



GEOFABRICS CASE STUDY



PROTECT SLOPES FROM EROSION WITH CONCRETE CANVAS

PRODUCTS USED

CONCRETE CANVAS®

Concrete Canvas is a flexible, concrete impregnated fabric that hardens when hydrated to form a thin, durable, water proof and fire resistant concrete layer. It is the original concrete on a roll.

- Used in a variety of civil infrastructure applications, such as ditch lining, slope protection and capping secondary containment bunds
- Allows concrete construction without the need for plant or mixing equipment
- Simply unroll and position Concrete Canvas, and then just add water (any type of water, including sea water) - Concrete Canvas has no impact on the pH of runoff water
- Compared to traditional concrete solutions, Concrete Canvas is faster, easier and more cost effective to install and has the additional benefit of reducing the environmental impact of concreting works by up to 95%
- Available in bulk and smaller batch rolls

PROJECT DESCRIPTION

A slope supporting critical infrastructure became of concern to the Townsville City Council as it was at risk of eroding during the coming rainy season. They required an erosion protection solution that could be installed quickly before the Christmas break and the onset of the wet weather.

Shotcrete was considered, but site access limitations made it difficult to spray the entire slope surface and lead times meant that a sprayed concrete solution could not be completed in time for the wet season.

OUR SOLUTION

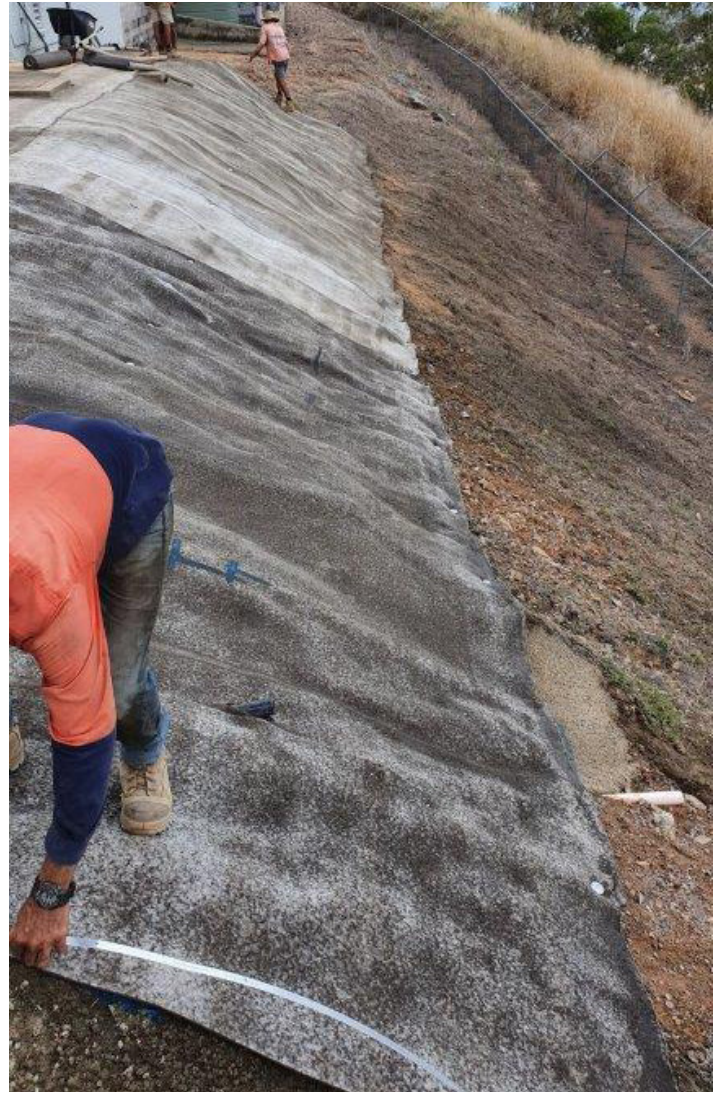
Concrete Canvas is increasingly being used as an alternative to non-structural shotcrete for the purpose of protecting slopes from surface erosion caused by weathering, surface run-off and environmental degradation.

The client chose to use Concrete Canvas GCCMs CC5™ and CC8™. Minor ground preparation works were carried out to reduce potential instability of the slope. Loose material was removed, and major erosion crevices were filled.

Two layers of CC5™ Batched Rolls were installed horizontally at the top of the slope and secured to the existing plinth using aluminium clamping bar to prevent water ingress. CC8™ Batched Rolls were then deployed vertically down the slope, secured at the edges and toe utilising anchor pegs.

All of the Concrete Canvas material was joined together by a 100mm overlapping. It was secured using a bead of adhesive sealant and inserting stainless steel screws through the layers at 100mm spacings, as per the Concrete Canvas Warmer Climates Guide. The temperature at the time of installation ranged from 30-35 degrees and rain shower hit while the Concrete Canvas was being deployed. Thanks to the 1-2 hour working time from hydration, all material was installed and joined before setting began.

The installation was hydrated using a supply of water from a storage tank - the finishing touch on an effective and timely project outcome for the client.



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Sustainable solutions

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