

# CASE STUDY

Erosion Control

Project: Ohope Road Slip  
Date: June 2011  
Client: Whakatane District Council  
Location: Whakatane



## MacMat-R®

The steep slopes on this exposed coastal site above Ohope road have been subject to numerous landslips over the years resulting in partial road closures and posing a significant threat to passing traffic. Any repair would have to consider the restrictions on site in terms of operating space and the need to minimise the effect on road traffic.

Accounting for these difficult working conditions the solution had to offer long-term protection of the long steep slopes using vegetation to stabilise the proposed cut soil batters. The vegetation on its own would not be sufficient to stabilise the exposed soil faces. Therefore there was a requirement to enhance the performance of the vegetated soil slope especially during the critical post construction period and prior to full establishment of the vegetation when the soil slopes were most vulnerable to erosion.

MacMat-R® was identified as being the most suitable solution for these conditions considering the erosive nature of the soils and the identified rainfall intensity for the site. The advantage of MacMat-R® is that it is also effective at reducing surface erosion immediately after installation.

The slopes were benched in a series of lengths up to 25m long. MacMat-R® was anchored in trenches at the top of the bench and into a metal filled drainage channel at the base. Face anchorage was achieved with 1m long galvanised steel pins at 1 metre centres. Due to the steep nature of the slopes, up to 80 degrees in places, a significant tensile load could potentially be applied to the product.

The selection of MacMat-R®, a turf reinforcement mat that incorporates a PVC coated double twist mesh, ensured that the tensile strength requirements for this site could be adequately met. Being a composite product it also meant that only a single layer installation was required, reducing installation speed, cost and storage space requirements on site.

It was winter by the time the slopes were hydro-seeded however within a very short period of time, germination was achieved and grass grew evenly through the product.

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.



During construction on the roadside



Greened up slope following construction



Completed MACMAT-R slope prior to hydro-seeding

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