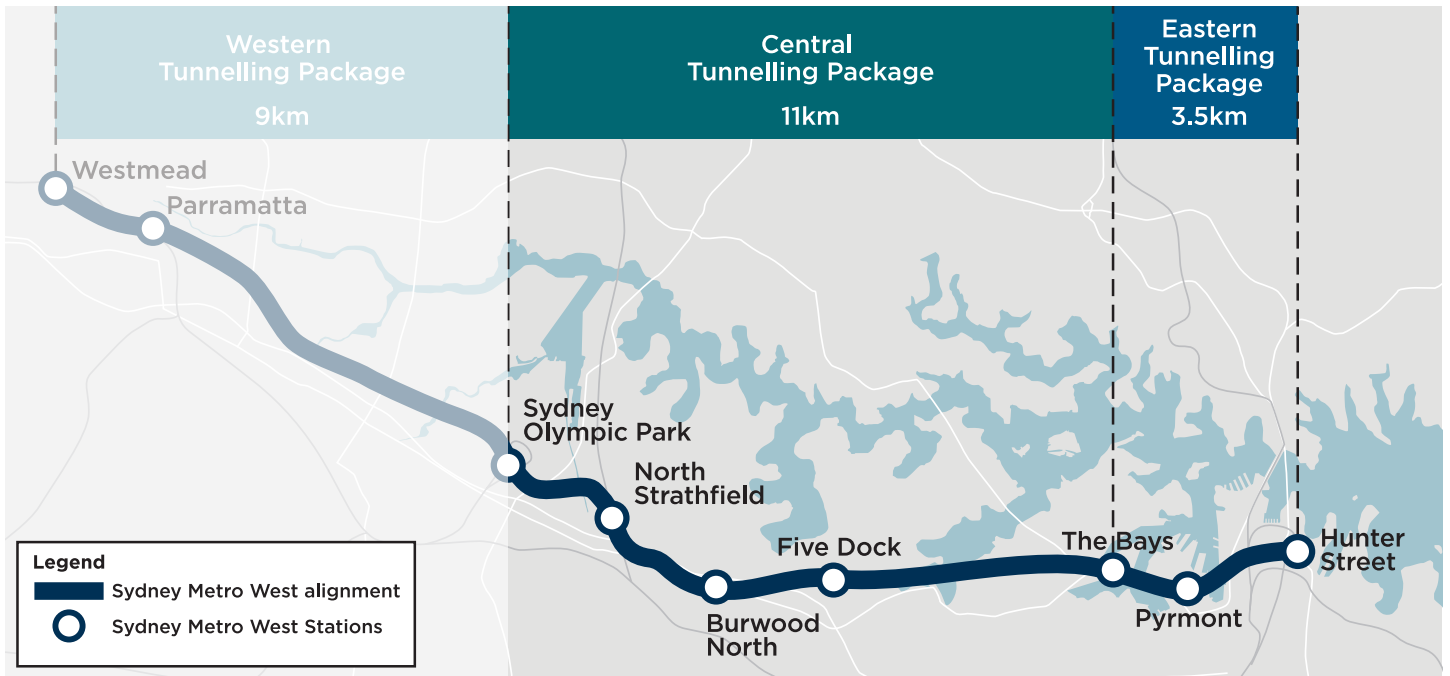
Acciona Ferroviaria Joint Venture (AFJV) has been awarded the contract to deliver 11 kilometres of twin metro rail tunnels between The Bays and Sydney Olympic Park and excavate five new metro stations, including a station at The Bays.

Both projects have established separate construction sites at The Bays that provide support for tunnelling activities.

## The Bays construction activities

Two tunnel boring machines (TBMs) started tunnelling from The Bays Station site in 2023 for the Central Tunnelling Package, the middle section of tunnelling for Sydney Metro West. These TBMs will complete their 11-kilometre journey to Sydney Olympic Park in late 2024.

The final two TBMs for Sydney Metro West arrived at The Bays in March, to carve out the 2.3-kilometre twin tunnels to Hunter Street, which will include Sydney's second under-harbour railway crossing. TBM Jessie launched in May and is tunnelling towards Pyrmont, while the final TBM will also launch from The Bays later this year.



The Sydney Metro West alignment.

## What's happening at The Bays?

TBM Jessie is the first of two TBMs being used on the Eastern Tunnelling Package and is currently excavating under Johnstons Bay, heading towards Pyrmont. The 1,100-tonne machine is named after Jessie Street who was an Australian activist, feminist and lifelong campaigner for women's rights and the peace movement.

This is the first mixed shield (slurry) TBM to be used on Sydney Metro West. This type of TBM is specifically designed to excavate in the highly pressurised conditions that are expected under Sydney Harbour. The final TBM for Sydney Metro West is currently being prepared on site, ready to start tunnelling towards the CBD later this year.

The two TBMs on the Central Tunnelling Package—Beatrice and Daphne—are expected to finish their tunnelling journey in late 2024 when they reach Sydney Olympic Park. Demobilisation activities will then start in this part of The Bays site, continuing until early 2025.

A tower crane will be used for demobilisation activities at The Bays, dismantling the site sheds and vertical conveyor that loaded out excavated material as part of tunnelling operations for the Central Tunnelling Package.

Other site demobilisation activities will start in October and include investigating the earth around the site, shutting off site services, and taking down various structures such as workshops, gantry cranes, conveyor systems, facilities and the site's spoil and segment sheds. The two sheds will be disassembled at the same time and will be taken apart in small pieces.

Once demobilisation is complete, the Central Tunnelling Package will hand this portion of The Bays Station site back to Transport for NSW and the station construction contractor.

## Crossing the harbour

The two TBMs for the Eastern Tunnelling Package will cross under Sydney Harbour, alongside the iconic Anzac Bridge, heading to the Pyrmont Station site.

These mixed shield TBMs use slurry technology to balance the pressure inside and outside of the machine as it moves through different ground conditions. Pipes and fluid control the pressure in the machine by turning the excavated material into a slurry mixture, which is pumped out of the TBM.



Inside TBM Jessie.

There will be four harbour crossings in total, with each TBM also travelling under Darling Harbour before reaching their final destination at the Hunter Street Station site in mid-2025.

This follows Sydney Metro's first successful crossing between Blues Point and Barangaroo for the recently opened City line.

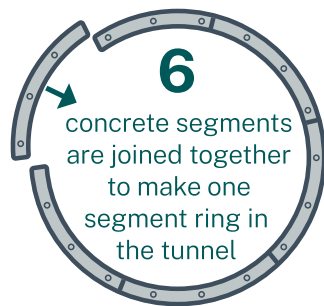
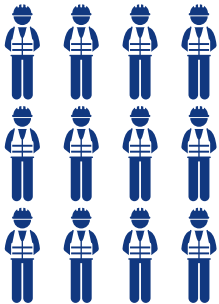
# Six-month construction lookahead

Activity (subject to change)	Sep	Oct	Nov	Dec	Jan	Feb
Oversized equipment deliveries	● ●	● ●	● ●	● ●	● ●	● ●
TBM tunnelling activities	● ●	● ●	● ●	● ●	● ●	● ●
Utility work	● ●	● ●	● ●	● ●	● ●	● ●
Tower crane assembly and operation	● ●	● ●	● ●	● ●	● ●	
Assembly of second east-bound TBM and launch	● ●	● ●	● ●	● ●		
Demobilisation of west-bound tunnelling facilities including spoil shed, segment shed and vertical conveyor		● ●	● ●	● ●	● ●	
Concrete demolition and excavation work within station box				● ●	● ●	● ●
Hoarding and fencing adjustments						● ●

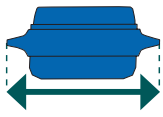
Construction activity ● Some out of hours works required ●

## Mixed shield TBM fast facts

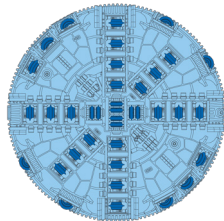
**12** workers per shift operate each TBM



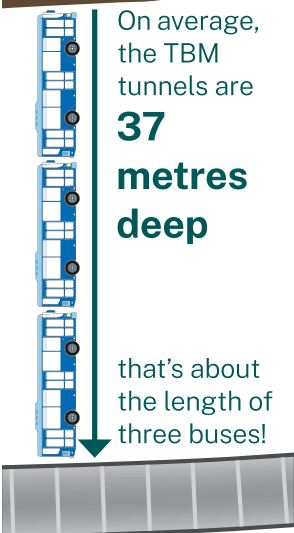
Each disc is approximately **51 centimetres** in diameter



**38** Disc cutters per cutterhead



On average, the TBM tunnels are **37 metres deep**



Each TBM weighs about **1,100 tonnes**



The TBMs are expected to travel an average of

**90 metres per week**

## Heritage highlights

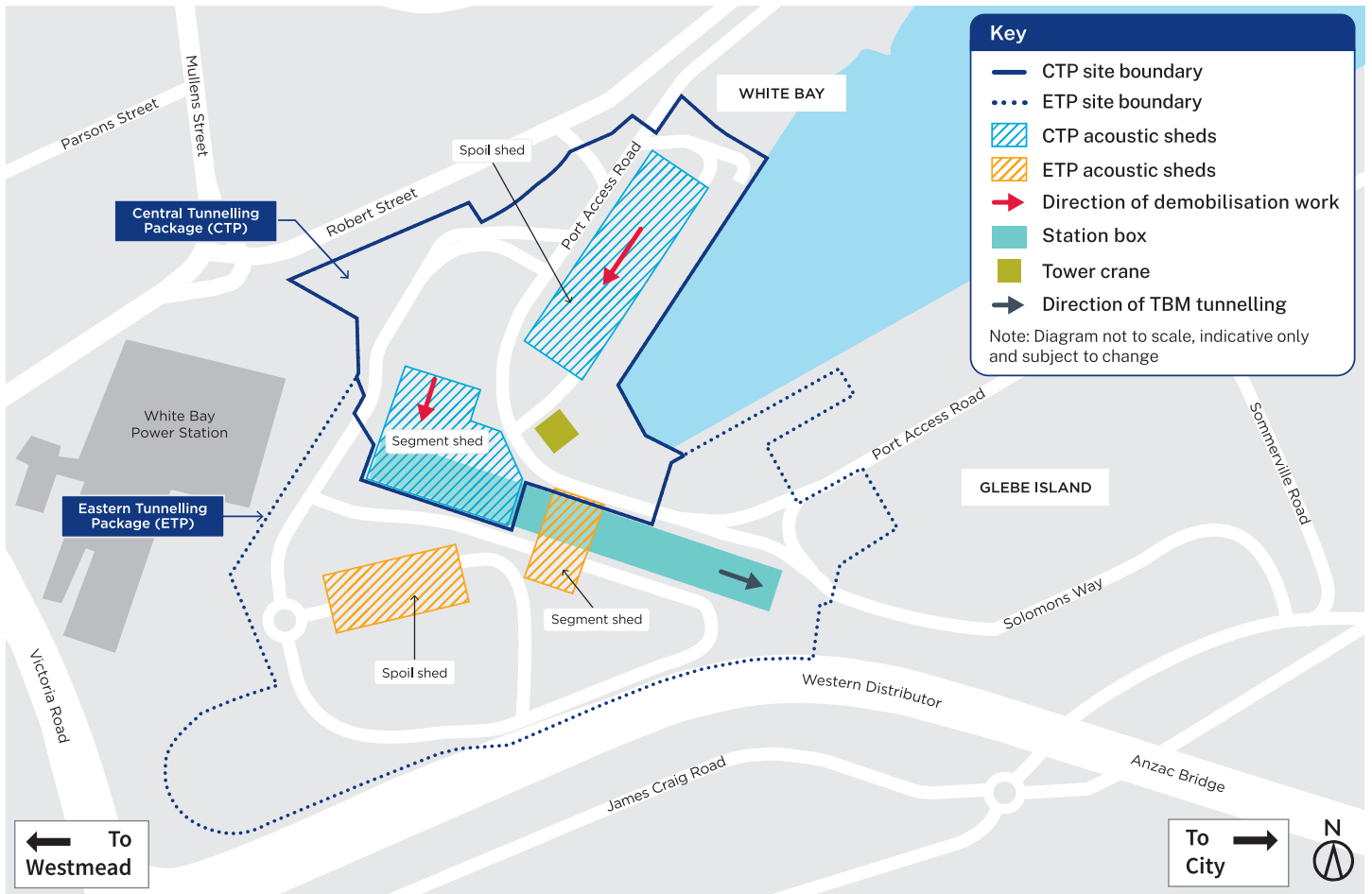
The Bays Station site is adjacent to the heritage-listed Glebe Island Bridge. The bridge was originally constructed in 1862 from timber, and then replaced in 1901 with a steel bridge featuring an electrically operated movable bridge that can be rotated horizontally, known as a swing span. It was built to connect Pyrmont to Glebe Island and Rozelle, providing a shortcut to the developing northern and western areas of Sydney.



Vehicles travelling over Glebe Island Bridge in 1971. (Source: City of Sydney Archives – John Ward).

Glebe Point Bridge is the second oldest bridge on Sydney Harbour, behind the Pyrmont Bridge. It has been closed to vehicle traffic since the opening of Anzac Bridge in 1995.

The NSW Government has completed inspections of the bridge to determine the maintenance required to improve the structure of the bridge, as part of The Bays Precinct Urban Renewal Plan. The plan emphasises the importance of establishing a direct, level pedestrian and cycle route linking the city, Pyrmont and Glebe to White Bay, using the existing Glebe Point Bridge. In 2023, temporary construction works to repair the bridge began, as the NSW Government works towards a long-term restoration solution for the historic bridge.



A map of The Bays site.

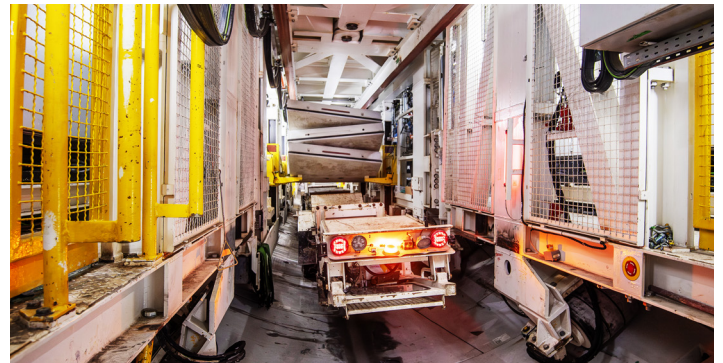
## Our community teams

JCG and AFJV have teams committed to working with the community as they deliver the project.

Please contact our teams on **1800 612 173** if you have any questions or would like to provide feedback about works at The Bays. We will continue to keep you updated on the progress of work in your area. If you would prefer to receive updates by email, please send a request to [sydneymetrowest@transport.nsw.gov.au](mailto:sydneymetrowest@transport.nsw.gov.au) and we will add you to the distribution list.

## Work hours

Tunnelling and support activities will occur 24 hours per day, seven days a week. Standard construction hours for the site are Monday to Friday from 7am to 6pm and Saturdays from 8am to 6pm, however some work will occur outside these hours. A notification will be provided for any expected out-of-hours work impacts.



Concrete segments are transported into the TBM using a multi service vehicle, before being installed to line the tunnel.

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### Contact us

If you have any questions or would like more information please contact our project team:

1800 612 173 Community infoline open 24 hours

[sydneymetrowest@transport.nsw.gov.au](mailto:sydneymetrowest@transport.nsw.gov.au)

Sydney Metro West

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