

Project Info



09 / 12 / 14



CC8™ Bulk Rolls



125m²



Transverse and Longitudinal layers



Otanche, Boyacá, Colombia



CONPROS



CC8™ was used to prevent rainwater runoff causing undermining of a nearby road.



Completed installation

In December 2014, Concrete Canvas® GCCM* (CC) was used to line a dissipater ditch to prevent undermining of the nearby road. Pre-mixed concrete had been used on other parts of the project, however this was taking a long time to install; pre-mixed concrete needed exact ground preparation and the re-bar and formwork would have been logistically complex due to the steepness of the slope and tight turns. Installation was carried out by CONPROS for the National Roads Institute of Colombia (INVIAS).

The ditch was excavated and vegetation and loose rocks removed. The ditch was then graded to create steps that would reduce water velocity. Bulk rolls of CC8™ were delivered and batched to specific profile length on site, then unrolled into the ditch by hand. The sides of the ditch were lined transversely in the direction of water flow with an overlap of 100mm between layers. The edges of CC layers were placed in an anchor trench at each shoulder and fixed to the substrate using 500mm ground pegs at 1m intervals. Material beneath overlaps was hydrated, then overlaps were jointed using screws at 200mm centres. Two longitudinal layers were laid consecutively along the base of the ditch, hydrated and sealed with mortar and FT 101 sealant. The full installation was then hydrated using a hose and 800 gallon drum.

125m² of CC8™ were installed by 6 people in two 8-hour days, with some precipitation and temperatures of 20-30°C. The contractor was very impressed with the speed of installation, with CC proving to be 10 times faster to install than poured concrete used on a very similar project.

*Geosynthetic Cementitious Composite Mat





Ditch was excavated and steps introduced



CC laid over the sides of ditch and into an anchor trench



Sides were lined first, then CC applied to ditch base



Sealing overlaps using FT 101 sealant



After hydration, planks were used to prevent voids behind the CC



Finished project