

## RETENTION WORKS FOR JOJOBERA GU EXPANSION JAMSHEDPUR, JHARKHAND, INDIA

### Reinforced Soil Walls and Slope Reinforcement

#### Problem

Lafarge is one of the leading cement manufacturers in India situated at 6km away from the Tata Nagar railway station in the state of Jharkhand.

Near their Hot Gas Generator (HGG) building, it was found that the existing slope was unstable since the time of construction. The management had plans to construct a 5m wide road which could be utilized for to and fro of bulky cement trucks every day. However, due to the unstable slope, construction of road was a point of concern.

The client was looking for a solution with certain factors in consideration like cost effectiveness, ease of construction and at the same time, stabilize the slope with aesthetics.

#### Solution

Keeping in mind all the aspects of project, the client decided to go with Maccaferri's products. Considering the scope of project and client's requirements, Maccaferri proposed reinforced soil slope using Terramesh® and Green Terramesh® system which is convenient, less time consuming and ends up as an aesthetically pleasing structure.

Terramesh® system consists of gabion basket facia units with an integrated double twist mesh as reinforcing element. These walls are easier to construct and more cost effective compared other conventional systems especially for very high structures. In this project, the base of Terramesh® wall was located at 1m below to achieve the necessary embedment.

Terramesh® has stone facing and Green Terramesh® has a grass cover at the face to sync with the natural environment. Non-woven geotextile was used behind the Terramesh® units in order to act as a separator and filter, which allowed free movement of water and also prevented any backfill sand to come out of the voids in between the stones.

A 300mm thick layer of vegetative soil with manure and grass roots was placed at the face of Green Terramesh® units. The height of retention varied from 5m to 7m.

**Client:** Lafarge India Pvt. Ltd

**Designer / Consultant:** Maccaferri (Designer) / Vincent DEKYNDT

**Contractor:** L&T ECC

#### Products used (Qty.)

- Terramesh	5X2X1-60 no
- Green Terramesh	4X2X0.79-44 no & 5X2X0.79-69no
- MacTex N	450 sqm

**Date of construction:** 11/2010 - 04/2011



Photo 1: During construction



Photo 2: During construction of Terramesh® system



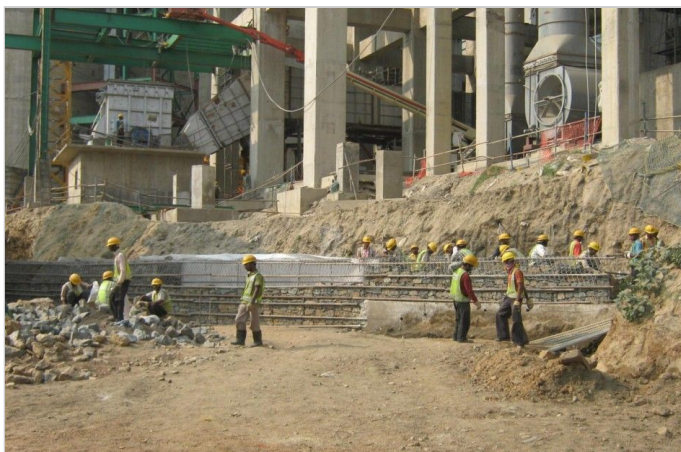


Photo 3: During construction of Terramesh® system



Photo 4: During construction of Green Terramesh® system



Photo 5: Completed Structure



Photo 6: Completed structure

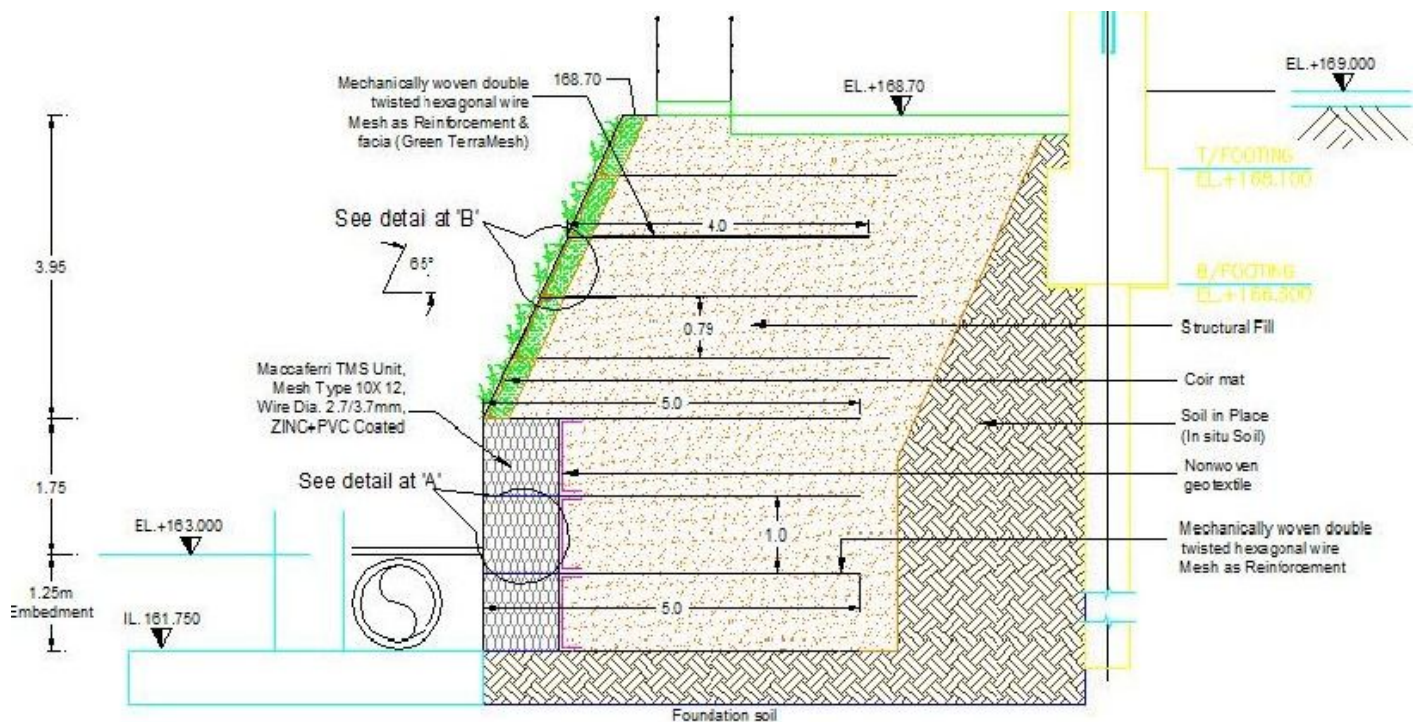


Diagram 1: Section drawing of the structure