

Project Info



23 / 11 / 17



CC8™ Bulk Rolls



125m²



Transverse and Longitudinal layers



Accra, Ghana



De-Montag Company Limited



CC8™ was used to line an irrigation channel as part of the Ashaiman Irrigation Scheme in Ghana



Completed irrigation channel in Accra, Ghana

In November 2017, Concrete Canvas® GCCM* (CC) was used to line an irrigation channel in Accra, Ghana. The installation was carried out as part of the Ashaiman Irrigation Scheme for the Ghana Irrigation Development Authority.

The client specifically chose CC™ as the solution for this project in order to determine the material's advantages over conventional channel lining methods. The client was particularly keen to witness CC's ability to save time both during installation and post-installation (due to its 24-hour setting time), durability, reduction in labour, and ease of installation. The works were carried out by De-Montag Company Limited for the Ghana Irrigation Development Authority.

Prior to installation, any vegetation was removed from the ground within the channel and its profile was re-graded and shaped. Anchor trenches were then dug on each shoulder and a bulk roll of CC8™ was delivered to site. The CC was then mounted onto a spreader beam, unrolled and cut to specific profile length. These pieces of material were then moved by hand to the channel and laid transversely, with additional layers laid with overlaps of 100mm. CT1 Sealant was then used for jointing the CC™ layers, along with 20mm stainless steel screws at intervals of 200mm. The edges of the CC8™ were anchored with 375mm ground pegs at 1m intervals where a transverse layup was used, and where a longitudinal layup was used instead, 2m intervals were implemented. Once the installation was completed, a 650-litre water bowser was used to hydrate the CC™, and the process was repeated after one hour to ensure sufficient saturation.

*Geosynthetic Cementitious Composite Mat





The original channel



Prior to works the channel was overgrown and heavy with sediment



The CC™ was delivered on a bulk roll, unrolled and cut to length



The CC™ was laid transversely



Grout was used to seal the ends of the CC™ at gates transitions



Completed transverse section post-hydration



Completed longitudinal section of channel

A total of 125m² of CC8™ were installed in just 2 hours, by a team of 7. Due to the use of CC™ rather than conventional methods, there was a significant reduction in closure time of the canal during installation, and the supply gate from the dam was able to be re-opened shortly after its completion.

The installation was a success, and the client is considering specifying CC™ again in the near future for a full-scale irrigation channel installation. The local farmers were also very happy and impressed with the material and the speed of installation as it meant minimal disruption to their use of the irrigation channel.

During a site visit in November 2022, the installation and material were found to be in optimal condition and full operation - channelling vital water to irrigate local farmlands. The performance in service of Concrete Canvas® CC8™ has provided the client with the assurances needed for further specification on other irrigation projects around Ghana.

5 YEARS AFTER INSTALLATION



Canal installation 5 years on



Completed canal 5 years after installation