

CASE HISTORY

Rev:00, Date : 10.12.2022

CONSTRUCTION OF GABION RETAINING WALL FOR SHORE PROTECTION WORKS AT NIGERIA

NIGERIA



Retention works

Client:	Products used:
RAPID LINK MULTINATIONAL LTD.	• TECHFAB METAL GABION (ZN+PVC COATED) • TECHGEO NON WOVEN GEOTEXTILE
Main contractor:	
Manufacturer & Supplier:	Year of Construction:
TECHFAB (INDIA) INDUSTRIES LTD.	2021

Problem:

Due to wave action during rising of sea level and high rise tides, extensive erosion has been observed along the boundary of the plot near sea face. This was affecting the aesthetics and safety of the visitors around. So, it was necessary to construct a retaining structure that will retain the soil behind it in place and prevent erosion. The height of the protection was 4.0m (above ground level).

Solution:

In order to overcome the problem of erosion and retain the sea facing slope, TechFab India has proposed the construction of Gabion retaining wall, which is one of the quickest and most economical ways to reduce shoreline erosion. Gabion Retaining walls are very much suitable in case of retaining structures for protection, nearby the water body. Gabions can take differential settlement effectively. Gabion retaining walls are highly permeable, flexible and free draining and hence do not develop pore water pressure.

A Gabion wall of 5.0m height including foundation depth is constructed and geotextile is also provided as a filter media behind the retaining wall. For the scour protection, gabion mattress has been recommended.



During Construction Photograph

Benefits of TechFab Metal Gabion over Conventional RCC Retaining Wall on site:

TechFab Metal Gabion was suggested for retaining and erosion control purposes in lieu of the conventional R.C.C Retaining Wall for achieving the following advantages:

- Flexible structure which can accommodate differential settlement.
- Free draining structure with no pore pressure development behind wall.
- Easy in construction, as it does not require skilled labourers.
- Does not require curing time as in case of R.C.C Retaining wall.
- Eco-friendly, as the vegetation growth over it, is compatible with surrounding environment.
- Advanced coating of gabion makes is resistance to corrosion under areas which are in constant / partial submergence.
- Cost incurred is significantly less compared to R.C.C Retaining Wall.

Benefits of TechGeo Nonwoven Geotextile:

- Acts as a “Filter” by preventing the backfill material from being washed out through Gabion face.
- Acts as a “Separator” between the backfill material and the Gabion fascia and thereby prevents the mixing of the tow.



During Construction Photographs - Gabion filling with boulders



During Construction Photographs



Completed Structure of Gabion Wall

Present Status of the Project:

The Project is completed successfully.

For further details kindly contact :

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