SLOPE PROTECTION

Project Info

- 01 / 07 / 18
- CC5™ Bulk Rolls
- 280m²
- Vertical layers
- West of Scotland
- TSL Contractors
- CC used to provide slope reinforcement at a newly constructed fish hatchery.

Completed installation

In July 2018, Concrete Canvas® GCCM* (CC) was used to provide slope protection at a newly constructed fish hatchery in the West of Scotland.

The project involved the design of reinforced concrete slab bases for the header tanks, shed and external tanks. The header tank mounding and slopes were made up with dug material and layered and tracked in with a geogrid in 450mm layers. The consulting engineer specified CC5™ to reinforce the side slopes with anchor trenches dug at the crest and toe of the slopes to prevent undermining and provide a neat edge termination.

Various alternatives were originally considered but CC was ultimately chosen due to its speed and ease of installation and its flexibility in terms of site access, as the project was located in a remote location only accessible by ferry.

CC5™ was supplied in bulk rolls which, following delivery, were mounted on a spreader beam and lifted by an excavator. The material was cut to the required length on site using a Stihl cut-off saw in order to reduce material wastage. Ladders were then placed along the side slopes to allow safe access for the installation crew during the installation.

*Geosynthetic Cementitious Composite Mat

CONCRETE CANVAS®
+44 (0) 345 680 1908 info@concretecanvas.com www.concretecanvas.com

CONCRETE CANVAS®

SLOPE PROTECTION

Bund reinforced using compacted soil and geogrids at 4500mm layers

Sand compacted prior to CC installation

Deploying CC bulk roll

Screwed and seled joint

Backfilled anchor trenches and corner detail

Corner detail

CONCRETE CANVAS®
+44 (0) 345 680 1908 info@concretecanvas.com www.concretecanvas.com

Concrete slab poured and header tanks and pipes installed after CC set

The rolls were installed in vertical layers and secured at the crest and toe of the slope into 150mm anchor trenches using 250mm x 12mm steel ground pegs. Subsequent layers of material were overlapped by 100mm and sealed together with Everbuild Clearfix sealant and jointed using screws at 200mm intervals, creating a neat, flush joint between layers. The anchor trenches were subsequently backfilled and compacted with as-dug material. Once installation was completed, the CC was hydrated using a simple hand pump water system.

Following the CC installation, the contractor poured a concrete slab around the mound perimeter and the header tanks and pipes were installed on top.

The installation team were impressed by the speed and ease of installation of CC on a site with heavily restricted access. In total 280m^2 of CC5™ were installed in 3 days with a crew of 4 people without specialist training or plant equipment and will provide long-term slope reinforcement around the header tanks.

"We are delighted with the finished article. By using CC we were able to create a clean and tidy, but critically, small, base for the header tanks to sit on. If we had used conventional concrete, it would have had to be a much larger base which would have required significant tree felling."

Michael Laing, Strutt & Parker
Client Representative

+44 (0) 345 680 1908 info@concretecanvas.com www.concretecanvas.com