CONCRETE CANVAS®

CHANNEL LINING

Project Info

- 23 / 09/ 24
- CCT2® Bulk Rolls
- 1,500m²
- Transverse layers
- Sollentuna, Sweden
- Häv och gräv i Östergötland AB
- To provide erosion control to a storm water drainage channel.

Completed Installation

In September 2024 Concrete Canvas® GCCM* (CC) was used to provide erosion control to a storm water drainage channel in Solletuna, Sweden.

The drainage channel was designed to collect rain-water run off from the top of a slope and transport it down into the below drainage system. However, over time the unlined drainage channel was becoming increrasingly damaged due to vegetation growth and erosion. To prevent further damage to the channel, clients SEOM VA-huvudman and Sollentuna municipalit looked at a number of solutions.

A rubber membrane was deemed unsuitable mainly because of environmental exposure reasons, but also because it would have been difficult to properly anchor it down to the substrate. A canal with L-shaped supports and a cast concrete bottom was considered, but the idea was abandoned because it made the structure too complex. Due to these options being unsuitable for the project, CCT2® was chosen due to the material being is easier, faster and simpler to install whilst causing minimal impact to the surrounding environment.

*Geosynthetic Cementitious Composite Mat

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Completed installation

Prior to installation, the unlined drainage channel had to be re-profiled with the vegetation removed and the slopes within the channel graded into a uniform surface. Once the works were completed, Bulk Rolls of CCT2® were brought to site and lifted into place using an excavator with a spreader beam attachement. Each Bulk Roll was laid transversely across the channel and cut to desired length using a disc cutter. Each layer of CCT2® was overlapped by 100mm and joined using stainless steal screws spaced every 100mm in the direction of water flow. To prevent water-ingress and wind uplift, the CCT2® material was secured within pre-excavated anchor trenches using steel pegs placed through each overlap. Once the material was secured in place, it was hydrated using a water bowser and hose, with the anchor trenches then back filled with excavated substrate.

The installation was completed by a team of 2 from Häv och gräv i Östergötland AB in just 7 days. With 4 days spent excavating the drainage channel and 3 days to install and hydrate 1,500m^2 of CCT2®.

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