

GABION WALLS FOR SAHARA AAMBY VALLEY CITY AMBY VALLEY, MAHARASHTRA, INDIA

Mass Gravity Retaining Walls

Problem

The reason for landslides were excessive vertical cuttings, overburden masses, inadequate surface and subsurface drainage and improper diversion of drainage. The native soil is lateritic which behaves as hard stone in dry condition and starts losing cohesion when it is saturated during heavy monsoon prevalent in the area for around 3 to 4 months. The source of a better soil is far away and this makes the soil replacement option (for foundation and backfill) very expensive.

All the above factors necessitated the selection of a solution which is having enough provision to dissipate pore water pressure completely.

The proximity of entire project location in a high seismic zone, proximity of Koyna dam reservoir and presence of lateritic soil urged the requirement of flexible structures. Also as the objective was to make a high class city with world class amenities, the need of a perfect landscaping was also aimed at from the planning stage itself.

Solution

A series of self-draining, flexible, eco-friendly Gabion walls have been provided in Sahara Lake City along external/internal roads, mini club area, car parking area and lake front.

Gabion with its high porosity in the order of 30-35% became the ideal solution. In many of the stretches, solutions were offered to restore the slides. Emphasis was laid on the provision of an eco-friendly solution.

Client: Sahara India Corporation Ltd.

Designer / Consultant: Consulting Engineers Ltd

Contractor: IVRCL Infrastructure Ltd

Products used (Qty.)

- Gabion 50,000 cu.m

Date of construction: 01/2003 - 08/2003



Photo 1: Overview of the site area



Photo 2 : During construction



Photo 3 : Construction of Gabion wall behind club house



Photo 4 : Completed structure



Photo 5 : Completed structure



Photo 6 : Completed structure