CASE STUDY

COBB SWITCHYARD ROCKFALL PROTECTION

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INTRODUCTION

Located in a remote mountainous region of the upper South Island, Cobb Hydroelectric Power Station—commissioned in 1944—features New Zealand's highest water head at 580 metres and generates 32MW of power. In October 2013, a project was initiated to mitigate rockfall hazards threatening the station's switchyard.

PROCESS

The solution combined active and passive rockfall protection using a system of rock anchors and netting. Over 100 rock bolts, ranging up to 6 metres deep, were installed using Williams Bar anchor rods (25–32mm diameter). Anchor suitability was confirmed with load testing up to 370kN. The rock face, covering an area of 700m^2, was stabilised using Maccaferri High Energy Absorption (HEA Panel) netting combined with an HR30 system. The work had to be carried out within a strict 3-week shutdown window, requiring efficient coordination and execution.

OUTCOME

An 8-man team successfully completed the installation within the tight timeframe and under challenging site conditions. The works were executed safely, with no impact to the switchyard or transformers, and provided a durable, engineered solution to manage rockfall risks at this critical energy infrastructure site.