

Project Info



01 / 02 / 16



CC8™ Bulk Rolls



1250m²



Transverse layers



M32, Bristol, UK



GRAHAM
CONSTRUCTION



CC used to provide
erosion protection to
near road side drainage
channel on M32



Completed installation

In February 2016, Concrete Canvas® GCCM* (CC) was used to line a drainage channel at the side of the M32 motorway in Bristol. The installation was part of construction works for a new bridge designed for bus-only traffic and the MetroBus scheme, a series of major improvements to the transport network by Bristol, South Gloucestershire and North Somerset Councils which aimed to ease congestion and improve public transportation services.

An existing channel was designed to accommodate surface run-off from the adjacent field and Purdown Hill. However, this had to be realigned to accommodate the new slip road. CC was chosen for this project due to its quick installation times, ability to be installed in wet conditions, and the reduction of disruption to traffic. The works were carried out by Graham Construction, and commissioned by The National Grid and PPV Ltd.

With over 60,000 vehicles commuting daily on the M32*, minimising traffic disruption and reducing land possession was paramount. Typically installed 10-times faster than conventional concreting options, the speed of installation of CC was a key part in its specification by SWECO. CC's ability to be installed in wet conditions, would also reduce any potential for programme disruption, whilst cutting the material onsite to the exact dimensions of profile sections, accommodated the changes in profile width. Prior to hydration, CC is a flexible material that can easily accommodate existing infrastructure, in this case, a series of drainage pipes running off from the adjacent field.

*Geosynthetic Cementitious Composite Mat





Section of incumbent concrete poured channel



Grading of profile and deployment of type 1 aggregate



Layers of CC laid transversely to accomodate varying profile widths



Cutting CC to length to reduce wasteage



Fixing CC to substrate with 250mm ground pegs



Jointing overlapped layers of CC using screws at 200mm centres



Hydration of deployed and fixed CC



CC conforms to the substrate, greatly reducing preparation time



CC easily negotiated corners and changes in depth and profile



Ditch outfall collecting surface run-off from adjacent field



Works in progress



Completed project

The existing poured concrete channel was removed and the new section was excavated using plant and v-bucket. The base was then scattered with aggregate before the CC was laid across the width of the channel and cut to size using a petrol disc cutter. The CC was overlapped in the direction of water flow by 100mm, and screwed together at 200mm intervals. The outside edges of the CC were then pinned in anchor trenches using 200mm steel ground pegs and backfilled. Hydration was then given via a roadside bowser and pump.

A total of over 1,250m² of CC8™ was installed in under 8 days by eight people in incliment weather. The project saved time, money and avoided significant traffic disruption and unnecessary lane possession.