

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 conjection 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 accomodate 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 ver 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, accomodated the changes in profile width. Prior to hydration, CC is a flexible material that can easily accomodate existing infrastructure, in this case, a series of drainage pipes running off from the adjacent field.

\*Geosynthetic Cementitious Composite Mat



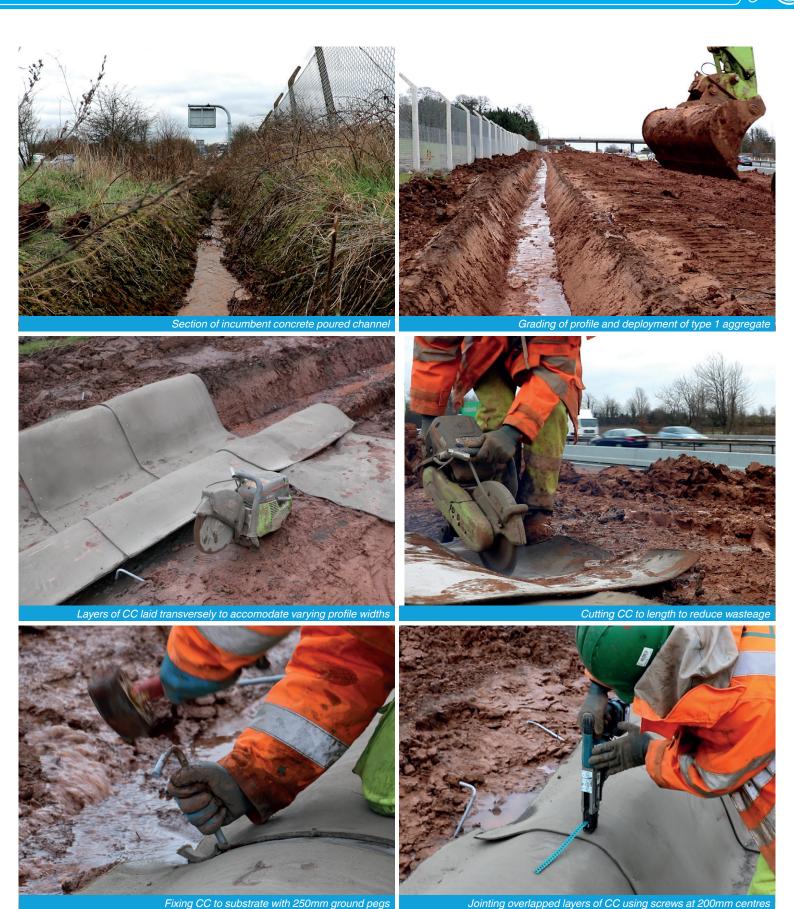












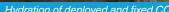
































The existing poured concrete channel was removed and the new section was excavated using plant and v-bucket. The base was then scattered with aggregate before the CC was laid across the width of the channel and cut to size using a petrol disc cutter. The CC was overlapped in the direction of water flow 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 1,250m<sup>2</sup> of CC8™ was installed in under 8 days by eight people in incliment weather. The project saved time, money and avoided signficant traffic disruption and unnecessary lane possession.



