GEOFABRICS®

FLAXMILL BAY COASTAL PROTECTION

COASTAL

CASE STUDY

PHIL SIMMS

M. : +64 21 509 435

E. P.SIMMS@GEOFABRICS.CO.NZ

A. AUCKLAND, NZ

PRODUCTS USED

ELCOROCK®

The ELCOROCK system consists of sand-filled geotextile containers built to form a stabilising, defensive barrier against coastal erosion.

The geotextile containers are made from Texcel, a durable staple fibre geotextile.

It's a versatile system ranging from hand-filled 40kg containers to hydraulically-filled 300 tonne mega-sand containers and tubes.

The ELCOROCK shoreline protection system has been proven through over 20 years of use in harsh coastal environments.

These structures have withstood coastal abrasion, vandalism, UV damage and even Category 5 cyclones.

The ELCOROCK system is supported by extensive research and development and superior design support.

It provides a cost-effective alternative to traditional coastal erosion protection systems made from concrete, rock armour, steel or timber. It increases public amenity of foreshore areas and enhances the environment.

Because of their strength and flexibility, ELCOROCK geotextile containers are widely used in the construction of sea walls. They have several advantages over traditional sea wall methods including reduced beach contamination from loose rock.

Containers can be filled with sand and other easily sourced materials, and the system improves the general amenity of the area.

PROJECT DESCRIPTION

Flaxmill Bay is a popular holiday destination located within Mercury Bay on the east coast of New Zealand's north island.

An existing sea wall that was constructed several years ago needed to be replaced due to coastal erosion of the bank that supported the road network located above it.

The road is vital to the community and a structure was required that could protect the sand dunes on the shore without causing disruption.

CHALLENGE

The client was looking for a timely and cost-effective solution while reducing the impact on holiday goers to the area during the summer period.

Due to its location, Flaxmill Bay has no natural breakwater and is prone to larger waves breaking onto the beach which undermines the bank supporting the roading network above.

The previous seawall was constructed using incorrect materials which caused the wall to collapse and allowed erosion of the bank.

OUR SOLUTION

ELCOROCK was chosen to construct the three groynes as it required a shorter construction period while providing high level protection. ELCOROCK also has a strong reputation as a defensive barrier against coastal erosion and harsh environments.

The beach was closed during the construction and filling the containers, but the road and traffic flow above was unaffected. The project was completed in only a few short weeks rather than months thanks to the ELCOROCK system.

DURING INSTALLATION

AFTER INSTALLATION