

Project Info



08 / 06 / 2015



CC13™ Bulk Rolls



2000sqm



Transverse layers



Cwm, Ebbw Vale, UK



Jim Davies Engineering



CC13™ used to line a series of drainage ditches at a landfill site in South Wales.



Completed installation

In June 2015, Concrete Canvas® GCCM* (CC) was used to line a series of drainage ditches at the Silent Valley Waste Management landfill site in Cwm, Ebbw Vale, South Wales, UK. Rainwater was infiltrating the landfill, creating a potentially hazardous leachate that cost the landfill company over £250,000 a year to safely dispose of. The proposed solution was to cap the landfill with an impermeable geosynthetic, which would direct the rainwater into a series of ditches without risking any contaminate material entering the watercourse.

The ditch was excavated to profile using a plant and V-Bucket combination. Bulk rolls of 13mm thick CC (CC13™) were unrolled on the flat and cut to specific profile length using a disc cutter. These lengths were carried into position by the installation team, with each layer overlapping the previous by 100mm. The edge of the CC was placed under the impermeable geosynthetic before being backfilled to create an anchor trench. Hydration was achieved using a 1000L bowser and hose combination. The roadside edge of the ditch was buried under 150mm - 200mm of hardcore.

In total, 2000sqm of CC13™ were installed in just a few weeks™, providing a rapid and permanent drainage solution that would help the client save £250,000 each year.

“We’ve used CC on a number of installations now across Wales, on landfill sites and on mine water treatment plants. The speed that we can install it and the fact that it can be laid in the rain means we can get in and out of sites quickly and provide our clients with a cost effective concrete solution in conditions and geographies that would be difficult if not impossible to do with conventional options. I think it’s a great product and would have no hesitation in recommending CC being used on similar sites. In fact, we are demobilizing from the Glyncorrwg scheme to start works immediately on a similar sized CC project for a local authority.”

Martin Parry
Jim Davies Civil Engineering

*Geosynthetic Cementitious Composite Mat





The ditch was excavated to profile



CC13™ cut to length



Positioning the CC in the ditch



Burying the CC and geosynthetic



Hydration



A finished section of ditch