

PROJECT PROFILE

Client: Transperth Rail Network
Construction Consortium:

- Leighton Kumagai Joint Venture (LKJV)
- John Holland (Roe Street Connection)

Powers Fasteners provides high-tech solution for light rail expansion

Perth-Mandurah railway line doubles Transperth rail network

PERTH, AUSTRALIA — In one of the largest infrastructure projects in Western Australia, the construction of 163km of narrow gauge railway has doubled the Transperth rail network, adding 15 new stations, bridges and a city rail tunnel. The tunnel connects the city's existing northern line with the new southern railway.

Powers Fasteners, a world-wide leader in fastening and anchoring technology, was called upon to provide cutting edge anchoring technology to go with development of a state-of-the-art rail system. Its entry into the project came with anchoring the tunnel boring equipment's temporary rails. M16 Powers Blue-Tip Screw-Bolts were used to install the rail plates while Blue-tip Screw Eye Bolts were used to hold temporary electrical cables. The Blue-Tip bolt anchors were selected because they can be used in a variety of base materials and their patented double lead thread design provides high load capacities and fast installation.

Pandrol Rail Fastenings, a world innovator in rail track development, also looked to Powers' engineering support for installing its Vanguard Rail Plates for the first time in Australia. These ultra-low vibration plates were anchored with galvanized studs and secured with Powers' PE1000+, known in Australia as Power-Fast Pro, which is a 3:1 high-strength epoxy adhesive anchor. The epoxy anchors were used in a variety of application throughout the project and a team of technical experts from Powers Fasteners remained on-site to provide load testing and support 24 hours a day.

This Powers epoxy is a new, improved two-component injection adhesive available in a specially designed cartridge. It can be applied either manually or pneumatically. It was used throughout the jobsite and more than 1,000 cartridges went into the final stage of the project — moving the existing rails one meter to align with the new rails and the new tunnel.

