

Project Info



31 / 03 / 18



CC5™ Bulk Rolls



600m²



Longitudinal layers



Qarn Alam, Oman



Sarooj



CC5™ used to line drainage channels to prevent ingress into substrate and divert water from drilling rig



Completed section of CC lined channel

In March 2018, Concrete Canvas® (CC) GCCM* was used to line a newly constructed drainage channel situated around a drilling rig which was required to lead water from the rig to a sludge pit. The site, situated in Qarn Alam, Oman, required a solution to prevent further ingress of water into the subsoil on the rig as well as to manage the drainage of this water.

Concrete and PVC or steel pipes were considered for the project, but time restrictions and the sensitivity of the area meant CC was chosen as an alternative. CC's unique properties allow it to be installed quickly, with no requirement for specialist equipment, plant or personnel. The material is also considered an eco-friendly alternative to conventional concreting methods, and has been used by the UK's Environment Agency on several projects in ecologically sensitive areas. The works were carried out by Sarooj for Petroleum Development Oman (PDO).

In preparation for the installation, the rig area was flattened and compacted and drainage channels dug around its perimeter. A second channel was then constructed, leading from the platform to the sludge pits some 40m away, which measured approximately 3m wide. Once ground works were completed, the ground within the channels was covered in a liner to prevent ingress of water or other contaminants into the substrate. CC was then laid over the liner longitudinally, with subsequent layers overlapping the edge of the last layer by 100mm. Where required, two layers of CC were laid side-by-side, with one overlapping the previous by 100mm to ensure full impermeability. The edges of the CC material were fixed to the liner, and overlapping joints secured using Clearfix adhesive sealant. No other fixing or jointing methods were used as the sub-layer could not be compromised.

*Geosynthetic Cementitious Composite Mat





Drilling rig prior to installation



Liner laid in channels prior to deployment



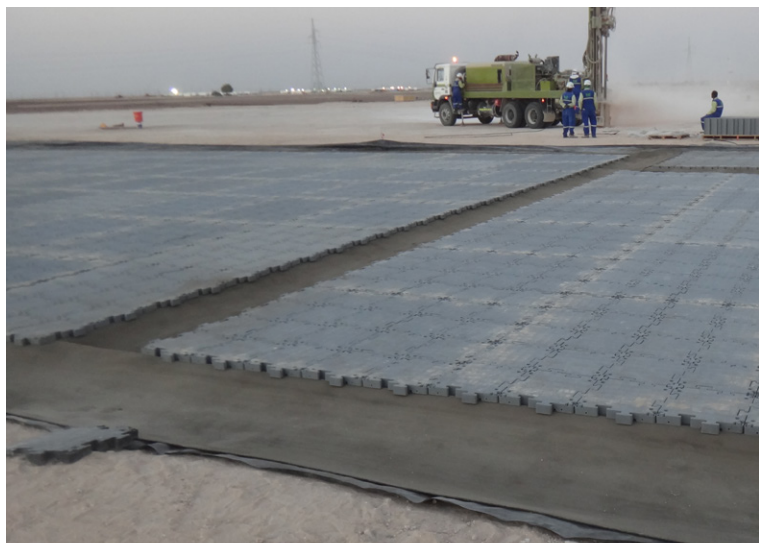
CC bulk rolls deployed from spreader beam and excavator



CC following deployment



CC edges and joints were sealed using Clearfix



No additional fixing or jointing methods were used



Completed channel lining installation

Once the deployment and jointing of the CC layers was completed, water from a nearby catchment pond was used to hydrate the CC via a high-volume pump and 50mm hose pipe. The drains were flooded using sandbags to prevent flow into the sludge pond. The water was left to sit for three hours within the channels, allowing for sufficient hydration in the 40°C heat, and the sandbags then removed to allow the water to drain. Due to high winds and the extreme temperatures, the CC was hydrated a second time the following morning at 6am while it was still cooler outside, in order to allow the CC to hydrate effectively.

In total, the installation of the CC took just 45 minutes, with the project spanning over two days including ground preparation, installation and hydration.

A total of 600m² of CC5™ was installed by a team of 10 people. The works were carried out by Sarooj for PDO, with consultation provided by BLC and RTConsult. The project was a success, with all criteria set out prior to the project being met.