

ROSEHILL SUBSTATION

Delivery of four 132/11kV substations, including civil works, full services, earthing, lightning protection, cable containment, and completed buildings with security and finishes.



SECTOR

Energy

LOCATION

Rosehill

CLIENT

Ausconnex

PROJECT COMPLETION

September 2025

PROJECT VALUE

\$8.2M

DELIVERY MODEL

Construct

The project involved construction of four new 132/11kV electrical substations to support existing and future data centres. Each substation included a main switch/transformer yard with precast blast walls, a switch room, and a control room.

Working on an asbestos-contaminated site, civil works included bulk earthworks, detailed excavation, and compaction to meet design, regulatory, and geotechnical requirements, with a capping layer to separate contaminated and clean fill.

All required services were installed, including electrical LV, plumbing, hydrants, mechanical services, and integrated fire protection. Extensive earthing and bonding works were completed, including lightning protection and earth grid systems.

Degnan provided containment for 132kV and 11kV cable runs to the Endeavour Energy switching station, along with security fencing and architectural finishes to complete the buildings.

KEY OUTCOMES

- Delivered 4 new substations to client requirements
- Worked with multiple stakeholders to achieve an integrated delivery outcome
- Completed contamination works to assist the client
- Maintained regulatory and environmental compliance throughout construction
- Installed all new systems to support operational safety and future service expansion
- Successfully coordinated works within a constrained site while managing environmental risk

CHALLENGES OVERCOME

- Delivered works within a contaminated, tight urban footprint adjacent to an operational high-security data centre
- Managed complex piling, excavation and concrete works in restricted conditions
- Coordinated multiple services concurrently utilising clash detection and issue resolution
- Ensured electrical safety compliance
- Controlled environmental risks and latent conditions
- Implemented protective measures to safeguard surrounding structure and property