CONCRETE CANVAS®

DITCH LINING

Project Info

- 09 / 02 / 15
- CC8™ Bulk Rolls
- 250m²
- Transverse layers
- Hermerdon Tungsten Mine, Plymouth, UK
- Daniels W Plant Hire
- CC was used for temporary works to prevent water from seeping through bedrock and flooding the lower area of a mine site

Project immediately after installation

Channel 9 months after installation

In February 2015, Concrete Canvas® GCCM* (CC) was used to temporarily line a drainage channel at Hermerdon Tungsten Mine, Plymouth, UK.

In order to facilitate the construction of settlement ponds it was necessary to divert the Hooksbury Channel which ran through the site. The bedrock was found to be allowing water to leak into the construction site, so an impermeable lining was required. Poured concrete was considered, however this would have required complex logistics and treatment of any water run-off to prevent harm to the local ecology. CC has a low alkaline reserve and low wash out rate which allows any run-off to be discharged into water courses without treatment and with negligible impact on the environment. Installation was carried out by Daniels W Plant Hire with consultation from SLR Consulting and the EA.

The channel was graded and any loose stones and vegetation removed. Bulk rolls of CC8™ were batched to specific profile length on site and laid in the channel, with a 100mm overlap between layers in the direction of water flow. The material was jointed using screws at 200mm intervals. As the CC was required to temporarily contain the flow of the existing water channel, the standard anchor trench detail was not needed.

A total of 250m² of CC8™ were installed in just one day.

*Geosynthetic Cementitious Composite Mat

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Later in the year, following completion of the construction of the settlement ponds, it was decided to keep the CC in place. Stones, soil and logs from the existing channel were placed into the new channel to help establish a natural habitat and allow the migration of eels and fish.

By January 2016, vegetation had grown on the soil above the CC and the migration of eels had been observed, with both the client and the EA deeming the project a success.

Site before works began

Initial installation completed

Culvert interface

Stones, soil and logs placed

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Natural habitat establishing

Completed project

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