

## Project Info



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CC13™ Bulk Rolls



170m<sup>2</sup>



Transverse layers



Oak Mollington Golf Club,  
Townfield Lane, Cheshire



Northern Divers (Eng) Ltd.



CC13™ was used to  
provide protection to  
a shallow cover gas  
pipeline

**Northern Divers**  
[Engineering] Limited



Completed channel in Cheshire

In January 2018, Concrete Canvas® GCCM\* (CC) was used to provide protection to a shallow cover utility pipeline at Oak Mollington Golf Club in Cheshire. The contractors, Northern Divers (Eng) Ltd., have typically used concrete mattresses to provide shallow cover utility pipeline protection in the past, however, in certain circumstances, these can be costly and impractical to transport. Due to the site access and location, CC was specified in bulk roll format as it was a more cost-effective alternative for the installation.

Prior to the installation, all vegetation was removed from the channel, the ground re-graded and anchor trenches dug on each shoulder using the 8T digger on site. The material was then delivered, mounted onto a spreader beam and hung from the digger, and laid transversely across the channel. The material was secured in the anchor trenches using galvanised mild steel pegs. Subsequent layers of the material were screwed together at 200mm intervals. This was repeated along the length of the channel, before the CC was hydrated.

170m<sup>2</sup> of CC13™ were installed in approximately 3 days by a team of 4 people, in cold conditions. The contractor, who was new to CC, was very pleased with the outcome of the installation.

On the material cost alone, the Concrete Canvas alternative to the revetment mattresses was over two-thirds less expensive, saving the client tens of thousands whilst providing the same technical performance and scour protection.

\*Geosynthetic Cementitious Composite Mat







*Channel prior to works*



*Outflow pipe meeting channel*



*CC was laid transversely across the channel*



*CC was fixed in anchor trenches using ground pegs*



*Screws were used to joint overlaps*



*Channel termination detail*





Completed channel

***“The underlying utility pipeline now has hard engineered concrete protection from impact damage and scour without increasing bed levels so as to cause a damming effect at the outflow pipe.”***

Keith Dunn  
Project Manager  
Northern Divers (Eng) Ltd.