

Project: Cobb Powerstation Rockfall Protection Works
Date: October 2013
Client: Trust Power
Location: Takaka, Nelson



Steelgrid® HR

COBB hydroelectric power station is located in the mountainous terrain at the junction of Takaka and Cobb River, in the upper South Island of New Zealand. The power station generates an average output of 192GWh/year and is an important contributor to the Tasman region.

The switchyard located at the base of the slope needed to be protected from the potential risk of rock falling. In addition to this, the stability of the slope needed to be enhanced to a satisfactory level.

In light of this, the designer identified that rock bolting to the slope surface of different lengths with mesh cover to prevent rock falls (secured drapery) was the most appropriate stabilisation method for the site. The mesh selected was Steelgrid®HR30 with high stiffness, high tensile strength for the majority of the slope area.

Additional HEA panels (10mm dia rope panels) were also installed on areas with larger rock outcrops where very high stiffness was required. The objective of having a high stiffness mesh was to minimise the deformation of the mesh between 4 anchor points when rocks detach from the slope surface. This means that the anchor capacity and efficiency of the anchor load can be maintained as per designed in the long term.

Offering high stiffness at low strain performance fully complied in accordance to UNI11437 (2012), both Steelgrid® HR30 and HEA Panel benefited the project by:

1. No requirement for overlapping of mesh panels
2. No requirement to make depressions around the anchor head
3. No requirement to tension the mesh on the slope face

This means that Steelgrid® HR and HEA panels are rapid to install and is vital to the successful completion of this time sensitive project.

The information contained herein is general in nature. In particular, the content herein does not take account of specific conditions that may be present at your site. Site conditions may alter the performance and longevity of the product. Actual dimensions and performance may vary. This document should not be used for construction purposes and in all cases, we recommend that advice be obtained from a suitably qualified consulting engineer or industry specialist before proceeding with installation. © Copyright held by Geofabrics New Zealand Ltd. All rights are reserved and no part of this publication may be copied without prior permission.



Steelgrid® HR30 rock bolting installation



Steelgrid® HR30 installation in progress



Steelgrid® HR30 mesh protecting the switchyard