

GEOFABRICS® KIWI BRIDGES ACCESS ROAD



RAIL

CASE STUDY

GEOFABRICS CONTACT
PHIL SIMMS

PROJECT LOCATION:
HELENSVILLE, AUCKLAND

DESIGNER:
BECA

**HEAD CONTRACTOR/
INSTALLATION CONTRACTOR:**
HEB CONSTRUCTION LIMITED

END USE CLIENT:
KIWI RAIL

PRODUCTS USED

TENCATE MIRAFI® RS380I

TenCate Mirafi RSi® are the first truly multifunctional woven geotextiles developed to ensure reinforcement, separation, drainage and filtration and superior material interaction between the aggregate layers in an integrated way.

TenCate Mirafi RSi® Engineered Woven Geotextiles provide engineers with an alternative solution to traditional solutions for haul roads, unpaved roads and load supporting platforms, combining all the critical functions that contribute towards subgrade reinforcement.

Geofabrics are the exclusive distributors of TenCate Mirafi RSi® in Australia and New Zealand.

PROJECT DESCRIPTION

After the aging Northland rail received a significant government investment totalling \$94.8 million, KiwiRail were tasked with replacing five bridges and repairing thirteen tunnels in total.

CHALLENGE

Due to the soft soils in the area a haul road needed to be constructed to handle the stress of 2 x 100 tonne cranes driving over, while the bridges needed to be completed before the end of September, creating a tight deadline for the project.

With every delay or day behind, KiwiRail would incur significant costs associated with the rail line being shut down.

OUR SOLUTION

Geofabrics were originally engaged on this project to simply provide a quote for the soft soil haul road.

The original design incorporated multiple layers of geotextiles, geogrids, and a black sand layer to provide a 500mm haul road.

With the tight deadlines in place and after consultation with the principal engineer, Geofabrics were able to offer an alternative solution.

The project manager at HEB Construction & KiwiRail were happy to explore the use of more efficient materials to construct the haul road faster and with less labour.

TenCate Mirafi RSi® Engineered Woven Geotextiles solve problems in the most demanding of construction conditions, as well as saving on construction costs by maximising the use of large on-site material.

The product was approved and Geofabrics supplied technical information including case studies.

VALUE CREATED

By using TenCate Mirafi RSi®, Geofabrics delivered a number of benefits for the contractor and end-use client.

SHORTER LEAD TIMES

By purchasing from Geofabrics, a local New Zealand business, all products were supplied in a timely manner.

LESS PRODUCTS REQUIRED

Reducing the design from multi-layer to single layer halved the time required to install each section of the road. With a total area of 16,000m², the time saved across the project was significant.

PROJECT DELIVERED AHEAD OF SCHEDULE

With less labour, and more efficient geotextiles like TenCate Mirafi RSi®, HEB Construction were able to complete the project in 10 days rather than 14. A significant outcome for the client.

