

Project: Pataua Bay Coastal Protection Revisited  
Date: August 2015  
Client: Private Residence  
Location: Pataua Bay, Northland



## ELCOROCK® Containers

Coastal erosion is a natural process that is generally only of concern when threatening human habitation or development. Armouring shorelines by means of riprap revetments, seawalls and bulkheads is a very common approach to combating erosion. Residents above Pataua Bay, Northland prior to November 2011 had concerns erosion would undermine their dwelling and employed Richardson Stevens Consultants to find a solution to prevent further loss of the slope.

The **ELCOROCK®** container system has been used extensively in Australasia and Pacific for over 20 years for coastline protection and was the solution of choice for the Pataua site. **ELCOROCK®** 2.5m<sup>3</sup> Vandal Deterrent containers were filled and placed in position using site won materials which reduced the volume of imported materials (thereby reducing the volume of truck traffic to the site – an important consideration along most urban foreshores).

**ELCOROCK®** specialist geotextile sand containers provide an excellent solution due to their durability, permeability, stability and flexibility providing a “soft engineering” option that improves the amenity of beach or foreshore and reducing the beach contamination from rock walls.

On a recent visit to the Pataua Bay site in August 2015, it was the assistance of old photos that allowed us to see where the erosion occurred 4 years ago as the installation of **ELCOROCK®** combined with planting of Spinifex and Pingao has promoted vegetation and significant sand replenishment returning the area to its natural state.

Therefore, coastal structures are imperative to protect the environment, ecology, infrastructures, and economic activities near shore



Coastal Erosion 2011



Erosion scarp on the toe of dune



Vegetated structure 4 years on



Placement of ELCOROCK® containers



Revegetated area August 2015



Revegetated area August 2015

### How ELCOROCK® works.

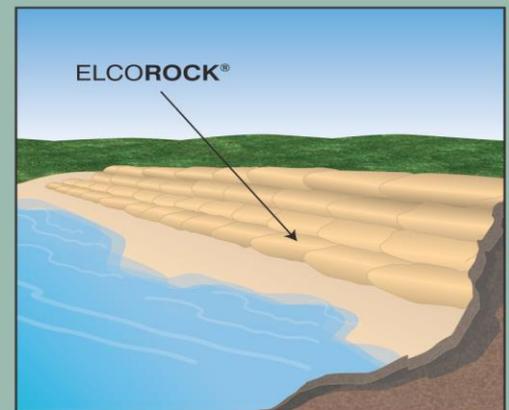
The ELCOROCK® shoreline protection system consists of sand-filled geotextile containers which form a stabilising, defensive barrier in coastal areas. The system provides enhanced public amenity, allowing greater public access at reduced risk for the asset owner.

A world-leader in geosynthetic erosion protection, the ELCOROCK® system effectively combats erosive forces in coastal regions and inland waterways. The robust containers are manufactured in Australia using a nonwoven geotextile with enhanced filtration and extreme UV resistance.

After 20 years of use in the harsh Australian environment, the system's resilience and strength has been proven many times over. ELCOROCK® structures have withstood UV damage, coastal abrasion, vandalism and even Category 5 cyclones. The system is supported by extensive R&D and world class design modelling.

ELCOROCK® structures provide a cost-effective alternative to traditional coastal structures made from concrete, rock armour, steel and timber. The system also enhances the environment by providing a stable base for marine growth.

Geofabrics supports the ELCOROCK® system with ongoing R&D, installation systems and design support.



ELCOROCK® Application

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