

## Project Info

**MAY 1** 01 / 05 / 16

**CC** CC5™ Bulk Rolls

**#** 2,647sqm

**V** Transverse layers

**G** Vicuña, IV region, Chile.

**A** Agrotek Spa

**i** To improve the local water management system.



*The completed installation after hydration, before water flow*

In May 2016, Concrete Canvas® GCCM\* (CC) was used to line a drainage channel at Vicuña, IV region, Chile. The objective was to stop water infiltration in an irrigation channel and to improve the local water management system. The idea of using reinforced concrete was discarded due to the cost and amount of time it would take to construct the channel.

Temperatures during the daytime were up to and in excess of 30°C, the channel had to irrigate the fields on Sundays, so a solution was sought that could allow them to do so, otherwise the crops would dry-out. The works were carried out by Agrotek Spa for the Peralillo Agricultural community, with consultation from Comisión Nacional de Riego.

Vegetation, trees, and rocks were removed, excavated and levelled with a mini excavator, the profile of the channel was formed by compacting the earth with the use of a wooden mold.

The Concrete Canvas was supplied on bulk rolls. The spooled CC was mounted onto a spreader beam frame and cut to the exact length required using knives, eliminating waste and accommodating any variations in the channel profile. CC's main advantages over conventional concrete are speed and ease of install, cost savings, durability and environmental friendliness. Overlapped in the direction of water flow by 100mm, adjacent layers were screwed together using SS screws at 200mm centres. The outside edges of the Canvas layers were captured in a backfilled anchor trench after being pinned to the ground using 250mm steel ground pegs. Hydration was completed via a roadside 1000ltr water tank and motor pumps.

\*Geosynthetic Cementitious Composite Mat





*Vegetation was removed, excavated and levelled with a mini excavator*



*The profile of the channel was formed by the use of a wooden mold*



*The complete graded channel profile*



*Pipes were installed underneath roads affected by the channel*



*The CC was mounted onto a spreader beam and cut to the required length*



*The completed installation*





*The completed installation in use prior to being fenced off*

The installation of CC required approx 10 days with a team of 5 people, the complete project took 1 month, with the install of water gates, pipes underneath roads and reconditioning the asphalt of the roads.

The project was very successful, the community now has 70% more water than they did previously and it takes just 6 minutes for the water to travel down the length of the channel, as opposed to over 45 minutes that it used to take. The client was extremely happy with the result and have also used CC to work on a project for the second stage of the same channel.

The project was faster to install and more economical than other more conventional options, allowing the Peralillo Agricultural Community to keep using the channel once a week during construction.