



An artist's impression of what the completed Artarmon substation at the corner of Reserve Road and Whiting Street will look like from the Gore Hill Freeway overpass.

Artarmon power supply and substation under construction

Helping power Australia's biggest public transport project

Energising the new Sydney Metro City & Southwest project is a step closer with construction of a traction substation now underway in Artarmon.

The project is an extension the metro rail from Tallawong to Chatswood under Sydney Harbour and the CBD to Bankstown and includes two 15.5-kilometre rail tunnels linking seven new underground stations.

In 2024, Sydney will have 31 metro railway stations and a 66-kilometre standalone metro railway system, revolutionising the way Australia's biggest city travels.

Located at the corner of Reserve Road and Whiting Street, the Artarmon substation will distribute high voltage electricity to the overhead wiring used to power metro trains in the 3.2-kilometre section of dual tunnels between Chatswood and Crows Nest.

In total the Sydney Metro City & Southwest project requires 11 new substations that will be located at Artarmon, Victoria Cross, Barangaroo, Pitt Street, Waterloo, Sydenham, Dulwich Hill, Canterbury, Campsie, Lakemba and Punchbowl.

Of these, Artarmon substation will be the first completed.

The site, at 98-104 Reserve Road, is located within the Artarmon industrial area and is situated directly above the Sydney Metro tunnels.

The facility will include an above-ground building for the substation and electrical equipment, and a shaft for cables and maintenance access to the tunnels below.

- The site has a prominent corner position visible from the Gore Hill Freeway fly-over with street frontages to both Reserve Road and Whiting Street (a cul-de-sac)
- The stakeholder and community consultation process for the Sydney Metro City & Southwest project played an integral role in selecting the location of the substation
- Consultation with government agencies, Willoughby City Council, business groups and the community has continued throughout development of the design.

A Station Design and Precinct Plan (SDPP) showing how the design for the Artarmon substation facility was developed, has been approved by the Department of Planning, Industry and Environment (DPIE).

The plan can be viewed on the Systems Connect website at www.sclww.com.au.

Connecting the new metro tunnels below Artarmon with the power grid

Directly related construction work is underway within the nearby area to connect the Artarmon substation and underground metro tunnels with the Ausgrid power network.

This bulk power supply work includes installation of 33-kilovolt high voltage cables along Reserve Road and Carlotta Street at Artarmon, to connect the new metro substation at the corner of Whiting Street and Reserve Road with the existing Ausgrid substation located between Carlotta and Campbell Streets.

The cables will be installed primarily in the road reserve via trenching.

Construction of the power supply for the metro substation at Artarmon began in May and is expected to be completed early in 2022.



Jason Ridley, Systems Connect Site Supervisor, is part of a team of over 20 construction workers building the Artarmon substation at the corner of Reserve Road and Whiting Street. Jason is looking forward to August this year when the pre-fabricated substation will be delivered by trucks and craned into position.



The Artarmon substation is located adjacent to the Gore Hill Freeway and will connect with the Ausgrid substation via new underground cables.

What is a traction substation?

A traction substation takes the electrical power from the utility provider (in this case Ausgrid) and converts it into a form suited to powering metro trains and electrical systems.

Sydney Metro is an entirely new railway and will be separate from the existing Sydney Trains network.

The requirements of the new driverless trains, automatic platform screen doors and other network features mean that a new power system, using the latest technology, is needed.

Six month lookahead

Activity (subject to change)	July	August	Sept	Oct	Nov	Dec
Construction of the foundations	●					
Tunnel cabling & maintenance access	●	●	●	●	●	●
Pre-fab substation installation		●	●	●	●	●
Fit-out, cabling & connection		●	●	●	●	●
Power supply trenching & conduits	●	●	●	●	●	●
Power supply cable hauling					●	●

Contact us

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