

# Case Study

Project: **Clifton Springs Breakwater**  
 Location: **Geelong, Victoria, Australia**  
 Client: **City of Greater Geelong**  
 Date: **2004**



## ELCOROCK®

Sand drift was causing problems at the Clifton Springs Boat Harbour, located near Geelong in Victoria. The sand was following the natural coastal process and was filling up the harbour, decreasing the available draft for boats and also increasing the maintenance cost and frequency. To alleviate this, the City of Greater Geelong proposed to construct a groyne, effectively blocking the sand from entering the harbour.

Typical coastal groyne construction involves sand or rock core, with large, generally angular, rock armour on the outside for protection. As an alternative, Geofabrics Australasia and ELCO Solutions Pty Ltd proposed ELCOROCK® sand filled containers in place of both the core and rock armouring. The traditional method of rock walls has a significant impact to the beach environment, contaminating the sand with rock material, broken away from the rock structures.

Constructed in 2004, the ELCOROCK® groyne consists of large 2.5m<sup>3</sup> containers manufactured in a robust vandal deterrent type geotextile. The main ELCOROCK® groyne is approximately 100m long, and is around 2m high in a 3-2-1 installation.

The softer option provides protection for the harbour and also improves the amenity of the site by allowing public access to an otherwise hazardous area.



*Placing the ELCOROCK® containers*

Experienced contractor and specialised equipment assisted in an expedient installation and excellent finish.

The installation has been so successful and accepted that a further two smaller groynes have been installed close by, designed to capture localised sand drift, to improve the beach amenity.



*Project complete*



*Aerial view of groynes*

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