

Secutex® Soft Rock

Coastal protection

Project name
East Coast Sea Revetment, Singapore

Client
Singapore's National Parks Board (NParks), Singapore

Supplier
Green Cosmos Marketing Pte. Ltd., Singapore

Product
Secutex® Soft Rock RS 1201





Fig. 1: Storage of Secutex® Soft Rock on site



Fig. 2: Installation of Secutex® Soft Rock

Challenge

As an island nation, Singapore is vulnerable to the impacts of sea-level rise. Over the years, Singapore’s coastline has receded, and residents of various regions are also observing erosion. The East Coast region is one of the highly impacted areas, with a few eroded beach parts observed.

The East Coast region of Singapore is one of the first major reclamation projects that started in the 1960s. The region has recently developed into a commercial and residential complex. East Coast Park, which comprises a 185-hectare area, is the largest in Singapore, with an artificial beach and other facilities, such as Bedok Jetty, Marine Cove, etc. With elevation, only approximately 5 m above Singapore Height Datum, robust and sustainable coastal protection is needed to protect the East Coast from severe erosion.

Solution

As a part of Singapore’s government’s response to climate change, a sustainable coastal protection structure is required. In the few stretches of the East Coast region, the geosynthetic sand container solution has been proposed to protect the eroded beach. For this project, Secutex® Soft Rock RS has been chosen.

Secutex® Soft Rock RS is a double-layered nonwoven geosynthetic sand container with excellent robustness, abrasion and UV resistance. It comprises nonwoven staple fibre as a filter layer and coarse fibre, which acts as a protection layer against UV exposure.

The project commenced in 2020, and several sections have been constructed. Some stretches include Tanjong East Coast Twin Jetty, Bedok Jetty, East Coast Park Pier, and Pasir Ris Park Shoreline. Over two years, a total of 4000 pcs of Secutex® Soft Rock RS 1201 was supplied to the project. It is the first project in Asia where Secutex® Soft Rock RS 1201 is installed.



Fig. 3: Installed sand container Secutex® Soft Rock RS