

Project Info

APR 13 13 / 04 / 17

CC CC8™ Bulk Rolls

1,463m²

Transverse layers

Kenyar Dam, Hulu Terengganu, Malaysia

Daengco Sdn Bhd

i CC8™ was installed as a channel lining solution at a roadside near Kenyar Dam in Malaysia.



Completed installation near Kenyar Dam

In April 2017, Concrete Canvas® GCCM* (CC) was used to line a channel that runs alongside an access road leading to Kenyar Dam in Hulu Terengganu, Malaysia. The channel collected rain and surface water from the mountain and transported it to a nearby river.

The channel had previously been lined with rubble pitching and poured concrete, but over time water had seeped from the old concrete and got underneath the road beside it. Precast concrete or reinforced concrete were considered, but would have involved a lot of traffic disruption, as well as being much more time consuming. Due to its quick installation times, ease of installation and, therefore, limited disruption to traffic, CC was chosen for the project instead. The works were carried out by Daengco Sdn Bhd.

The CC8™ was delivered to site in bulk rolls, laid longitudinally across the profile of the channel in the direction of water flow and cut to length. The CC was then fixed to the surface using anchor wedges at intervals of around 200mm along the overlaps of material. Following installation, the edges of the CC were terminated in concrete grouting, and the CC was hydrated; however, water continued to flow through the channel during installation (as CC is capable of being installed underwater) and assisted in the hydration process.

*Geosynthetic Cementitious Composite Mat



The channel prior to installation



The CC was delivered to site in bulk rolls



The CC was laid transversely in flowing water



Anchor wedges were used to fix the CC to the channel walls



The completed installation



The channel in use



Completed installation

The CC8™ provided a waterproof lining which is capable of withstanding the high velocities of waterflow that are typical for the channel. The flexibility of the CC meant that installation was easy and much quicker than conventional concrete methods as it was able to contour to the channel profile and the team were able to prevent the formation of any voids underneath the material.

In total, 1,463m² of CC8™ were installed in 2 weeks in very wet weather conditions, which slowed progress as the work could only be carried out when the channel water levels were low. Both the client and contractor were impressed by the ease of install, and pleased with the outcome.