

Project Info



11 / 01 / 18



CC5™ Batched Rolls



20m²



Transverse & Vertical layers



Adelaide, Australia



Retaining Wall Solutions



CC5™ was used to line stormwater outfall slope and protect the road alongside it



Completed outfall slope in Adelaide, Australia

In January 2018, Concrete Canvas® GCCM* (CC) was used to remediate a stormwater outfall slope in Adelaide Hills Council, Australia.

The outlet, situated in the hills east of Adelaide, comprised of a near-ancient concrete drop structure which had failed and collapsed, and was risking destabilisation of the slope along with the road under which the outlet was buried. The proximity of the outlet to the road edge, along with the angle of the slope, meant not only would the cost of the slope's failure be high, but it was likely that the scour would undermine the road and cause failure if action was not taken.

The conventional method option, installation of reinforced shotcrete, is not only time consuming and expensive, but in access restricted areas can create an Occupational Health and Safety hazard (OH&S), especially regarding handling of the concrete discharge pipe. Instead, CC was specified for the project due to its ability to be easily installed on the site, despite limited access, and would save costs and time, and reduce any health OH&S risks associated with the installation.

The works were carried out by Retaining Wall Solutions for the Department of Planning Transport and Infrastructure.

*Geosynthetic Cementitious Composite Mat





Slope prior to works



Completed installation

In preparation for the installation, the slope was re-graded to ensure any debris and vegetation was removed, and two batched rolls of CC5™ were delivered to the site. The CC was unrolled and cut to required lengths, with one layer laid transversely underneath the discharge pipe. The other layers were laid running longitudinally down the length of the slope, leading into the drain below. Layers of the CC material were overlapped by 100mm and fixed to the substrate using screws and rock bolts were required. Once the installation was completed, the CC was hydrated.

A total of 20m² of CC5™ was installed in less than a day by a team of 2 people, on a site with restricted access, and on a very steep slope.

The designer and client (DPTI) was “very happy with the product”, and was impressed with its “unique ability to be super workable while being sufficiently strong”. The contractor, Retaining Wall Solutions, was also very pleased with the result, indicating that it was much faster and easier than the alternative, shotcrete. The reduced supply cost was also of great benefit to the client.