

Project Info



November 2019



CC8™ Batched Rolls



60m²



Transverse layers



Suvarnabhumi Airport,
Thailand



Vigor Merger Co., Ltd.



CC trialed to
establish its benefits
over alternatives
for remediation of a
concrete channel



Completed CC remediation trial

In November 2019, Concrete Canvas® (CC) GCCM* was installed as a channel lining and remediation solution at Suvarnabhumi Airport in Thailand.

The installation was carried out as a trial to establish how CC would perform and to compare installation methods in terms of speed and ease.

The concrete channel in question was showing severe degradation and cracking in numerous places, as well as areas of vegetation growth which had established through the cracks. Alternatives to CC would include complete replacement of the channel using pre-cast sections or poured concrete with formworks.

In order to carry out the trial, the channel first had to be prepared. The installation team removed any vegetation and filled existing cracks with mortar. Anchor trenches measuring 150mm x 150mm were prepared on both sides of the channel in which the CC edges would be captured and later backfilled for a neat termination. On the areas where CC would be installed, a section of the concrete channel was removed using an angle grinder.

The 8mm thick variant of CC (CC8™) was specified for the project and delivered to the site in man-portable batched rolls, allowing for installing without the need for heavy plant and machinery while also reducing wastage.

*Geosynthetic Cementitious Composite Mat





Inspection of the channel prior to works



Channel had degraded and vegetation grew through cracks



Angle grinder used to remove section of concrete for easier installation



Preparing for deployment following removal of concrete section



Deployment of CC batched rolls



CC secured to concrete and at overlaps using SS screw anchors



Completed installation and CC to concrete termination point

The batched rolls were deployed transversely across the concrete channel. Layers of CC were overlapped by 100mm and ends of the material were captured within the anchor trenches using ground pegs. The overlaps were jointed using a bead of sealant and stainless-steel screw anchors with 15mm washers inserted every 300mm.

The leading and trailing edges pegged to the ground where sections of the concrete had been removed. These were later filled with poured concrete in order to bury the material and provide a more uniform transition between the CC and existing concrete.

Following the completion of each installation section, the CC was hydrated using a portable water tank.

A total of 60m² were installed in just two days by six people from Vigor Merger Co., Ltd. The works were carried out for Airport Authority. The client was happy with the outcome of the trial and will consider the use CC for similar applications in the future.