

## CONSTRUCTION OF UNPAVED ROAD HALDIA, WEST BENGAL, INDIA

### Sub-grade and Pavement Drainage

#### Problem

CESC are constructing a 2 X 300 MW Haldia Thermal Power Plant. To cater for the construction traffic which mainly consist of heavy trucks they had to construct a temporary unpaved road with a design life of 2 years. This unpaved road will be converted to a permanent paved road once the construction of the plant is completed.

The foundation soil mainly consists of soft silty clay soil up to a depth of 9 m and hence it was decided to provide a suitable reinforcement for strengthening of the unpaved road. The total proposed length of road was 1.7 km.

#### Solution

The solution by CESC was to construct an embankment (with the existing local soil) 1.5 m high having a top width of 11m. The middle 7 m width (road width) of the embankment was constructed up to 1.0 m height to allow for 250 mm each of silver sand and brick bats (Jhama Khoa).

One layer of thermally bonded non woven geotextile (MacTex H) was laid over this followed by a 250 mm thick properly compacted silver sand. Over this another layer of MacTex H was placed followed by one layer of MacGrid WG4S. A 250 mm thick layer of properly compacted brick bats (Jhama—Khoa) was placed over this to arrive at the road surface.

Present Status : The Project is completed successfully

**Client:** HALDIA ENERGY LTD. / CESC

**Designer / Consultant:** La Mayer

**Contractor:** HEL

**Products used (Qty.)**

- MacGrid WG	14625 sq.m
- MacTex H	31050 sq.m

**Date of construction:** 04/2010 - 06/2010



Photo 1. Site before Construction



Photo 2. Embankment ready for laying MacTex H



Photo 3. Sand filling on Geotextile



Photo 4. Laying of MacGrid WG4S



Photo 5. Laying of Jama Khoa over MacGrid WG4S



Photo 6. Completed Structure

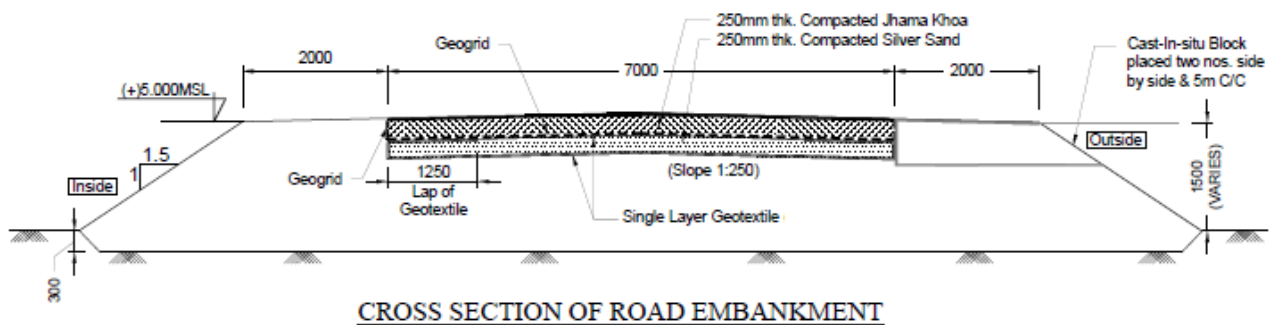


Diagram 1: Cross section details

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