

GUEST SPEAKER

ROBIN BAIRD and PETER BROWN

Sydney Metro West Overview

Robin Baird gave us a comprehensive overview of the Sydney Metro West project, which is under construction to transform Sydney for generations to come. Sydney Metro is Australia's biggest public transport project and is revolutionising how Australia's biggest city travels.



Sydney Metro comprises of:

- Metro North West line opened in 2019 with 13 metro stations between Tallawong and Chatswood
- Metro City & Southwest is a new 30-kilometre line extending the Metro North West from Chatswood, under Sydney harbour, through the Sydney CBD and south west to Bankstown. Passenger services between Chatswood and Sydenham are expected to open in 2024, then onto Bankstown in 2025
- Metro West is a new 24-kilometre metro line connecting Greater Parramatta with the Sydney CBD. The project is under construction with nine confirmed stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays and Hunter Street in the Sydney CBD.
- Metro – Western Sydney Airport commenced construction in 2020 and will service Greater Western Sydney and the new Western Sydney International (Nancy-Bird Walton) Airport forming the transport spine of the Western Parkland City.

Sydney Metro West will provide a train every four minutes during peak times, with state-of-the-art signalling and communications systems, so that the driverless trains operate under

expert attention by the Operations Control Centre, with safety and security paramount. Stations are designed to be fully accessible, as wheelchair and pram users will be able to access the metro train at any door, enabling efficient and safe transfers. Sustainability has been a key focus of the network, both during construction and later for operations.

The particular focus for the presentation was the Sydney Metro West project, which also includes a stabling and maintenance facility at Clyde. Tunnelling for Sydney Metro West has been split into three major contracts; Western Tunnelling Package (nine kilometres between Sydney Olympic Park and Westmead), Central Tunnelling Package (11 kilometres between Sydney Olympic Park and The Bays) and Eastern Tunnelling Package (3.5 km between The Bays and Hunter Street in the Sydney CBD).

The planning process for Sydney Metro West has been completed through a staged infrastructure application due to the size of the project. Sydney Metro West construction and metro operations was approved under two major planning applications between 2020 and 2022. The Environmental Impact Statement (EIS) for rail infrastructure, stations, precincts and operations between Westmead and the Sydney CBD was approved in January 2023 and excavation work has commenced across the project. Sydney metro West has commenced planning for over and adjacent station development at Parramatta, Sydney Olympic Park, Hunter Street (West and East) and Pyrmont.

As an engineer with responsibility for the Eastern Tunnelling Package (including Hunter Street, Pyrmont and The Bays stations and the tunnels in between), Peter Brown gave us a closer look at key aspects of Hunter Street Station. The new station will become a large, vibrant precinct in the commercial heart of the Sydney CBD, with easy connections to George Street, Light Rail, Sydney Trains services at Wynyard and Martin Place, and the new Sydney Metro City & Southwest station at Martin Place.

Hunter Street Station comprises construction of two major access blocks at opposite ends of the platform cavern; West (at corner of George & Hunter Streets, opposite Wynyard) and East (bounded by O'Connell, Hunter & Bligh Streets). In addition, there will be turnback tunnels extending further east, including one tunnel out to the Domain. Construction of a Temporary Decline Excavation is underway in the East block.

Then stage 2 will involve Cavern and Turnback excavation, plus demolition of buildings within the East & West blocks. Conventional excavation equipment, in addition to tunnelling techniques, are being employed, with great care for safety for construction workers, above ground pedestrians and adjoining buildings. TBM tunnelling is due to be underway by the start of 2024.

Stage 3 will involve Shaft Excavation at East and West blocks, plus permanent lining of the station Cavern and the Turnback Tunnels. Stage 4 will involve TBM Breakthrough & Removal (by Q4 2025)

Graphic photos were shown of the shaft excavation at the Martin Place and Barangaroo stations to show the equipment scale and operational techniques.

A lively Q&A ensued, with members showing keen interest, with all queries clearly and very helpfully addressed. Notably, the Metro West line will not be linked physically with the other Metro lines, so trains cannot transfer between the networks.

We are also most grateful that Sydney Metro has agreed to enable Sydney Probus to inspect the construction site of the Martin Place Station, which is nearing completion for operation in 2024, in the near future.

John Jeremy expressed members' appreciation to both our guest speakers for so clearly informing us of the huge scope of the overall project and its objectives, as well as the engineering detail in bringing it to reality.