

Project Info



01 / 10 / 2015



CC8™ Batched Rolls



4000sqm



Longitudinal layers



Liberdade, Minas Gerais, Brazil



Portex Engenharia



CC8™ was used to line a series of ditches along a railway.



Completed installation

In October 2015, Concrete Canvas® GCCM* (CC) was used to line a series of ditches located along a railway in Liberdade, Minas Gerais, Brazil. There were severe access issues as several of the ditches were cut into steep slopes on either side of the railway. Poured concrete was considered for the installation, however this would have required lengthy line closures and complex, costly logistics. The railway runs through an area of National Park under preservation (APP) which meant it was advantageous to use CC due to the environmental benefits. The client was VLI, one of the largest private rail concessions in Brazil, and the material was supplied by SPI Engenharia e Representações.

To prepare the site for installation, vegetation was removed from the invert and the ditch graded to profile. Batched rolls of 8mm thick CC (CC8™) were delivered to site and manually transported to the ditches. For the ditches located higher up the slope, a rope and pulley system was used, assisted by a small backhoe. The batched rolls were laid longitudinally with subsequent lengths overlapping the previous by 100mm. Each layer was pegged every 2m on the shoulder of the ditch, and the overlaps were jointed with 25mm screws at 150mm intervals.

In total, 4000sqm of CC8™ were installed at speeds of up to 300sqm a day by 7 people, during the rainy season and temperatures of up to 35°C, with no line possession required. The client was very impressed with the speed and safety of the install, noting that **this was the first incident free installation they'd had with this volume of concrete infrastructure.**

*Geosynthetic Cementitious Composite Mat





Removing vegetation from



Grading the ditch



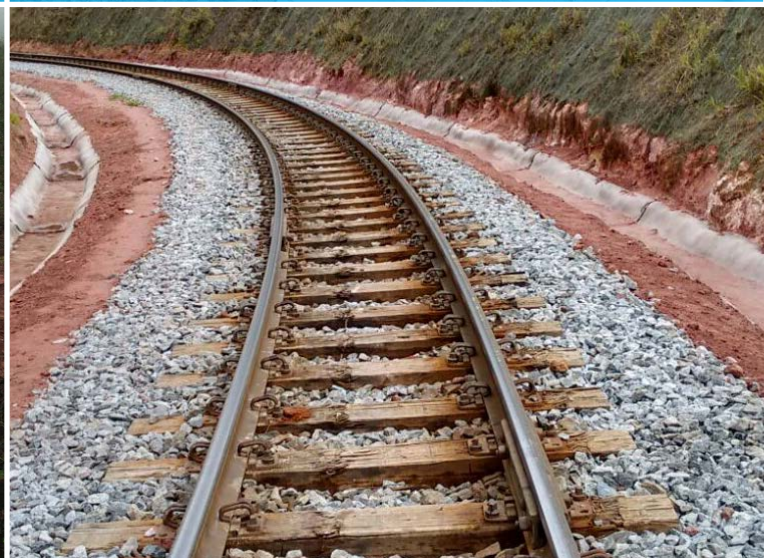
Batched rolls delivered to site



CC laid longitudinally



CC immediately after hydration



Two of the finished ditches



Junction detail



Small section of slope protection



Stepped section of install

“This application was not only practical, and fast, and we had many rainy days during the process with not one stoppage, and it was the safest job and the lowest accident rate we have ever experienced in our company”

Thiago Lisboa
Manager
VLI

“The second day, when we came back to the site, we were amazed - the CC was hard and in place, we could not believe it”

Diego Ferreira
Manager
Portex Terraplanagem