



The Artarmon Traction Substation, at the corner of Reserve Road and Whiting Street, is nearing construction completion.

Artarmon power supply and substation nearing completion

Getting ready to power Australia's biggest public transport project

Energisation of the new Sydney Metro City & Southwest project is on track, with final equipment installations in the new Artarmon Traction Substation and bulk power supply now underway.

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

The Sydney Metro City & Southwest 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.

The new substation will receive high voltage electricity from a nearby Ausgrid substation in St. Leonards, via underground cables, converting the power into the types needed to operate the metro trains.

The substation includes transformers and a number of above-ground buildings for electrical and communications equipment connected by cables to the metro tunnels directly below the facility.

- The substation comprises 5 modular buildings containing switch rooms, telecommunications racks and other equipment
- There are a total of five large transformers within the facility
- The substation includes 1,026 cables, with a combined length of 25 kilometres, including high voltage, low voltage, communications and earthing cables
- The facility is screened behind a tall facade to conform with the local industrial environment

Construction of the Artarmon substation began in October 2020 with energisation and ongoing testing and commissioning planned from April 2022.

The substation will be the first on the Sydney Metro City & Southwest line to be completed.



The Artarmon substation buildings were prefabricated in a factory before being craned into position on a supporting metal frame.



The last of the equipment rooms was lowered into place using a 500 tonne crane.

Offsite fabrication of equipment rooms has reduced onsite construction time

Each of the 5 buildings within the Artarmon Traction Substation facility were prefabricated in a large factory and arrived onsite with all of the basic equipment installed.

“We wanted to minimise construction time and impacts on the local community, so we designed the modular buildings to be constructed offsite and delivered to site with as much equipment preinstalled as possible”, Area Manager, Kia Arbabi said.

Building work will continue through to April, from which time testing and commissioning of the new bulk power supply and traction substation equipment is expected to begin. Systems integration will be ongoing throughout 2022.



The Telecom Equipment Room being bolted into position by Kia Arbabi and the team.

Construction of the Artarmon Traction Substation has remained on schedule, despite significant operational challenges arising from the COVID-19 pandemic.

“From detailed design, through construction, delivery of the modular buildings and most recently the installation of the transformers, it’s all come together exactly as the team planned”, Kia Arbabi said.

Six month lookahead

Activity (subject to change)	February	March	April	May	June	July
Completion of building works	●	●	●			
Landscaping works	●	●				
Equipment & cabling installations	●	●	●			
Testing & commissioning	●	●	●	●		
Energisation of the substation			●	●	●	●
Network integration					●	●

Contact us



1800 171 386 Community information line open 24 hours



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