

## Project Info

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 CC8™ Bulk Rolls

 1250m²

 Longitudinal layers

 Covington Road, South Lanarkshire, Scotland

 QTS

 CC used to line a drainage channel along rail cutting to prevent erosion and prevent washout failures.

**NetworkRail**

**QTS**



Completed channel lining installation in Scotland

In January 2018, Concrete Canvas® GCCM\* (CC) was specified to line a drainage channel at Covington Road near Thankerton in South Lanarkshire, Scotland.

The aim of the project was to reline a 600 linear metre open drainage channel to prevent erosion and reduce cutting saturation, which could potentially cause land slippage. The works were carried out by QTS, who have installed CC on many other projects for the client, Network Rail.

If the channel had remained unlined, it would have meant periodic and costly de-vegetation of the channel in order to prevent blockages and subsequent overspill and slope saturation. CC offers long term, effective weed suppression and was specified due to its ease of and speed of install, which significantly reduced time on site and the overall installation cost.

10 bulk rolls of 8mm thick CC (CC8™) were delivered to the project site. Prior to installation the channel was excavated and compacted to profile using an excavator and V bucket. Anchor trenches were dug on either side of the channel to allow the leading edge of the CC to be buried so as to prevent undermining. The bulk rolls were deployed with a spreader beam with two layers laid longitudinally and CC overlaps screwed together at 200mm intervals with stainless steel screws.

\*Geosynthetic Cementitious Composite Mat





*Railway line and crest drainage channel*



*Excavated channel prior to installation*



*CC8™ bulk rolls placed strategically at intervals along channel*



*Two CC layers laid longitudinally and pinned into anchor trenches*



*CC termination at concrete outfall*



*Concrete outfall diverting water into culvert underneath railway line*





CC channel protecting rail cutting from saturation following previous landslip



Completed CC lined channel

The installation team pinned the material into anchor trenches on either side of the channel with 250mm ground pegs at 2m intervals and the anchor trenches were then backfilled as an extra precaution against undermining. Following each day's work, the CC was hydrated using a 1000L bowser and hose with a diffused spray nozzle. The material cannot be overhydrated and has a working time of 1-2 hours after hydration which meant it could still be installed in the rain without any programme disruption.

In total, 1,250m<sup>2</sup> of CC8™ were installed by a team of five in inclement weather conditions in less than 1 week. The client was pleased with the installation as it will prevent erosion and cutting saturation, which could potentially cause land slippage and subsequent line closures.

*"Concrete Canvas is a great solution as a viable alternative to below ground piped drainage for many crest drain applications. CC allows for long runs of effective crest drainage which is readily maintainable and prevents newly profiled ditches from overgrowing with vegetation, which in turn offers a cost effective solution for our Client."*

**Mark Knowles**  
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