

# Case Study

**Project:** Belongil Spit  
**Location:** Byron Bay, NSW, Australia  
**Contractor:** Byron Shire Council  
**Client:** Byron Shire Council  
**Consultant:** Byron Shire Council/WBM Oceanics  
**Date:** July – September 1999



## ELCOROCK®

The wild seas of 24 May 1999, dubbed "Massive Monday" by surfers, saw the biggest waves in 25 years pounding the Northern NSW and Gold coasts. Large swells and high tides in July 1999 further damaged the coast. One of the hardest hit areas was the Belongil Spit, Byron Bay, leaving 8 houses in severe danger of toppling into the sea.

Local police issued an emergency order to residents to build "a cost effective and efficient seawall" solution. This consisted of the construction of an ELCOROCK® wall at the toe of the 4m high scour embankment.

Two ton ELCOROCK® containers were chosen because of their ease of filling and placement. These containers provide a soft natural appearance, which is desirable in this popular tourist destination.

ELCO Solutions Pty Ltd recommended a wall with a toe located at RL - 0.5m (min) and crest located at max wave height +0.5m above MHWL with a double layer facing, placed in stretcher bond.

Unfortunately due to restricted funds the wall was only constructed one layer thick and too low to prevent over topping during king tides and large swell.



*Storm damage May 1999*

To date the wall has performed well and has protected the existing houses from further threat.

In total, 550 2152RX8 sand containers were used to stabilise the area, a further 2500 are proposed for additional threatened areas.



*House in danger*



*Project complete*

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