

KAITERITERI SLIP REPAIR NELSON

REINFORCED SOIL SLOPES

Product: Green Terramesh, Tensar Geogrid, Enkamat, Bidim Geotextile

Problem

In 2004 extensive slips occurred after a short period of high intensity rainfall causing damage on both sides of Kaiteriteri-Sandy Bay Road, the main access road through Kaiteriteri. The slips affected 900m² face over seven sites ranging from five to eight metres high.

Kaiteriteri is one of New Zealand's premier swimming beaches and is a popular holiday spot. Due to the coming festive season a very short construction period of only 6 weeks was a requirement. Because of the narrow roads and steep site access, conditions were extremely difficult and precluded the use of vegetated front face application.

Solution

MWH in Nelson were able to analysis the structure incorporating Green Terramesh and Tensar geogrid using Maccaferri's Macstars software. Green Terramesh is an innovative technique which combines the use of geogrids for reinforcement and a modular front face system for facing stability and face construction. The system is cost effective through improvements in construction tolerances and savings in construction time – key requirements for this site. Green Terramesh can be used with a rock facing or more typically as a vegetated green face. It is ideally suited to the Kaiteriteri site as on site soils could be utilised, lessening the need for costly imported fills.

Enkamat was used as surface erosion control blanket at the toe of the slope and Bidim geotextile was used as a separator between the rock facing and the reinforced back fill.

The installation of Green Terramesh was found to be straightforward. This ensured that the construction tolerances required for the face were easily met and the work was completed within the tight construction period.

Client:

TASMAN DISTRICT COUNCIL

Main Contractor:

COLIN THOMPSON CONTRACTING

Consultant:

MWH NELSON

Product used:

GREEN TERRAMESH, ENKAMAT, BIDIM, TENSAR

Construction Date:

OCTOBER—DECEMBER 2004



Before construction

Date: Oct 2004



During Construction

Date: December 2004



After Construction

Date: December 2004

Maccaferri NZ Ltd.

14 Goodman Place, P.O. BOX 12536, Penrose, Auckland, New Zealand
Tel. (+64) 9 6346495 - Fax (+64) 9 6346492, FREEPHONE 0800 60 60 20
E-mail: sales@maccaferri.co.nz - Web site: www.maccaferri.co.nz
Quality System AS/NZS ISO 9001:2000

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