

CATO MANOR PIPELINE & ROAD PROTECTION

BELLAIR ROAD, CATO MANOR, KZN, SOUTH AFRICA

Soil Veneer Applications

Problem

Heavy rains experienced during October 1999, caused the Umkubaan and Umbilo rivers that flow through Cato Manor to rise to abnormal levels. This resulted in excessive erosion and subsequent failure of the eastern embankment along the Bellair road, just north of the Umbilo river bridge. The rise in the water table beneath the road resulted in further instability of the embankment compromising the road and a bulk water pipeline.

Solution

Maccaferri Africa /African Gabions was asked to propose a structure that would retain the affected road embankment. The proposed structure was a combination of a gabion Mass Gravity wall, to a height of 6,5m, and a Terramesh™ System to a height of 2m. The total height of the structure was 8,5m, spanning a length of 52 linear metres with a foundation of 2,5m including a gabion key, which was sufficiently anchored into the river bed. A geotextile was used at all mesh/soil interfaces to act as a separation layer.

Client: DURBAN METRO

Designer / Consultant: DURBAN METRO

Contractor: NASHRAVE

Products used (Qty.)

- Gabion unknown

Date of construction: 11/1999 - 12/1999



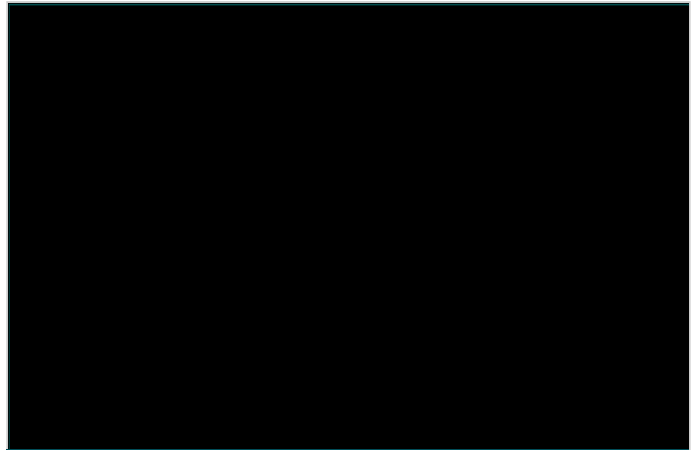
Before construction



During construction



After construction



Typical Section