

Project Info

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 CC5™ Bulk Rolls

 # 6,000m²

 Longitudinal layers

 Mafambisse, Mozambique

 Tongaat Hullet & Concrete Canvas SA

 CC5™ used to line an irrigation channel at a sugar plantation in Mozambique.



CC lined canal section with sandbags used to ensure flat edges.

In November 2011, Concrete Canvas® GCCM* (CC) was used to line and provide protection against erosion and water loss to a channel in Mafambisse, Mozambique.

The channel was 4km in length and shallow in depth, and served as an irrigation canal at a sugar plantation. The original, unlined dirt channel required lining to prevent water loss through water seeping into the substrate. The canal is situated on a fairly remote site, however CC bulk rolls were still able to be specified as there was sufficient road access to site for the required plant. Furthermore, in comparison to poured concrete, one pallet of CC (one CC bulk roll) is the equivalent to two two-tonne ready-mix trucks, greatly decreasing logistical burden and carbon emissions. The works were carried out by Tongaat Hullet for the sugar plantation, with support and input from Concrete Canvas SA.

Little ground preparation was required due to there being an existing dirt channel. The bulk rolls of CC were delivered to site and laid longitudinally along the length of the channel. Where required, subsequent layers were overlapped by 100mm. Once a length of material was installed, sandbags were positioned on the edges of the material and down the middle of the channel to ensure flat edges and intimate contact with the substrate was maintained. Following installation, the material was hydrated and edges buried in pre-dug anchor trenches to prevent ingress and undermining.

6,000m² of CC5™ were installed by a team of around 18-20 people.

*Geosynthetic Cementitious Composite Mat



Original dirt canal



Installation of CC



Sandbags were used to ensure flat edges and intimate contact with substrate



Completed installation