

Case Study

Project: **Jumeirah Beach Sea Wall**
 Location: **Dubai, United Arab Emirates**
 Contractor: **S & H Engineering**
 Client: **Dubai Municipality**
 Date: **February 2003**



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Dubai's Jumeirah Open beach located approximately 5km south of the famous Arab Tower Hotel attracts large numbers of foreign tourists.

The beach itself and amenities were in good condition however the amenities block, which extends out beyond the sea wall is regularly subjected to wave attack during the Shamal (storm) season. These storms threatened to undermine the foundations of the structure, which could have resulted in significant damage or loss of the structure.

To protect the structure the municipality initially placed 1m³ woven bulker bags around the perimeter of the structure to provide cheap and flexible protection. However the durability, stability and aesthetics of the structure proved undesirable and another solution was required.

The Dubai Municipality was aware of the ELCOROCK® container systems due to the success of projects such as the Narrownneck Artificial Reef and the Maroochy Beach groynes in Australia and contacted ELCO Solutions Pty Ltd for some advice on a long-term solution to the problem.

A revetment structure, which combined the 0.75m³ and 2.5m³ containers, was recommended.

As the structure was likely to be subjected to a large volume of pedestrian traffic and possible vandalism, ELCOMAX® 1209RP geotextile was used on the top of the containers. The composite geotextile, which traps approximately 3kg/m² of sand within the structure of the geotextile, ensures greater wear (abrasion) resistance and UV resistance than other geotextiles.



Initial bulker bag solution

The end result is a structure which client, contractor and supplier can be proud of.



ELCOROCK® solution



Project complete

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Geofabrics Australasia Pty Ltd
 Ph: +61-3-8586 9100
 Fax: +61-3-8586 9174
 Email: sales@geofabrics.com.au
www.geofabrics.com.au

Geofabrics International
 Ph: +61-7-5563 2051
 Fax: +61-7-5563 3727
 Email: exports@geofabrics.com.au
www.geofabricsinternational.com