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# Gabion Structure for Canal Banks Protection and Erosion Control

Case Study



- Application: Erosion Control
- Project title: Rehabilitation of Kyebi Township Roads
- Location of installation: Kyebi - Ghana
- Client: Department of Urban Roads
- Installation Date: January 2021
- Material used: Gabions



## Challenge:

A constructed during the uplift of the Kyebi township roads was across a river. This river discharges large volume of water especially in the raining season. This called for the construction of a weir to direct the flow through a culvert beneath the road. During the raining season the flow rate was very high leading to scouring underneath approach of the weir. This gradual scouring was a threat to the stability of the weir, the culvert and the possible cause of flood within the area.



## Initial Approach:

Initial solution was to place boulders at the edges of the approach channel of the weir. This was executed but could not solve the problem due to the high velocity of flow after heavy downpour.



## Solution:

Gabion basket properly filled with selected boulders acting as a gravity wall was constructed to deal with the problem of scouring.

A 2mx1mx1m gabion baskets were connected and filled with selected boulders to form the wall.

A two tier gabion wall was constructed to deal with the problem of scouring.



## Solution's Benefits:

- Flexible structure.
- High drainage capacity structure.
- Fast installation with local labour force.
- Insusceptible to settlement and dynamic loading.
- Allows establishment of vegetation.



## Construction Steps:

1. Excavation and ground preparation



2. Placement of boulders in gabion basket



3. Completed gabion wall





## Contact Us:

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