

CASE HISTORY

Rev:01, Date : 13.05.2020

BANK PROTECTION AND FLOOD CONTROL MEASURES FOR MADHUMATI AND BONAR NALLAH AT BANDIPORA, SRINAGAR

BANDIPORA, SRINAGAR, INDIA



Flood Protection Works

Client:	Products used:
	TECHFAB METAL GABIONS ZINC+PVC COATED
Main contractor:	Quantity supplied:
	173171 CUM
Manufacturer & Supplier:	Year of construction:
TECHFAB (INDIA) INDUSTRIES LTD.	2015

Problem:

In 2015, both Nallah had experienced severe bank erosion due to melting of ice at high altitude and release of water from the Kishan Ganga Hydro Electric Power Project (KGHEP) which caused flood in nearby villages as well as high erosion of the river.



Photo 1: Gabion Installation in progress

Project Challenges:

This region is surrounded by high slope mountain and due to steep gradient; the velocity of water is quite high causing erosion of the bank and bed of the channel. It is observed that there is erosion at various locations along the nallah thus posing threat to the community staying along the banks.

Solution:

The advantage of Gabion wall & other form of energy conservative structures was adopted for its easy construction; economy & flexibility. The gabion structures go easy with surrounding & maintain ecological balance by allowing growth of flora and fauna of the regime.

The permeable nature of the Metal Gabion eliminates buildup of hydrostatic pressure behind the retaining structure and uplifts caused by turbulent flows.

The flexibility of the double twisted hexagonal mesh helps in withstanding differential settlement without fracturing the structure particularly when a structure is installed on unstable and uneven ground or in an area where scours from waves or current can undermine.

Metal Gabion structures are heavy monolithic gravity units able to withstand earth's thrust. Its efficiency increases instead of decreasing with age since further consolidation takes place as silt and soil collect on the voids and vegetation establishes itself.

Execution on site:

The work was extremely challenging in terms taking material to site due to steep gradient, high water level & surrounded by locality. The temporary access road was constructed & water from nallah was diverted to facilitate gabion work. The gabions were placed in situ by varying foundation depth 1m to 3m. We have given extensive training for proper implementation of gabion at site. The contractor started the work simultaneously at various locations due to its urgency and timeline fixed in the contract. The series of gabion retaining wall: spur & energy dissipater were being constructed along Bonar & Madhumati Nallah.



Photo 2: During Construction



Photo 3: Completed Structure

Conclusion:

The gabion wall work completed satisfactorily. The social benefits of the gabion wall are erosion control of the bank and protection from Flood of surrounding community as well as local crews can be easily trained on site to perform the installation job which results into improved social economic value of the region.

For further details kindly contact :

TechFab India Industries Ltd.

711/712, Embassy Centre, Nariman Point, Mumbai – 400021

Tel: + 91– 22 - 2287 6224 / 6225 Fax: + 91– 22 - 2287 6218

E: info@techfabindia.com

W: www.techfabindia.com