

# Melbourne Substation

In order to maximise space and prepare for high capacity metro trains, a multi-storey substation was custom designed to be installed in Melbourne's CBD. This would be situated on a narrow strip of land, and had to be constructed within a tight timeframe. Prefabrication technology allowed the substation to be built off site at the same time as the foundation being installed; this saved time and eliminated the potential for weather delays. Consisting of a team of contractors, communication and action had to be precise.

Treadwell was engaged to supply the FRP products for the structure and security perimeter.

## Project Challenges

- It was a key consideration that the product be non-conductive. This was to ensure maximum safety for staff and public.
- Posts, rails and barrier mesh needed to be designed to withstand the wind load requirements of AS1170.
- The selected product had to be able to form a secure perimeter around the structure, proving a safe barrier against trespassing and various security concerns.

## PROJECT INFORMATION

Project Category:	Utilities Infrastructure
Scope of Work:	Supply SecurEX® FRP Solution
Treadwell Products:	ArchitEX™ FRP Structural Profiles EX-Series® GratEX® FRP Micro Mesh Grating SecurEX® FRP Picket Fence System



## Treadwell Solution:

- 1 Treadwell's SecurEX® FRP fencing is suited to a wide range of rail applications, especially in areas where stray electrical currents are concerns.
- 2 SecurEX® FRP Picket Fence is an anti-climb design, providing an added layer of security around the structure it protects. Easily installed on even and uneven ground.
- 3 GratEX® FRP Micro Mesh grating was selected as it accommodates wind loading concerns while providing a barrier against debris or foreign objects.
- 4 Being lightweight and easy to install, FRP is very manageable during construction.
- 5 Given the nature of FRP, any system utilising it is virtually maintenance free, keeping maintenance costs to a minimum.