

Project Info

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CC

CC13™ Bulk Rolls

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120m²

Transverse layers

Ulceby, Lincolnshire, UK

PPV Group Ltd.

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CC13™ was installed as a channel lining and erosion protection solution above a gas pipeline for Cadent Gas

Cadent
Your Gas Network

PPV
Group Ltd



Completed installation

In June 2019, Concrete Canvas® (CC) GCCM* was installed as a channel lining solution to provide erosion control and weed suppression over an identified shallow cover HP gas pipeline at a site near Ulceby in Lincolnshire, UK.

Cadent Gas have a series of pipelines (assets), many of which are crossed by drainage channels in privately operated farms and fields. The regular maintenance of these drainage channels can erode the protective top cover for buried high-pressure and intermediate-pressure pipelines which then run the risk of impact or puncture by landowners and third parties. A minimum level of top cover must be maintained over pipelines.

Traditionally, methods for maintaining and protecting the shallow cover above pipelines have included regular maintenance of the channel by the site owner, which typically involves mechanical dredging or manual clearance of the channel. Both of which run the risk of reducing the level of protective top cover, are time consuming, costly and pose Health and Safety risks of working within the vicinity of a high pressure gas line.

Larger sites may warrant installation of a full culvert which is also costly and time consuming to install. Neither flume nor culvert allows for open visual inspection of the channel and are prone to blockage. Lining the channel with CC does not reduce the hydraulic capacity or flow rate of the existing channel, unlike with flumes or culverts.

*Geosynthetic Cementitious Composite Mat



Site prior to works



Grading of the channel banks



Channel following ground preparation



CC edges pinned within anchor trenches half way up the slopes



Anchor trenches backfilled following hydration



Termination of leading edge



Completed channel lining installation for pipe protection

In addition, CC offers high visibility of the lined channel, ideal for aerial inspection and, in conjunction with the current Marker Posts, provides a warning to third party maintenance teams. The speed of installation means contractors spend less time on site, reducing risk to Health and Safety, minimising site access requirements and returning the asset to full operation in less time. CC is BBA certified with a durability in excess of 120 years when used in erosion control applications.

The project was carried out as part of the shallow cover gas pipeline works that have been running since 2016. The section of the channel which required lining was overgrown with weeds. As a result, prior to installation, the vegetation had to be removed and the banks graded to provide an even, formalised and smooth surface on which to install the CC.

CC13™ was specified for the project and delivered to site in bulk rolls. The gas pipeline was identified in the invert of the channel, the CC was installed above with the leading and trailing edges of the material buried in anchor trenches that were dressed with hardcore after the installation of CC had taken place. The material was deployed from a plant-mounted spreader beam and laid transversely across the channel's profile, with perimeter edges terminated in anchor trenches around half-way up the banks of the channel and secured using GMS ground pegs. Overlapped layers of CC were jointed using stainless steel screws.

The scheme as a whole was completed in five days; the installation of 120m² of CC13™ was completed by a team of three in just two days. The client, Cadent Gas, was pleased with the outcome of the project.