

## Project Info



22 / 02 / 19



CC8™ Bulk Rolls



250m<sup>2</sup>



Transverse layers



M6 Junction 3  
Northbound, England, UK



Hillstreet UK Limited



CC8™ used to provide  
a channel lining solution  
to newly constructed  
Accidental Spillage  
Containment channels



Completed channel alongside M6 in England, UK

In February 2019, Concrete Canvas® (CC) GCCM\* was specified as a channel lining solution for Accidental Spillage Containment alongside the M6.

The scheme was designed to create a number of Accidental Spillage Containment (ASC) along the M6 J2-4 Smart Motorway upgrade scheme. The ASCs are situated at the toe of the embankment alongside the road, and capture water run-off from the road, including contaminated water. At each end of the ASCs are headwalls with penstock attached. In the event of an incident on the carriageway, the penstocks are manually shut to prevent contamination entering the local water courses. The ASC profiles have been designed to contain a certain volume of water when the penstocks are shut. Once the ASC is to capacity, the contaminated water can be pumped out and treated. The penstocks can then be reopened and the normal surface drainage water can flow through the ASCs.

Works were carried out by Hillstreet UK Limited for a Balfour Beatty VINCI Joint Venture on behalf of Highways England. Arcadis Jacobs Joint Venture acted as Designer for the project, while Concrete Canvas Ltd provided additional support where required.

The original ditch was in a poor state, with erosion and scour having altered its profile, as well as significant weed growth reducing its effectiveness. The attenuation solution, such as ASC lining with Concrete Canvas® and associated penstocks, improve the control of unforeseen pollution or incidents.

\*Geosynthetic Cementitious Composite Mat







*Original channel had suffered erosion and was overgrown*



*Newly constructed ASC following ground works*



*CC bulk rolls deployed from plant mounted spreader beam*



*CC deployed transversely across channel width*



*CC cut to length in-situ to minimise waste*



*CC material hydrated under overlaps prior to jointing*





CC edges secured in anchor trenches using ground pegs



Joining overlaps using stainless steel screws



Completed ASC following backfilling of anchor trenches



Completed ASC







*Profile of completed ASC*

Due to the state of the ditch, it was filled in and recut prior to lining to ensure a consistent profile and smooth substrate on which to lay the CC, avoiding the possibility of voids beneath the material.

The material was laid using a 13.5t tracked plant, deploying the material via a mounted spreader beam. The material was laid in a transverse layup across the width of the ASC and in the direction of water flow, with CC edges captured in anchor trenches and fixed using Galvanised Mild Steel pegs. Overlapped layers of CC were jointed together using stainless steel screws to prevent ingress. Where the material terminates against precast concrete headwalls, grout was used to secure it and prevent ingress of water between the material and headwall. Once installation was completed, the material was hydrated directly from bowsers and the material captured in the anchor trenches buried.

The installation of the CC was carried out across two consecutive weeks, with each of the two ASCs taking just two days to complete. A total of 250m<sup>2</sup> of CC8™ were installed on this project, with the crew of four carrying out works in mostly dry weather.

Despite access restrictions, logistical requirements were greatly reduced. In comparison, a poured concrete installation for this project would have required considerable vehicle movement and heavy plant machinery.