

# ABSEIL ACCESS LTD

## Reference Project

### Geotechnical – Rock Fall Protection

Location: 21.3 PNGL rail line, Manawatu

Date: July/August 2011

Client: Kiwirail Network

Consultant: Tonkin & Taylor

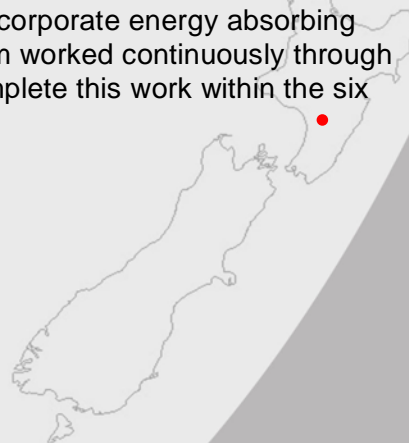
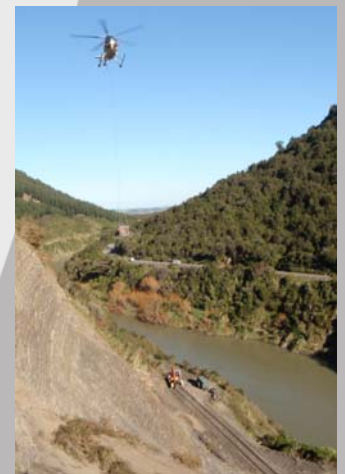
The Manawatu Gorge is the vital rail and road link between Hawkes Bay/Wairarapa and the Manawatu regions. During the milk season Kiwirail transports millions of litres of milk through the gorge to Fonterra's processing plants in Taranaki. In September 2010 a large slip engulfed the rail line, derailing a south-bound milk train.

The large and "rockfall active" slip required an urgent mitigation solution. A rockfall attenuation catch chute was proposed and designed by Tonkin and Taylor. Regular emptying of the fence was anticipated and the design incorporated several features to allow this.

An additional remote alert system was also installed to pre-warn trains of fence failure or overloading, adding a high level of security to Kiwirail and its clients.

The project involved installing temporary worker protection prior to constructing the fence. The rock itself was fractured, dilated and loose. The main anchors, RB32 in 6m deep x 75mm diameter holes, required full casing. Self-drilling anchors were also utilised. The fence is 2.5m high and 50m long.

The fence netting is Maccaferri galvanised PVC-coated double twist. The fence support cables incorporate energy absorbing elements. The Abseil Access team worked continuously through challenging winter weather to complete this work within the six weeks allocated.



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