

BOOTH ROAD CANALISATION
CATO MANOR, KZN, SOUTH AFRICA**Channelling Works****Problem**

With an anticipated 1:50 year flow volume of 500m³/s, the Booth Road Canal was expected to flood the main arterial road and surrounding residential areas.

Critical velocities along the river course were expected to reach 4,79m/s. The construction of a formalised canal, with bank protection, was therefore necessary.

An additional complication in the design was that the culvert downstream of the canal was smaller than the upstream culvert. A further concern was theft of the lids of the mattresses by the surrounding inhabitants.

Solution

A 580m long canal was constructed to handle the 1:50 year flood volume. The 1:1,5 canal side slopes were lined with our AG200 geotextile under 300mm thick Reno mattresses and the toe of the bank protected by a reinforced concrete slab.

A 1m x 1m gabion anchored the mattress at the crest of the slope.

The channel bed slope was increased near the downstream culvert to allow the same flow at a higher velocity. To reduce the impact of the structure on the environment and to conceal the mattress lids (to minimise the potential for theft), the mattresses were soil filled and seeded. The design was verified by the Macra 1™ internal Maccaferri software.

Client: CATO MANOR DEVELOPMENT ASSOCIATION**Designer / Consultant:** DURBAN METRO**Contractor:** ERBACON**Products used (Qty.)**

- Reno Mattress

Unknown

Date of construction: 12/1997 - 12/1998**Aerial view of Booth Road canal during construction****After completion**



After construction



During construction



During construction2



Immediately after construction