

Trelleborg

Supporting Growth and Connectivity Across Australia's Rail Network

With a growing portfolio of successful light rail projects across Australia, Trelleborg has established itself as a trusted partner in delivering resilient, long-lasting rail infrastructure that meets the needs of a fast-expanding network.

Australia is a key market for **Trelleborg**, with its Vector™ encapsulation solution supporting major rail developments across the country. Its long-standing relationship with Australia not only covers rail but also extends into other sectors such as defence, marine, mining and quarrying.

Australia is known for major investments in its rail and tram infrastructure, driven by forecast population growth of more than 15% over the next decade, and to support key projects such as the Brisbane Olympics in 2032.

With a government that recognises the link between transport capacity and economic growth, investment in expanding and modernising the network remains a clear priority. Trelleborg has become a key partner on this journey, providing customised designs of its **Vector™ embedded rail system**.

This is based on a high-performance, one-piece moulded microcellular foam polymer rail boot that simplifies jointing and installation, while also ensuring there are no voids or cavities, providing improved durability and resilience.

Unlike competing solutions, the **Vector™ system** can be installed using multiple methods – from top-down and sacrificial beams to bi-block sleepers. Its design

enhances noise and vibration absorption, extending rail service life and reducing maintenance, while delivering high electrical resistivity to eliminate stray current.

Acoustic performance and track stiffness can be customised without redesign, and its exceptional fatigue life and abrasion resistance gives a 30+ year design life.

Nationwide Track Record

From the Gold Coast to Adelaide, Trelleborg's embedded rail solutions have been used to dampen noise and provide high electrical resistance for over a decade. While normal requirements for the latter are around 10 Ω/km, Vector has been proven to provide up to 57 Ω/km electrical resistance – achieved on Parramatta Light Rail Stage 1, Sydney.

Australian projects that Trelleborg has supported include **light rail/tram projects in Parramatta Sydney, Gold Coast and Newcastle**, with the first highlighting Trelleborg's ability to adapt designs to meet the challenges of sensitive urban environments.

"A section of the Parramatta track ran past a hospital, and so this required stricter vibration and noise standards," explains Peter Hardy, Business Development Manager at Trelleborg. "In response, we designed a custom augmentation to our Vector encapsulation system to meet these needs, which has now become a standard part of our solution."

"Another challenge we overcame on this project was a section on an incline. That gradient was quite testing in terms of meeting the required specification, but our engineers rose to the challenge."



Fennell St Church St - Track Pour Section



Mac Street

Showcasing Project Success

Another key project for Trelleborg was the Adelaide Tram Extension, where the Vector solution was chosen for its performance and simplicity of installation.

Trelleborg was chosen for this project because of the company's expertise in polymer solutions for the rail industry, and the client was very pleased with the Vector™ solution. It provided excellent damping and electrical resistance performance and the installation was very straightforward.

All these factors contributed to keeping the project on schedule.

Trelleborg has also been closely involved with the **Gold Coast light rail project since 2012**. Most recently it contributed to Stage Three, which extended the network from Broadbeach South to Burleigh Heads.

Why Trelleborg?

Peter Hardy believes Trelleborg continues to be chosen for Australian rail projects due to the Vector's advanced design and ease of installation.

"These enable clients to execute project delivery with confidence," he says. "Our Vector system is simple,

reliable and backed by the experience of a long established global polymer organisation. Customers know we're in it for the long haul – providing trusted support on insulation, vibration and alignment, and standing by them if challenges arise."

Trelleborg continues to support the growth of light rail and tram projects throughout Australia, both for new projects and maintenance support. Most recently it has bid for Parramatta Stage 2 enabling works, and Hardy doesn't rule out the potential for future in-country component manufacturing, should the demand be there.

Meet with Trelleborg at AusRAIL

Trelleborg representatives will be attending AusRAIL Plus in Melbourne on 25–27 November and are inviting new and existing clients to meet with them.

If you would like to speak with the team, please contact Peter Hardy on +44 (0)7956 963359 or email peter.hardy@trelleborg.com to book a time slot.

