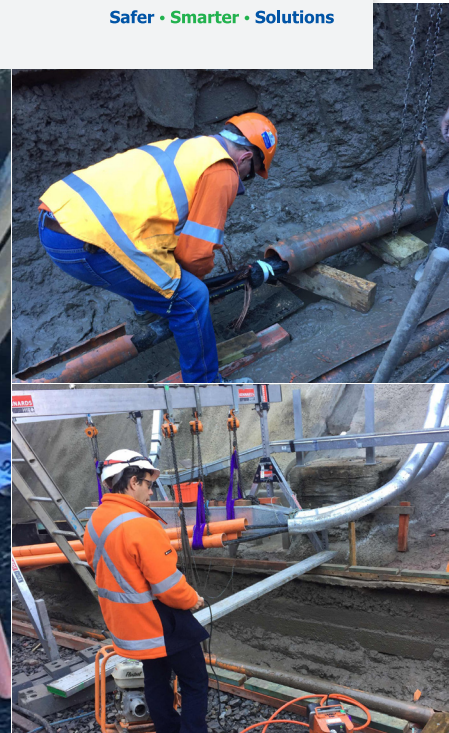
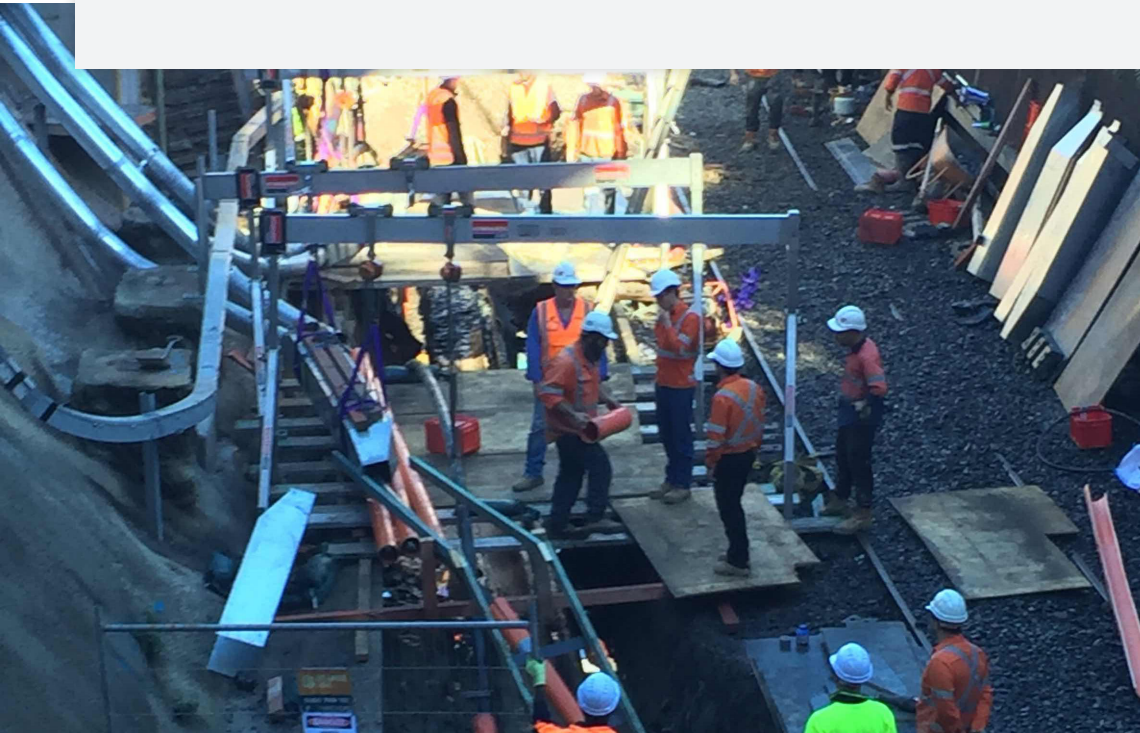


# LEE STREET SUBSTATION COMMISSIONING



**Transport for NSW (TfNWS) constructed a new substation at Lee Street. Works included the design, supply, installation, construction, testing and commissioning of all permanent infrastructure, associated works and temporary works required to deliver an operational substation. EnerMech was engaged to manage the substation commissioning.**

**Client:** United Group Limited (UGL)

**Year:** 2018

**Service:** M&EI – Commissioning and Testing

## Scope of Work

Development and management of QA completions process for specialised traction equipment

Provision of highly competent multi-skilled personnel to perform testing and commissioning services

### Commissioning

- 33kV Mitsubishi switchboard
- 1500V Switchboard
- 33/11kV Power transformer
- 11/0.4kV Distribution transformer
- 66/0.6kV Traction Transformer
- Rectifier
- UPS Commissioning – including Battery discharge testing
- Low voltage distribution board
- Automatic transfer switch
- Rail earth contractor / voltage limiting device
- Isolating rail connecting switches

### Testing

- Circuit breaker timing
- Micom protection relay
- Microelettrica Scientifica protection relay
- Current transformer
- Voltage transformer
- High voltage cable
- Low voltage cable
- SCADA Testing with Sydney Trains

## Test Equipment Used

- Omicron CCPC100
- Omicron CMC356
- Omicron CMLIB A
- Omicron CT analyser
- Omicron TD1
- Omicron Cibano 500
- AC Hi-pot tester
- 10kV IR tester
- 200A Ductor Tester
- 60kV VLF Tester
- Battery Discharge Tester (Torkel)
- Process calibrators
- Multimeters

## Project Delivery

As part of the Power Supply Upgrade (PSU) program it was discovered that the existing Prince Alfred Substation needed to be replaced with two new substations; one at Lee Street and one at Chalmers Street.

Lee Street Substation supplies traction power to the Sydney Central Yard tracks at Central Station.

A major challenge was that the Chalmers Street substation required the stage one 33kV commissioning at Lee Street to be completed first.

EnerMech provided commissioning management across both projects ensuring the successful completion of work to meet the expected power requirements of the future rail network.

## Key Benefits

Comprehensive commissioning package development and implementation

Seamless operations handover and technical support

Provision of highly experienced rail subject matter experts and high voltage commissioning team

Successfully delivery of complex project

