

REFERENCE PROJECT

Geotechnical (Slope Stabilisation)

Location: NIMT Utiku
Date: March 2017
Client: KiwiRail
Consultant: Aecom NZ (Wellington Office)

A slip below the North Island Main Trunk line threatened to undercut the rail corridor. Abseil Access was awarded the project to install 50 soil nails with a reinforced shotcrete wall to prevent further erosion.

A purpose built road was constructed to ensure all works were kept outside of the rail corridor and the overhead traction system. There were no disruptions to the operations of the rail network.

BluGeo 25mm GRP bars were used for their excellent corrosion resistance. The soil nails were installed into the papa rock at 1.5m spacing and 4m deep. Drainage behind the face was achieved using a subsoil drain along the crest, strip drains behind the shotcrete face and 6 sub-horizontal PVC drains at 3m centers.

The 35mpa shotcrete was re-enforced with Forta-Ferro fibres to meet the RDP toughness of 400J. It was applied at a nominal 75mm thickness over a layer of Geobruigg Tecco G65/3 rockfall mesh. Additional site works included lower layer of Geofabrics erosion control mesh and new stock fence along the top.

The works were completed within the 5 week timeframe and exceeded all Kiwirail QA and H&S expectations.

