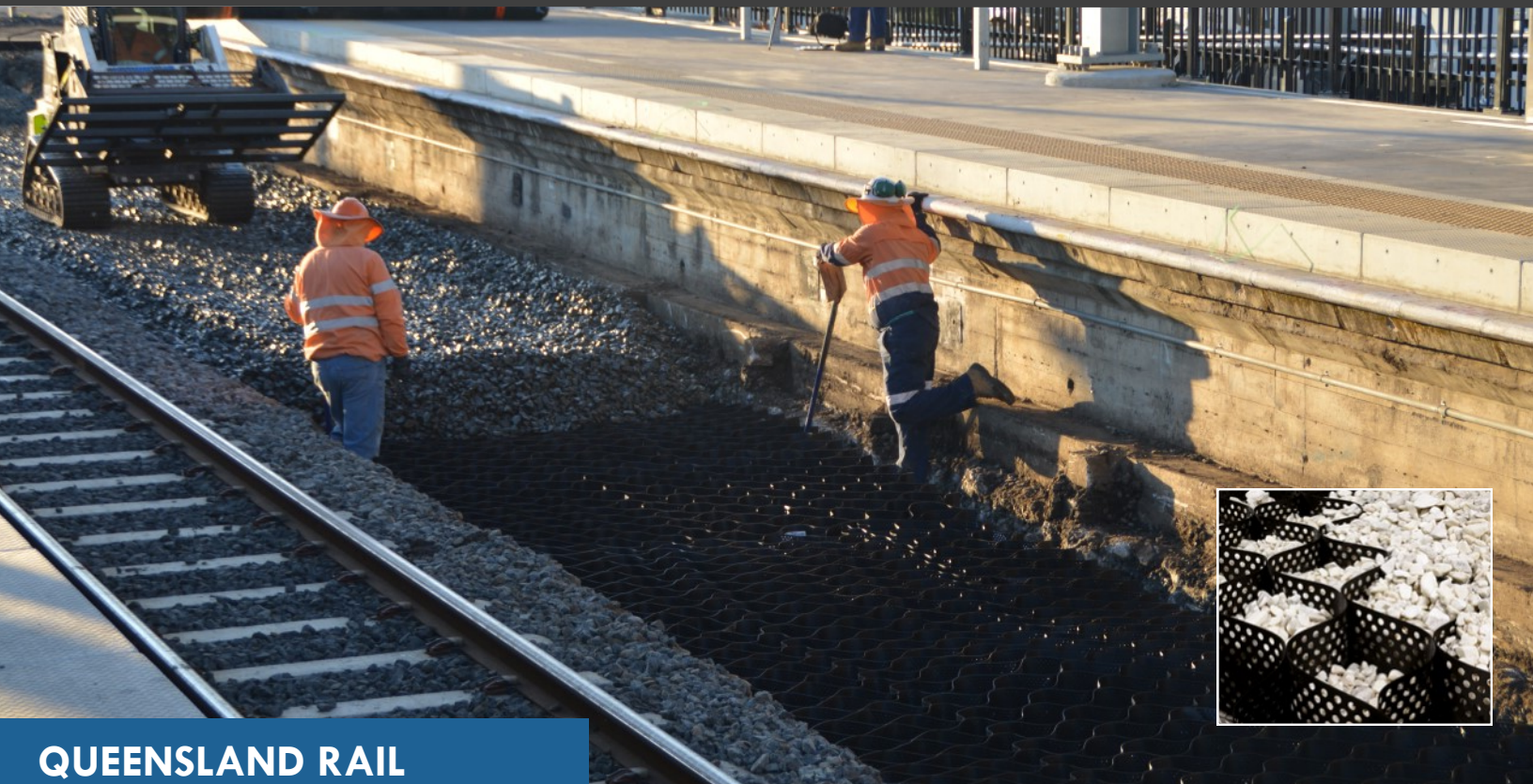


GEOWEB®

BALLAST STABILIZATION SOLUTIONS FOR RAIL STATIONS



QUEENSLAND RAIL

Sandgate Railway Station, Australia



Maintenance Reduction in High Impact Zones

The GEOWEB® 3D soil confinement system is **effective in reducing maintenance** in high impact areas. By stiffening the ballast layer, movement and deflection is limited and maintenance in these critical transition zones is significantly reduced.

BALLAST REINFORCEMENT IN HIGH STRESS AREAS

Frequent track maintenance issues for the Queensland rail were reduced using a variety of innovative geosynthetic products including the GEOWEB® Soil Stabilization System.

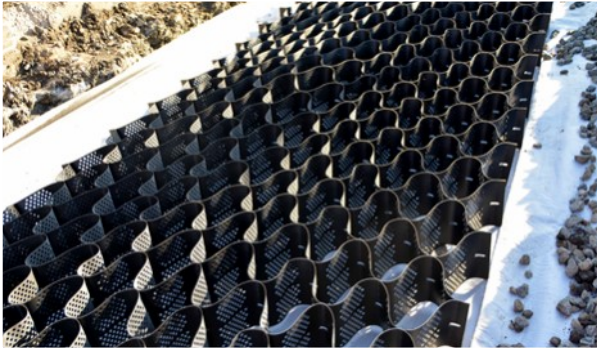
THE PROBLEM

Queensland Rail (QR) manages a very large network of mainline track across Queensland including the Suburban lines in and around Brisbane to Cairns. QR needs to maintain problematic sites across their network. In order to carry out this work, QR is required to shut down parts of their rail network for up to 48 hours. While this work is typically scheduled for weekends, each **track closure can be very costly and disruptive to service.**

Sandgate Railway Station, located near Cabbage Tree Creek, Boondal Wetlands and Moreton Bay, has a very high water table and **soft saturated subgrade** that supports the track. For a weekend in July, QR carried out maintenance work adjacent to the Railway Station. Previous maintenance work was only carried out 18 months prior, but proved ineffective against the saturated subgrade.

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RAIL STATION LOAD SUPPORT SOLUTION

Approximately 200 lineal meters of track was reinforced with the GEOWEB® 3D Soil Stabilization System.

The existing track, sleepers and ballast material was removed from the railway on the up track. A layer of geocomposite was installed at the subgrade interface, and then 8-inch deep GEOWEB geocells were placed directly on the geocomposite.

The use of the GEOWEB system was included to increase the structural bearing capacity of the ballast layer above the soft subgrade. The GEOWEB cells stabilized the track supported material by preventing lateral movement of the ballast infill. **The system increased the stiffness and load bearing capacity of the ballast layer**, while reducing ballast degradation and bridging the poor subgrade soil. The perforated cell walls allowed for lateral drainage of any water that entered the ballast layer.

The GEOWEB® system stabilized the track-support material by preventing lateral movement of the infill and played a vital role in decreasing maintenance and service interruptions.

GEOWEB® TRACK STABILIZATION SYSTEM

Railway engineers worldwide have relied on the GEOWEB technology to create high-stiffness roadbed foundations under track, and at bridge approaches, diamonds and turn-outs. The GEOWEB system is extremely effective in stabilizing track subgrades, and has even more beneficial value in soft soil areas.



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IDEAS THAT WILL WORK FOR YOUR PROJECT?



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