

CASE STUDY

Geocontainer

Project: Shoreline Protection Lake Moawhango
Date: April - May 2009
Client: Genesis Energy
Location: Lake Moawhango



ELCOROCK® Bags

Genesis Energy has a hydro dam located at the southern end of Lake Moawhango. They have access to the dam via a road (part of the earth dam bund), which passes through the Army Training ground forming part of the Waiouru Military Camp. Frequent storms on the lake generate waves causing erosion of the ash layers that form the shoreline around the lake, threatening the access road.

ELCOROCK® containers are manufactured from a specialist UV stabilised composite of non-woven heavy weight geotextiles and developed by ELCO Solutions as a flexible alternative to “hard rock” solutions for long term exposure in coastal and shoreline works. They can be filled with local sand and silts minimising the environmental impact.

ELCOROCK® containers were chosen for this site after evaluating a number of different solutions as there was an extremely short construction time frame of only 6 weeks. The solution also had to fit within a tight budget and environmental constraints.

Design suggestions were provided with the assistance of ELCO with the double sided vandal resistant product chosen. This was mainly to assist with the trapping of sand and material in the area to provide extra abrasion resistance.

Ultimately **ELCOROCK®** containers proved to be a cost effective option for this sensitive site which will be monitored by Genesis for a year, before continuing further erosion repair work.



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Due to weather delays from snow falls as well as live Army firing exercises, the contract was limited to 4 weeks. During this period 800m² of **ELCOMAX®** geotextile was placed and 507 **ELCOROCK®** 2RP 0.75 m³ containers were filled and installed on 2 sites. Prior to the placement of the ElcoRock containers, **ELCOMAX®** geotextile was installed to create the separation layer to the structure to limit any residual erosion of the ash soils below the containers. The contractors were able to achieve an installation rate of between 30-40 containers per day which allowed them to complete the works well within the tight deadline prior to the filling requirement of Lake Moawhango for generation of hydro power.



Completed section prior to erosion mat placement



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