

EROSION CONTROL - SLOPE PROTECTION

Products: Geoweb, Bidim Geotextile, Clips & Steel Pins

Problem

A new 1.1km extension was required linking Wakeman Rd with Acacia Bay Rd to provide alternative traffic access to the western end of Acacia Bay. The extension forms part of the Taupo District Councils budgeted road upgrade program. Acacia Bay road was deemed too narrow and too close to the lake to be considered for upgrading. Heavy vehicle traffic also needed to be catered for. The projected growth of the area was the motivating factor for this project.

Solution

Geoweb was considered the most effective solution to provide erosion protection on a steep slope from scour, while at the same time providing a layer of top soil on the slope to encourage and aid the re-establishment of native vegetation. Returning the area to its natural state after construction of the road was part of the consent process.

The steep 35 degree slope provided some design challenges. To support the weight of 100mm soil on this slope both tendon and pin options were considered. Maccaferri provided the technical support for the use of Geoweb on this site by analysing the slope geometry and soil loads to provide a suggested layout for both pin and tendon options. The engineer elected to go with the pin option which resulted in the use of 8500 steel pins and clips. The panels were joined using 14 500 rivets by means of a pneumatic gun. The steep slope required the use of safety harnesses and safety ropes during the installation process. A storm event in mid April caused some surface scour, the top soil was replaced and the finished structure hydro seeded.



Slope during installation



Completed slope & hydro seeded



Vegetated slope

Client name:

TAUPO DISTRICT COUNCIL

Main Contractor:

GREG LAMB LTD

Consultant

OPUS CONSULTANTS

Products used:

GEOWEB, BIDIM A14 & A19, CLIPS & STEEL PINS

Construction date:

END OF MAY 2008

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