



## GEOFABRICS CASE STUDY



# BUILDING A RAILWAY LINE FROM MELBOURNE DIRECT TO BRISBANE

## PRODUCTS USED

### Tensor® TriAx® Triaxial Geogrid

- Creates a Tensor Mechanically Stabilised Layer (MSL) by stabilising granular layers to perform as a composite with interlocking mechanisms, ensuring optimum performance and resulting in cost savings
- Increases the bearing capacity of working platforms for heavy-duty plant, cranes and piling rigs with geogrid load spreading capability
- Creates a flexurally stiff platform and smooths out the variable quality of support from a foundation soil
- Extends the service life of roads, significantly reducing maintenance budgets

### Bidim® Green Non-Woven Geotextile

- Premium non-woven geotextile made with a combination of Australian recycled PET and virgin plastic material
- Used in the construction of roads, railways and embankments where ground is soft and unstable
- Separates soft ground from fill material, providing filtration for drainage, increasing the life span of the road and reducing long-term maintenance costs

## PROJECT DESCRIPTION

Inland Rail is a once-in-a-generation project, building a railway line from Melbourne direct to Brisbane through Parkes NSW. It will allow double stacked containers to travel in a transit time of 24 hours or less, competing directly with road transport. This project completes the national freight network between Melbourne and Brisbane via regional Victoria, NSW and Queensland.

5.3km of new rail was required to be constructed at Parkes to allow a link with the Sydney, Broken Hill and Perth railway lines. The remainder of the project required upgrading 98.4km of existing rail track, including a full rebuild of the rail tracks, rail formation and supporting structures in the exiting rail corridor.

Geofabrics met with the designers on numerous occasions to refine the foundation design of the railway, as construction was required to pass over weak subgrades. Various options were considered including the removal of poor subgrades.

## OUR SOLUTION

Lime stabilisation and bidim A44 were used as a separation layer, while Tensor TriAx TX170 acted as a mechanical stabilisation layer under the capping layers.

Bidim A44 and Tensor TriAx TX170 can be flexibly deployed to reduce cost and save time compared to digging out soft subgrades and replacing with granular fill.

In total, 120,000 sqm of bidim A44 and 14,250 sq m of Tensor TriAx TX170 were used in the project. By using products sourced by Geofabrics, the project was constructed on time and within budget.



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