

CASE STUDY

STATE HIGHWAY 73 ROCKFALL PROTECTION

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INTRODUCTION

In August 2013, Abseil Access was engaged by the New Zealand Transport Agency (NZTA) to design and install a rockfall mitigation system along State Highway 73 at Arthur's Pass, adjacent to the rockfall shelter and Reids Falls. This section of the Southern Alps corridor experiences frequent rockfalls that can close the main transport link between Christchurch and the West Coast. Working alongside Opus International and Maccaferri, the objective was to create a robust, low-maintenance system capable of withstanding a 500 kJ impact and protecting a 700 m² section of cliff face.

PROCESS

The final solution was a 30 m × 30 m hybrid attenuation chute with a 2 m-high 'throat' zone of High Energy Absorption (HEA) panels to intercept and slow falling debris. A drape system directed rocks safely to the base, where they could be contained until cleared during scheduled maintenance. Works included vegetation and loose rock removal, and the installation of top and lateral cable anchors drilled 3 m deep. All activities were carried out 30 m above the road while maintaining a live traffic lane directly below.

OUTCOME

The completed system delivered effective rockfall protection with minimal maintenance requirements, significantly improving road safety on this critical alpine route while ensuring uninterrupted traffic flow during installation.

