

Project Info



12 / 10 / 17



CC8™ Bulk Rolls



250m²



Transverse layers



Treorchy Comprehensive School, Treorchy, South Wales



Hammond ECS



CC8™ was used to line a dilapidated concrete slab channel on the site of a comprehensive school in South Wales.



The completed channel on the grounds of Treorchy Comprehensive School

In October 2017, Concrete Canvas® GCCM* (CC) was used to line a dilapidated channel on the grounds of Treorchy Comprehensive School.

The channel, which had originally been constructed out of concrete slabs, was situated on the Northern bank of the school, at close proximity to some of the school's buildings. The channel's purpose was to collect and transport surface run-off from the bank, protecting the adjacent classrooms.

A number of alternative methods had been considered for the project, including a plan to excavate and re-profile the channel, before replacing and re-pointing the concrete slabs. However, CC was chosen above the considered alternative solutions due to being up to 10 times faster to install than traditional methods (therefore requiring less time on site, and often saving money), considerably more beneficial to the environment, and the lack of requirement for heavy plant on site. The use of CC also mitigated any requirement for maintenance and risk of further degradation of the channel in future, minimising any associated health and safety risks.

The works were carried out by Hammond ECS for Treorchy Comprehensive School, with input and consultation from Rhondda Cynon Taf County Borough Council.

*Geosynthetic Cementitious Composite Mat





Loose concrete slabs were a H&S risk and decreased efficiency of the channel



Parts of the channel had become overgrown



The leading edge of the CC was pegged in the embankment anchor trench



The CC was laid transversely with overlaps measuring 100mm



Joints were fixed using screws or Hilti shot-fired nails



Once installation was completed, the CC was hydrated



Completed channel section



The flexibility of CC allowed the team to easily work around existing pipework



Termination of CC at a headwall



The completed channel

Prior to the installation of the CC, which was delivered to site in bulk rolls of CC8™, the channel's concrete slabs were pressure washed in order to remove any build-up of silt and vegetation. Anchor trenches were then excavated at each side of the channel, and the embankment leading into the channel was graded.

The CC was then cut to specified lengths and transported to the channel, where it was laid transversely across the channel's width. The leading edge of material was fixed into the anchor trench at the top of the excavated section of embankment using ground pegs, and the CC was then laid across the channel and fixed in the anchor trench in the opposite side. Subsequent layers were overlapped by 100mm and the material was jointed using screws and a screw gun for the earth bank slope substrate, or Hilti shot-fired nails for the concrete slab sections. Once the installation was completed, the CC was hydrated using a 1000L IBC and pump.

A total of 250m² of CC8™ were installed in 1 week by a team of 3 in wet, inclement weather conditions. The Council are very happy with the result and quality of finish on the installation and have said they would look to use the material again on similar projects.