

REFERENCE PROJECT

Geotechnical (Rockfall Protection)

Location: Johnsonville line, Wellington
Date: October 2017
Client: KiwiRail
Consultant: Aurecon NZ (Wellington Office)

A slip below the Johnsonville line threatened to undercut the rail corridor. Abseil Access was awarded the project to install 70 rock bolts with a reinforced rockfall mesh to prevent further erosion.

A purpose-built scaffold was constructed to ensure all works were kept outside of the rail corridor and the overhead traction system. Access to the scaffold was over a scaffold bridge crossing the stream. There were no disruptions to the operations of the rail network.

Two anchors were installed for Suitability Testing and loaded up to 250kN following BS8081 2015

BluGeo 25mm GRP bars were used for their excellent corrosion resistance. The anchors were installed through the slip and into rock at 2.5m spacing and 8m deep. Casing was required to keep the 100mm hole open through the loose slip material. Drainage behind the face was achieved using 9 sub-horizontal PVC drains at 3m centers.

The area was covered with a layer of Geofabrics erosion control mesh (MacMatR) reinforced with diagonal 12mm galvanized wire rope

The works were completed within the 6 week timeframe and exceeded all Kiwirail QA and H&S expectations.

