

Project: Stanley Bay Rockfall Protection
Date: September 2014
Client: Naval Base
Location: Devonport Naval Base



Steelgrid® HR

A series of minor rock detachments from a weathered rock slope posed a risk to the marine diesel pipe at the toe of the slope in Stanley Bay of the Naval Base area in Devonport. Some steel fence which had been installed using single twist mesh was deemed to be inadequate to arrest the potential larger rock diameter that could dislodge itself in the long run. The client decided that permanent slope stabilisation and protection work was to be undertaken.

Considering the various site-specific issues, a rock fall catch fence or Green Terramesh Reinforced Soil Bund was not possible due to the limited space available. The designer opted for an in-situ slope stabilisation option using short length soil nailing; while specifying the Geofabrics range of Steelgrid® HR30 PVC in conjunction with a regular network of nails to stabilise the slope.

Steelgrid® HR30 PVC is a geocomposite mesh with high tensile strength and stiffness at low strain. The stiffness feature of the mesh is particularly important when the mesh is used in the secured drapery application together with the nail to stabilise the slope surface. The higher mesh stiffness means that Steelgrid® HR does not need to be tensioned while in position on the slope, no depression is required around the nail plate zone and does not require any lapping of the adjacent panels.

The full PVC coated mesh means that the durability of the mesh far exceeds any mesh available on the market that are not polymer coated.

The entire slope was stabilised with approximately 550 no of soil nails with a 2.0m x 2.0m spacing. Total slope area covered with the Steelgrid® HR30 PVC was approximately 2,500m². The project took the specialist contractor 3 months to complete with 3 alternating crews.



Steelgrid® HR30 PVC being put in place



Close up of Steelgrid® HR30 PVC



Completed Steelgrid® HR30 PVC project

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