

## Project Info



23 / 06 / 11



CC8™ Bulk Rolls



375m²



Transverse and Longitudinal layers



A46 Newark to Widmerpool Improvement



Balfour Beatty



Successful trial to prove CC as an alternative to concrete slab lined ditches

**Balfour Beatty**  
Ground Engineering



CC lined channel after installation

In June 2011, Concrete Canvas® GCCM\* (CC) was used to line a ditch alongside a stretch of the A46 as part of the Newark to Widmerpool improvement scheme. The ditch was designed to catch surface run-off from adjacent fields to prevent localised flooding of a critical section of the A46.

An initial trial of 160m² was carried out to establish whether CC could successfully be used as an alternative to the originally specified concrete slabs for providing erosion protection to the invert of the channel. The works were carried out by Balfour Beatty.

In preparation for the deployment of the CC, Balfour Beatty cleared the ditch of vegetation and debris before grading the profile. The CC was deployed in a transverse layup at the lower section of the channel to accommodate sharp bend radii, whilst the longer and straighter sections at the crest of the hill were laid in a longitudinal layup. The material was deployed in bulk rolls, mounted on a spreader beam attached to a tracked excavator, which was able to follow the contours of the channel.

Following the success of the proof of principle trial, the remaining 150 linear metres of channel was lined with CC8™. In total, 375m² of CC8 was installed in significantly less time and with a lower logistical footprint compared to the concrete slab alternative, greatly reducing the time on site and minimising passenger disruption through lane possession.

\*Geosynthetic Cementitious Composite Mat







*Ditch prior to groundwork and installation*



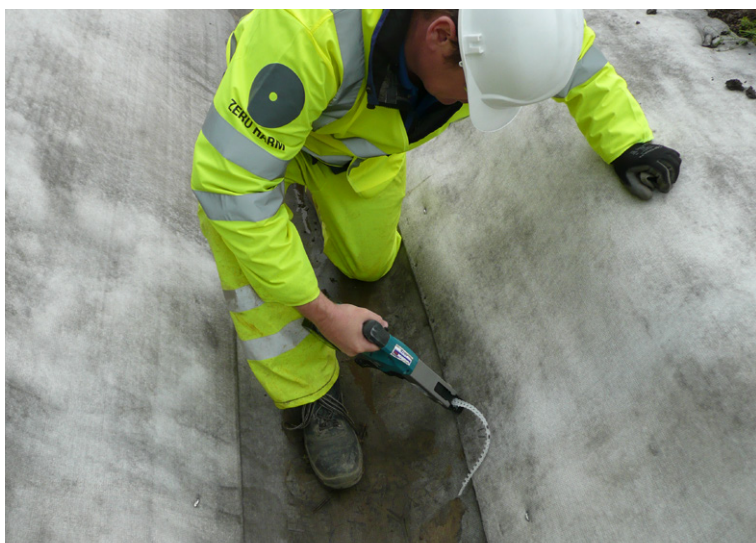
*CC8 bulk roll laid from spreader beam for the steep section in 20 mins*



*Side CC layers added*



*CC hydration of overlap areas*



*Overlaps joined with 25mm drywall lining screws*



*Section of completed channel where transverse layup meets longitudinal layup*



Following a site inspection in April 2018, despite being installed prior to the development of Concrete Canvas Ltd's [Four Key Principles of Installation](#), the CC lined channel was found to be performing hydraulically exactly as designed, 7 years later without any required maintenance in the intervening period.



\*Geosynthetic Cementitious Composite Mat