SLOPE PROTECTION

Project Info

- 16 / 12 / 19
- CC5™ and CC8™ Batched Rolls
- 155m²
- Vertical and Horizontal layup
- Townsville, Queensland, Australia.
- Townsville Earth Moving.
- Concrete Canvas GCMs used to provide erosion protection to a slope supporting critical infrastructure.

Installation completed

In December 2019, Concrete Canvas® GCCMs* (CC) was used to protect a slope supporting critical infrastructure from erosion in Townsville, Australia.

Although the slope was stable, the soil was loose and there was a concern that it could erode away in the coming rainy season. The client, Townsville City Council required an erosion protection solution that could be installed quickly before the Christmas break and the onset of the wet season.

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

Instead, the client chose to use Concrete Canvas® GCCMs. CC5™ and CC8™ GCCMs are stocked in hand portable Batched Roll format by Concrete Canvas Ltd's Australian Sales Partner Geofabrics Australia Pty Ltd. The material could therefore be delivered to site with short delivery lead times and could be installed without the need for heavy lifting equipment, a significant benefit for this project.

The works were carried out by Townsville Earth Moving for Townsville City Council.

*Geosynthetic Cementitious Composite Mat

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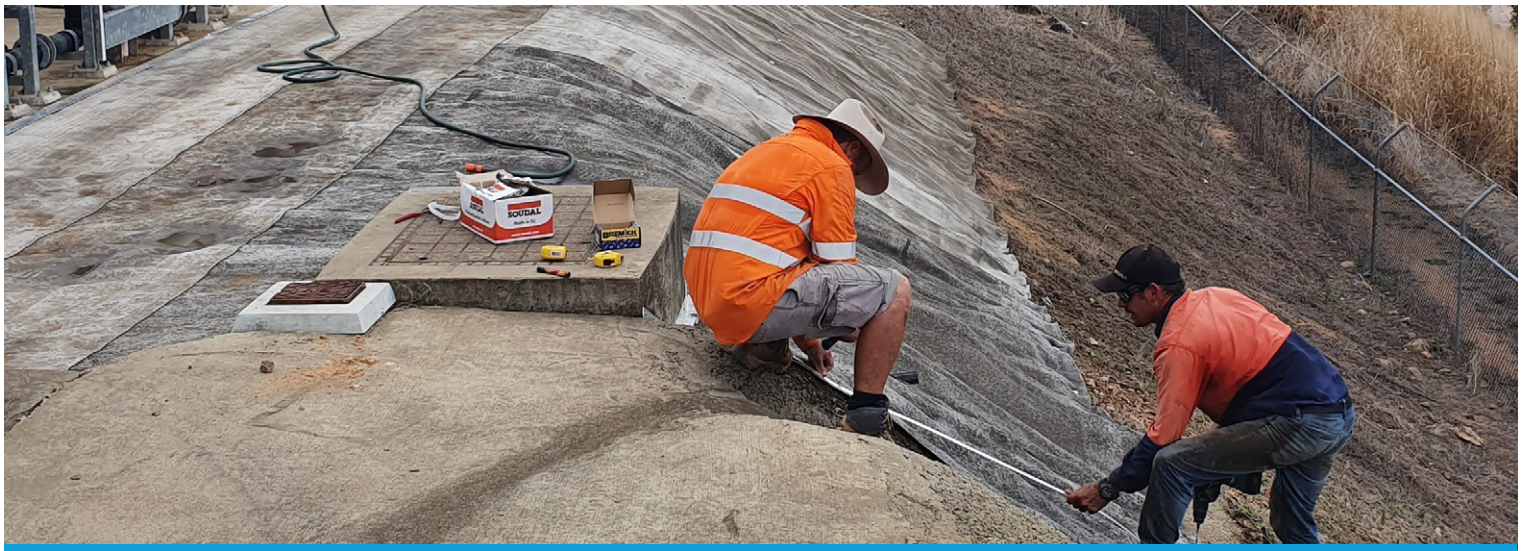

Measuring CC

Minor ground preparation works were carried out to reduce potential instability of the slope, loose material was removed and major erosion crevices were filled.

2 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 CC material was joined together by overlapping by 100mm, then secured using a bead of adhesive sealant and inserting stainless steel screws through the layers at 100mm spacings, as per Concrete Canvas Ltd 'Warmer Climate' detailing. The temperature at the time of installation ranged from 30-35 degrees and rain shower hit while the CC was being deployed, but with the inherent 1-2 hour working time from hydration, all of the deployed CC material was installed and joined before setting began. The whole installation was then hydrated using a supple of water from a storage tank with a hand-held hose.

The project was driven by a tight deadline; to complete the installation prior to the Christmas break, this was achieved and both the Townsville City Council and Townsville Earth moving considered the project a success. The installation highlighted to the client and contractor the ease & efficiency of CC, the material will now be considered on future projects where they may have traditionally turned to shotcrete. Having an opportunity to support the customer with short delivery time frames & technical support ensures they will utilise the option of installing CC on future projects.

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