

# CASE STUDY

## TE KUITI NIMT 453 TRACKSIDE V2

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## INTRODUCTION

Between April and June 2015, Abseil Access was contracted by KiwiRail, with design by AECOM NZ, to stabilise five ignimbrite bluffs along the North Island Main Trunk (NIMT) line at Te Kuiti. These cuttings are among the highest rockfall risk areas in KiwiRail's network. The work needed to be completed without delays to train operations, requiring specialised planning and rapid rail corridor clearance capability.

## PROCESS

To maintain uninterrupted rail services, all plant and machinery were configured for quick removal from the corridor, including a modified hi-rail excavator and rotary telehandler capable of manoeuvring around the overhead traction system. Anchor installation lengths ranged from 2.5 m to 7 m, with hole diameters of 76 mm or 100 mm, matched to design loads of 67 kN and 133 kN respectively. Selective proof load testing was conducted, achieving maximum loads of 100 kN and 200 kN. Glass-Fibre Reinforced Plastic (GRP) tendons in 32 mm and 38 mm diameters were used to minimise corrosion risks and improve handling safety. Continuous communication with KiwiRail rail control allowed for efficient coordination, including safe re-electrification of the traction system during works.

## OUTCOME

The stabilisation works were completed to specification without disruption to the rail network. The GRP anchoring system provided KiwiRail with a durable, low-maintenance solution while ensuring safety for both rail operations and on-site personnel.

