

Project Info



January 2020



CC5™ Bulk Rolls



600m²



Vertical layers



Watergang, Stellenbosch,
South Africa



Adferiad



CC used to provide
refurbishment to a dry
stack wall, and protect
the blocks from theft



Completed installation at the Watergang development in South Africa

Project Introduction

In January 2020, Concrete Canvas® (CC) GCCM* was installed to refurbish and provide protection to a dry stack wall from theft of its pre-cast blocks at a site in Watergang, located in Stellenbosch, South Africa.

The dry stack wall at the Watergang development was continuously being de-stabilised as a result of blocks being stolen as construction progressed. In order to deter theft of the blocks, a solution was required to protect the wall facing and prevent further blocks being removed.

Sprayed concrete was considered, but this was a costly solution and would be difficult to establish given the restricted access to the wall facing. The stepped profile of the dry stack wall also required a lining that was capable of adhering to the profile whilst not changing its performance. As a result, CC5™ was selected as a protective lining and facing that was both rapidly deployable and aesthetically suitable.

Works were carried out by Adferiad for an undisclosed customer, with consultancy provided by Element Consulting Engineers, and support from Concrete Canvas Ltd's partner, Kaytech.

*Geosynthetic Cementitious Composite Mat



Installing Concrete Canvas® GCCM

Conditions on site at the time of the installation were hot, dry and windy. While these conditions posed no real problems for installation of the CC5™, the hot temperatures and dry conditions would have to be taken into consideration during hydration.

Prior to installation of the CC, any repair work required on the dry stack wall was carried out. The CC5™ was then cut to required lengths which were laid vertically down the face of the dry stack wall. The edges of the material lengths were terminated in an anchor trench positioned 500mm behind the top of the wall and within a shallow anchor trench at the base of the wall.

All subsequent layers were overlapped by 100mm. These were jointed by thermal bonding along the laps with a hot air welder. The CC5™ was then fixed to the dry stack wall block facing using wedge anchors to ensure a flush contact with the underlying stepped profile. This was critical in ensuring voids did not occur, but also to prevent vandals attempting to pry the CC away from the wall face.

Once installation was completed, the material was hydrated using hose pipe and spray nozzle. Hydration was carried out three times at 30 to 40-minute intervals to ensure sufficient saturation of the material in the hot, dry conditions on site. A final hydration was given at the end of the working day and the anchor trenches then backfilled with non-erodible material and compacted with a mechanical rammer.



Site prior to works



Dry stack wall prior to CC installation



Proximity of dry stack wall to development site



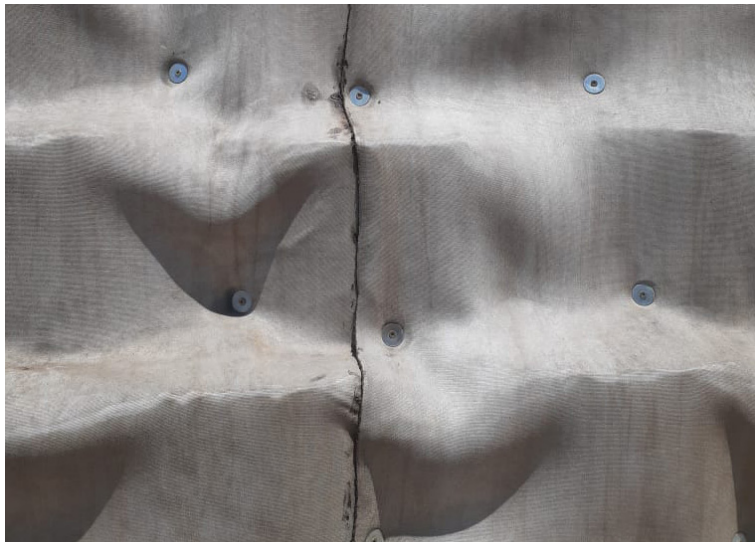
Preparation of anchor trenches



Lengths of CC installed vertically down wall face



CC secured to dry stack wall using wedge anchors



Thermally bonded CC joint and facing fixings



Hydration of CC



Completed CC installation prior to backfilling of anchor trenches



Compacting filled anchor trenches with mechanical rammer



View of completed CC installation from top of dry stack wall

Project Outcome

In total, approximately 600m² of CC5™ was utilised for lining of the dry stack wall facing. The installation progressed at approximately 200m² per day and the project as a whole was completed within a week.