

DITCH LINING



In November 2010, Concrete Canvas GCCM* (CC) was used to line a ditch adjacent to the M4 in Wiltshire, UK. The ditch needed to be cleared and was in dire need of repair. Originally a series of pipes and headwalls had been considered however there was concern over pipe blockages and future maintenance issues, so an alternative design was sought. CC provided a solution that prevented erosion, suppressed weed growth and eliminated the maintenance issues associated with blocked pipes. Additionally, there was a key requirement to introduce a series of cascades that would reduce the water flow rate. CC enabled simple and cost effective cascades to be constructed using concrete sandbags, over which the CC was easily laid.

The existing concrete ditch was cleared of debris to ensure intimate contact between CC and the substrate, whilst a new section of ditch was excavated and graded to profile. A small anchor trench was created at each crest, before the cascades were constructed using concrete sandbags located every 3m along the base of the ditch. Bulk rolls of CC8™ were delivered to site and hung from a spreader beam which allowed the CC to be cut to specific profile length, avoiding wastage. The CC was then laid transversely across the ditch with a 100mm overlap between layers. The CC was pegged into the anchor trench through every overlap, but the overlaps themselves were not sealed to create weep paths that would prevent the build up of hydrostatic pressure behind the material. Holes were cut into the CC to accommodate inlet pipes and other existing infrastructure. After hydration, anchor trenches were backfilled to prevent water ingress.

The project was deemed a success and the speed and ease of install allowed a 20 linear metre section of ditch to be laid by a team of 3 in just 1 day.

*Geosynthetic Cementitious Composite Mat













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