



**CASE STUDY:**

# SCOUR PROTECTION

**MUNNA POINT, SUNSHINE COAST QLD  
FEBRUARY 2017**

**CLIENT: NOOSA COUNCIL**

## 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.

**GEOFABRICS®**  
Smarter Infrastructure

Fishing from the shoreline of Munna Point has been a favorite past time of the holiday makers using the Noosa River Holiday Park which since the 1920's. Recently the water's edge at Munna Point has experienced severe erosion to the point in which the council had to fence off this part of the beach to ensure public safety.

Noosa Council along with consultant International Coastal Management(ICM) developed a solution of combining 15m long groynes made from Geotextile Sand Containers along with sand filled mattresses at the toe of the groynes.

The aim was twofold - restore the foreshore and move the channel back to the centre of the river away from the shoreline, thus reducing the scouring.

The groynes are to be constructed using ELCOROCK 5.5 tonne sand containers and the sand filled mattresses to be 8 m wide standing 500 mm in height and have a length of between 22-26 m.

The installation of both the groyne and the mattresses was carried out by Nabis Dredging. The specially designed mattresses were delivered in panels of 2m x 22- 26 m in length. Nabis then sewed 4 of these panels together making an 8 m wide unit. The mattresses were floated out into position then hydraulically filled using a 6/4 dredge. Once filled, the weight of the mattress ensured they naturally sunk and were guided into the exact position. The individual geosynthetic 4.5 tonne sand containers were then positioned

> Munna Point Scour Protection



Coastal erosion before the project began



The mattresses were maneuvered into position then filled



Submerged mattresses

and filled to create the groyne which overlapped the mattresses.

Since the installation of the groynes and the mattresses, there has been a natural replenishment of sand to this area with the beach profile increasing by approximately 8 metres along a 110m strip of beach. The mattresses have a natural sand covering now which will not only protect the shoreline, but will provide the Sand Containers with a longer expected life.

The mattresses were a bespoke product and there was a lot of work between the designer ICM and Geofabrics to ensure a product was produced that was not only fillable but was also durable enough to withstand the rigors of a coastal environment.



Submerged mattresses



Beach view after project completion