

CASE STUDY

TE KUITI NIMT SITE 6

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INTRODUCTION

In May 2015, Abseil Access was contracted by KiwiRail, with design by AECOM NZ, to stabilise “Site 6” – a large ignimbrite cliff above the North Island Main Trunk (NIMT) line near Te Kuiti. This section of the King Country rail corridor is among the highest rockfall risk areas in KiwiRail’s network. Works needed to be completed without delays to train services, in challenging winter conditions.

PROCESS

Using an A-frame drill rig with a hydraulic rotation unit, crews drilled 46 boreholes, each 100 mm in diameter and up to 12 m deep. The ignimbrite contained voids up to 1.5 m long, influencing the choice of 38 mm Glass-Fibre Reinforced Plastic (GRP) anchor rods to overcome corrosion concerns and simplify rope-access installation. Select anchors were proof-load tested to 200 kN. Two Geofabrics High Energy Absorption (HEA) panels were installed to stabilise cliff face areas unsuitable for anchoring. The works were carried out while maintaining an active rail corridor, with all plant and systems designed for rapid clearance in the event of train movements.

OUTCOME

Despite extended wet weather, short winter days, a high-traffic rail environment, and additional anchors being specified mid-project, the works were completed on time. The combination of GRP anchors and HEA panels delivered a durable rockfall mitigation solution with minimal disruption to KiwiRail operations.

