

Project Info



18 / 03 / 19



CC5™ Bulk Rolls



250m²



Vertical layers



Ireland



CEM Services



CC5™ installed at petroleum facility in Ireland to demonstrate erosion protection and weed suppression for an existing bund.



Completed installation at Ireland petroleum facility

In March 2019, Concrete Canvas® GCCM* (CC) was used to provide erosion protection and weed suppression to an existing bund at a major petroleum facility in Ireland. The existing bunds surrounded a series of tank farms storing hydrocarbons as part of the larger offshore facility.

The bunds required regular maintenance to control vegetation growth and CC was chosen on a trial basis by the client to provide hard armour weathering protection of bunds, effective weed suppression, protection against animal damage and additional levels of containment and fire protection.

The works were carried out by CEM Services who provide extensive multidisciplinary maintenance and civil engineering services to the oil and gas industry in Ireland.

Vegetation was removed from the bund prior to works and any sharp rocks or protrusions were removed from the substrate to ensure a uniform profile. The bulk rolls of CC5™ were dispensed from a spreader beam mounted from a large crane located at the crest of the bund. Each bulk roll was positioned at the toe of the bund and secured within the 150mm anchor trench by the installation crew using 250mm galvanised pegs. The CC was then unrolled back up the bund where it was cut to length using utility knives and secured into the crest anchor trench with additional pegs.

*Geosynthetic Cementitious Composite Mat





Bund area prepared prior to works



Bund following grading ready for installation



Installation in progress



Deploying bulk roll



CC secured in toe anchor trench and unrolled up bund height



CC layers laid vertically



Crest anchor trench detail



Applying sealant and screwing layers together at 50mm centres



Anchor trenches backfilled following hydration



CC bund installation completed

Subsequent layers were overlapped by 100mm and the overlaps sealed using a CC-approved sealant and jointed with stainless steel screws at 50mm intervals using an autofed screwdriver. The sealant created an impermeable joint whilst the screws provided a mechanical bond between overlapped CC layers. Hydration was achieved at the end of the working day using a bowser and pressure hose with spray nozzle attached, after which the anchor trenches were backfilled to prevent water ingress under the CC and provide a neat termination. The installation crew safely navigated the bund area during the installation by utilising a fall restraint system.

In total 250m² of CC5™ was installed in less than 2 days with a crew of 4 people from CEM Services and will provide long-term erosion protection and weed suppression for the client while providing additional levels of containment and fire protection for the bund area.