

# ABSEIL ACCESS LTD

## Reference Project

### Geotechnical – Rock Fall Protection

Location: NIMT Toetoe Bluff, Rangitikei

Date: July–August 2011

Client: KiwiRail Network

Consultant: Tonkin & Taylor

The NIMT line runs beneath a 20-metre high vertical cutting at Toetoe, just south of Taihape. Above the cutting rocks can roll down the slope and intercept the rail corridor.

A rockfall attenuation catch chute was proposed and designed by Tonkin and Taylor, Wellington. Falling debris is captured in the 1.5m high fence and channelled down the vertical section. A catch pit at the base prevents the debris from reaching the rail corridor.

The advantage of this type of attenuation chute is the minimal maintenance required. As the fence has an open base and the curtain hangs loose it is self emptying.

The project involved installing temporary worker protection prior to the construction of the fence. The rock is papa siltstone matrix with cobblestones. The main anchors, RB25 in 5m deep x 80mm diameter holes, support posts at 6m centres. The fence throat is supported by steel posts 1.5m above ground level at the lip of the cliff and the net drapes down the cliff with a maximum height of 22m.

The fence wire netting is Maccaferri Galmac PVC coated double twist, 4000m<sup>2</sup>. The four-man Abseil Access team completed the work within the 10 weeks allocated.



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