CONCRETE CANVAS®

CHANNEL LINING

Project Info

- 13 / 10 / 17
- CC5™ Bulk Rolls
- 800m²
- Transverse layers
- Damang Gold Mine, Ghana
- De-Montag Company Limited
- CC5™ was used to line the mine's Pit Cut Back Drain channel to determine the advantages of CC over HDPE lining methods.

The completed installation at the Damang Gold Mine

In October 2017, Concrete Canvas® GCCM* (CC) was used to line a Pit Cut Back Drain at the Damang Gold Mine in the south-west of Ghana. The Pit Cut Back Drain, which served as a drainage channel, had a base width of 1000mm, and an average side slope of 1500mm at an angle of 1:0.5.

The lining of the Pit Cut Back Drain was selected for trial purposes to determine the advantages of CC over HDPE lining methods. The client wished to witness the ease and speed of installation, rapid curing, and durability of CC, as well as the reduction in labour usage that using CC can provide.

The works were carried out by De-Montag Company Limited for Abosso Goldfields Limited.

In preparation for the installation, rocks, debris and vegetation were removed, and the channel profile was excavated, graded and shaped, with anchor trenches dug at either shoulder of the channel in preparation for the burial of the edges of the CC. The CC was then delivered to site in bulk rolls of CC5™, which were mounted onto a spreader beam and self-loading truck.

*Geosynthetic Cementitious Composite Mat

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The site of the channel prior to works

The Damang Gold Mine

Delivery of the CC5 Bulk Rolls

The channel was excavated, graded and shaped prior to installation

The prepared channel

When access was restricted, CC was cut and transported to site

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CC being unrolled and laid on site

Anchor pegs were used to fix the CC into the anchor trenches and

Overlaps of CC material were jointed using stainless screws

The anchor trenches were backfilled for a clean termination

Where access to the channel was restricted, the CC was unrolled and cut to required length on the flat using a Stanley Knife, then transported to the site. Otherwise, the CC was unrolled transversely across the width of the channel and the material cut to length on site.

The edges of the CC were fixed in the anchor trenches and at 1m intervals along the edge of the CC material using 250mm ground pegs. Additional layers were overlapped by 100mm and jointed using stainless steel screws at 200mm intervals. Once installation was complete, the CC was hydrated using a bowser with pressure hose and sprinkler head. Hydration was repeated an hour later to ensure sufficient saturation.

800m^2 of CC5^{TM} were installed in just two 10-hour days by a team of 12 people, in wet weather and muddy conditions. The trial was successful and resulted in a significant reduction in the blockage of water flow since the installation. The client was happy with the outcome and impressed with the material's performance and the speed of installation.

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