

## CASE STUDY:

# CULVERT REHABILITATION

ORATANGA ROAD, MODBURY NORTH, SA  
FEBRUARY 2017  
CLIENT: TEA TREE GULLY COUNCIL

## Concrete Canvas

Concrete Canvas is a flexible, concrete impregnated fabric that hardens when hydrated to form a thin, durable, water proof and fire resistant concrete layer. It is the original concrete on a roll.

Concrete Canvas allows concrete construction without the need for plant or mixing equipment. Simply unroll and position Concrete Canvas, and then just add water (any type of water, including sea water). Concrete Canvas has no impact on the pH of runoff water. Concrete Canvas is widely used as a cheaper alternative to non-structural shotcrete.

Concrete Canvas is used in a variety of civil infrastructure applications, such as ditch lining, slope protection and capping secondary containment bunds.

## Geofabrics had met with Tea Tree Gully Council in late 2016 to help them develop a solution which could prolong the life of an existing steel Armco culvert at Oratanga Road in Modbury North.

The culvert invert had extensive scour and rusting, however replacement of the culvert would have proven prohibitively expensive and time consuming. Other solutions, such as replacement of the pipe inverse with reinforced concrete had also proven to be expensive and time consuming.

The Geofabrics team worked with the Council to develop an alternative solution which could be rapidly deployed, saving on time and money.

The eventual solution incorporated 8mm thick Concrete Canvas (CC8). Geofabrics and Council worked through the installation methods prior to deployment on site, ensuring a seamless workflow. The works included:

- » Temporary diversion of the creek flow
- » Cleaning of the invert base of rocks and sediment
- » Grouting of the corrugations with a cheap 20Mpa cement to form a suitable platform to lay the Concrete Canvas
- » Laying, overlapping, fixing and hydrating the CC8
- » Water proofing of the edging

Geofabrics ensured a team member was onsite throughout the project to help deliver the project seamlessly.