

Project Info



July 2016



CC5™ Batched Rolls



20m²



Vertical and
Longitudinal layers



Kyo-tanba Cho,
Kyoto, Japan



Taiyo Kogyo
Corporation



CC used in a trial to
establish its suitability
for weed suppression
against invasive species
like Japanese knotweed



Trial CC section 26 months after installation

Introduction

In July 2016 a trial began to establish the effectiveness of Concrete Canvas® (CC) GCCM* as a vegetation control method for Japanese knotweed. The trial focused on verifying the strength of joints in Concrete Canvas® against weed growth, and aimed to prove that these joints and the material itself is capable of preventing the protrusion of knotweed.

Aims

Three different joint types were trialled as described overleaf and placed over areas where weeds were overgrown in order to accurately establish the strength and effectiveness of each joint type area. The trial was carried out by Taiyo Kogyo Corporation on behalf of Concrete Canvas Ltd with the objective of establishing CC as an effective Japanese knotweed suppressant for use on future projects where the weed is present on site.

Trial Conditions

The trials were carried out on two sites in Kyo-tanba Cho, Kyoto. On the first site, the knotweed had been felled only, while the knotweed on site two was cut down two weeks after being sprayed with herbicide. The first of the installations was carried out on a slope, with a gradient of 1: 1.2 and facing southwest, while the second was installed on a flat area. The installation areas are surrounded by fields and mixed forest.

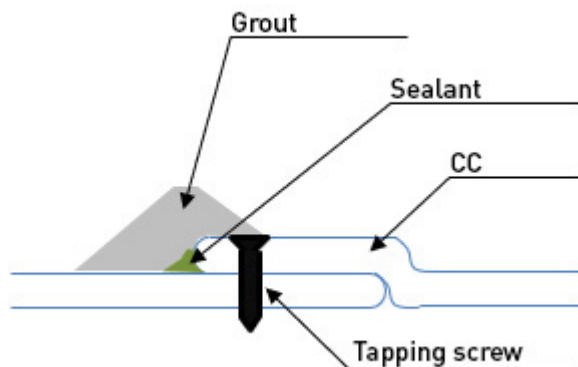
*Geosynthetic Cementitious Composite Mat



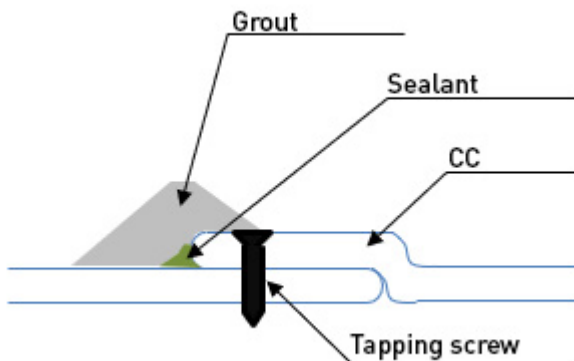
Method

CC was installed with the below specified overlap joints placed where several strong growing wild grasses and Japanese knotweed were overgrown in order to establish CC's ability to suppress them. In order to examine the necessity of herbicide application, the joints were applied in similar conditions on both sites, allowing for a controlled comparison of the sites. The locations of the shoots were marked with spray paint and the CC joints were arranged so that a shoot was located in the overlap to help with identification throughout the trial. The following three joint methods were tested:

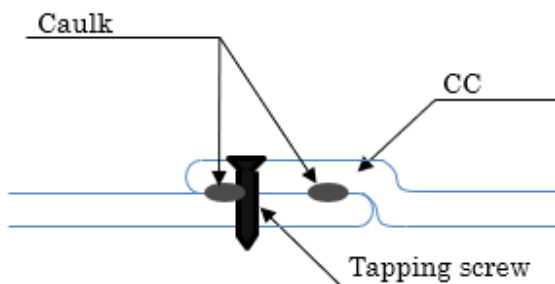
Joint Method 1: Standard caulk + self tapping screws + grout



Joint Method 2: Standard silicone sealant + self tapping screws + grout



Joint Method 3: Clearfix + self tapping screws



Site 1 Results



Before



Day 1: Location of shoots marked with spray paint



Day 816 - CC is beginning to moss over with age and still shows no signs of weed protrusion

The installation on site 1 was carried out on 29th July 2016. The performance of the CC material was observed over 651 days; during this trial period, the contractors visited the site at regular intervals in order to track the performance of the material. On completion of the trial, both the contractor and client established that all three jointing methods used on this site were successful in suppressing the strong growth of the wild grasses and knotweed found on the site and there was no evidence of growth through the joints or the material itself.

Site 2 Results



Before



Day 1: Location of shoots marked with spray paint



Day 816 - CC is beginning to moss over with age and still shows no signs of weed protrusion

The second installation, carried out on a separate site, was situated on a section of flatter ground.

At the end of the study, it was observed that all three jointing methods had proven their ability to provide effective weed suppression to a range of weeds and wildflowers, including those that are notoriously difficult to control, such as Japanese knotweed, on both sites. There was no evidence of vegetation growth below the body of the CC installation, as well as no protrusion of weeds through the joints, despite what was described as a remarkable amount of growth around the installation area. As a result, the contractor, Taiyo Kogyo Corporation, concluded that Concrete Canvas® is indeed an effective method of control against these plant types.