

REFERENCE PROJECT

Geotechnical (Rockfall Protection)

Location: Arthurs Pass, State Highway 73
Date: August, 2013
Client: New Zealand Transport Agency (NZTA)
Consultant: Opus International, Geymouth Office

State Highway 73 cuts through New Zealand's Southern Alps via Arthur's Pass, reaching an altitude of 920m. This is the main road link between Christchurch and the West Coast. This site, adjacent to the rockfall shelter & Reids Falls, experiences regular rockfalls which frequently impact the road, sometimes closing it to traffic.

The NZTA and Opus Consultants requested a design and install solution to mitigate the rock fall hazard. Abseil Access worked closely with Maccaferri to design a low maintenance solution, capable of withstanding a 500 kJ impact, and covering 700m² of rock face.

The completed design is a 30 metre wide x 30 metre high hybrid attenuation chute with a 2 metre high 'throat'. The throat is a High Energy Absorption (HEA Panel) zone at the top to catch and slow the falling rocks and debris, with a drape system to funnel the debris to the base of the net. Rocks and debris would then be confined in the netting until maintenance crews came to clear and service the drape.

The project involved removal of vegetation and loose rocks from the face, plus the installation of top and lateral cable anchors, each drilled to a depth of 3 metres. All this was done 30 metres above road level, while maintaining a live operating traffic lane beneath the work site.

