

CASE STUDY

Double Twist Mesh

Project: 338 Ohiwa Harbour Rd Slip
Date: June - July 2010
Client: Private Owner
Location: Opotiki



Green Terramesh

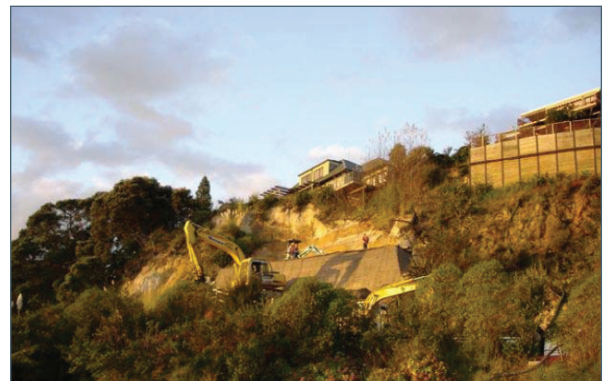
A large Pohutukawa tree on the slope below a private residence fell during a heavy storm event. The extensive root structure of the tree pulled away a large block of soil undermining the deck of the house above and leaving a portion of this deck overhanging and not fit for use. In addition, the safety of the house above was threatened if the slope was not protected from further deterioration. The total height of the slip area varied from 12m to 15m.

The original proposal considered large timber poles to form a tiered wall structure. This was ruled out from both cost and from an aesthetic point of view. Geofabrics were contacted to provide an alternative solution that offered a more aesthetic and 'softer' look.

The solution proposed and accepted by the engineers was a 70 degree slope having **Green Terramesh** facing units, designed to provide permanent stability to the face and at the same time offer construction advantages through the simple installation methodology of this system. Geogrid was laid between the **Green Terramesh** units to provide long term internal and external stability to the new structure. The construction of this new slope created a sufficiently wide platform for the construction of a 1:1 geogrid reinforced slope above. **Enkadrain** was used up the cut face to intercept groundwater and channel it down to **Megaflo**® collector drains which in turn discharge the water away from the slip area.

The MacStars software was used for the stability analysis as it has the ability to model the soil profile and reinforced block incorporating the **Green Terramesh** units and geogrid. The analysis included internal stability of the reinforced soil block, global and sliding stability.

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Overall view of GTM structure under construction



GTM structure under construction



Completed GTM structure

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