

Soil Embankments Stabilization

FiberRock 20S & Secugrid 40/40 Q1

Customer

Derrick Warren

End application

Green Retaining Wall

Customer problem

The client required retaining walls to stabilise the perimeter soil embankments, allowing for excavation of in-situ material to build concrete foundations for a new house. The conventional method used for this type of application would be to use concrete retaining blocks.



Location

Salt Rock, North Coast, KwaZulu Natal, South Africa

Fibertex solution

However, Siyamba Earthworx consulted with the client and proposed a 'green' facing retaining wall solution, which was technically sound and aesthetically pleasing. Fairly good site conditions prevailed, which allowed for ease of construction. Three existing adjacent properties needed to be considered, so as to not disturb the existing infrastructure.



Fibertex product description

The Fibertex technical design team proposed a geosynthetic combination of FiberRock 20S Geosynthetic Sand Containers (GSC) and Secugrid 40/40 Q1 Geogrid.

Over 10,000 FiberRock 20S GSCs (20L; 70kg; 0.8 m x 0.5 m) were used as a facing. Multiple layers of Secugrid 40/40 Q1 were placed horizontally at regular designed intervals, to allow for interlocking and friction for slope stabilisation.

Value proposition

The Fibertex solution allowed for planting shrubs that would eventually take over the structure completely, to attain the 'green' wall, as per the client's requirements.

Customer success story

This successful project sets a fine example of the strongest form of retaining walls. In spite of heavy rains recently that caused devastation in the area, there is no erosion or damage to this structure. The contractor highly recommends the use of durable FiberRock 20" bags in retaining wall applications. These bags remain in place, even in extreme conditions.

