

Project Info



30 / 04 / 13



CC5™ Bulk Rolls



575m²



Vertical layers



El Barill,
Cundinamarca Region,
Colombia



Undisclosed



CC5™ to prevent further
erosion and potential
land slip on a roadside
slope.



Completed project in El Barill, Colombia

In April 2013, Concrete Canvas® (CC) GCCM* was used to provide slope protection in El Barill, Cundinamarca region, Colombia. The slope 40m long in total, and situated adjacent to a main road. Heavy rainfall had contributed to severe erosion, with a small section of the slope badly affected. The erosion had created a risk of land slip and debris endangering road users. There was also a risk to the integrity of the road's surface.

The client began to search for a solution to prevent further erosion of the slope and ensure road users were safe, as well as preventing the need for costly road repairs. Shotcrete and concrete slabbing had been considered but the associated cost, the limited site access for heavy plant, and expected inclement weather during the installation period meant these solutions would prove challenging and expensive. As a result, these options were ruled out, and CC specified for the project.

In preparation for the installation, vegetation and debris were removed from the slope before the substrate was regraded. A drainage channel was created at the crest of the slope, lined with a geomembrane and later capped with CC. Bulk rolls of CC5™ were then delivered to site and the material cut to length using hand tools. The CC was installed in vertical lengths, each fixed at the crest and toe using ground pegs. The team carried out the work in four sections, beginning at the toe of the slope, installing the CC across the width of the slope, before moving onto the next section. Layers were overlapped by 100mm and jointed using drywall screws before hydration.

CC met all expectations, and eliminated the difficulties that would have come with using more traditional solutions, particularly on a limited site and the weather conditions experienced. The project was completed in less than 5 days by 2 people.

*Geosynthetic Cementitious Composite Mat





Slope prior to works



Bad weather and water runoff had caused severe erosion



Ground preparation was carried out by hand



Ridges were created in the slope to dissipate water energy



The CC was laid in vertical lengths, working from toe to crest



Hand tools were used to cut, fix and joint CC