

Project Info



24 / 09 / 14



CC5™ Batched Rolls



450m²



Transverse layers



Earlston, Scotland



Castle Group Scotland



CC8™ used to reline a failing culvert and prevent localised flooding.



Completed installation

In September 2014, Concrete Canvas® GCCM* (CC) was used to line a culvert in Earlston, Scotland. The culvert was failing and previous lining/remediation attempts had been unsuccessful. Shotcrete was considered as an alternative, however this would have resulted in a much lengthier installation, as well as requiring much more complex logistics as access to the full length of the culvert was limited. Additionally there was concern over the environmental implications of installing shotcrete in this location.

Installation was carried out by Castle Group Scotland for Bear Scotland. To prepare the culvert the existing failed coatings were removed from the corrugated section and replaced with a semi dry mortar mix to provide a flat profile. Further down the culvert is of masonry construction, and the entirety of the culvert floor is poured concrete. Batched rolls of 5mm thick CC (CC5™) were delivered to site and unrolled by hand across the width of the culvert, with an overlap of 100mm created between adjacent layers. The overlaps were screwed with 30mm stainless steel screws at 200mm centres but were left unsealed, creating weep paths to prevent the build up of hydrostatic pressure behind the CC. The top edges of the CC were sealed with a line of grout to prevent water ingress behind the material. Water was pumped from the nearby water course for hydration.

450sqm of CC5™ were installed by 4 people in 4 days in a live water course. The client was very impressed with the installation and CC is likely to be used on further culvert projects.

*Geosynthetic Cementitious Composite Mat





Masonry section before works began



Corrugated section before works began



Grout applied to corrugated section



Overlaps screwed and a grout applied to the top



The finished install



The finished install