

INSTALLATION GUIDANCE:

GROUND PREPARATION:

Preparation of substrate: CC will conform closely to the underlying surface contours of the ditch profile, therefore any vegetation and sharp or protruding rocks should be removed. The ditch should have a uniform profile for ease of future maintenance. If installing on soft ground, a compacted layer of granular fill can be placed in the invert to create a solid substrate.

Anchor trench: IMPORTANT NOTE: CC requires an anchor trench to prevent undermining from surface water run off and provide a neat edge termination.

INSTALLATION

Unpacking: Remove the packaging and unroll CC into the ditch profile ensuring the fibrous top surface faces upwards, with the PVC membrane in contact with the ground.

Cutting: Use a 'snap-off blade' utility knife for cutting CC before it is hydrated or set. Allow 15- 20mm from the cut edge due to potential loss of fill. A powered disc-cutter or angle grinder can be used for repeated cutting.

Positioning and fixing: Ensure there is at least a 100mm overlap between CC layers.

IMPORTANT NOTE: Care should be taken to position end of roll overlaps in the direction of water flow (like shingled roof tiles). Peg the CC along the anchor trench, through each overlap joint.

Hydrate the material under the overlapped sections of the CC.

Jointing: Insert stainless screws at 200mm centres, 30 - 50mm from the edge of the joint. Impermeability of joints can be improved by applying Adhesive Sealant between the layers, prior to screwing.

IMPORTANT NOTE: it is essential that CC layers are in direct contact with each other. To prevent CC layers from separating, joints can be weighed with sandbags during setting or additional screws can be used.

Hydration: Spray the fibre surface with water until it feels wet to touch for several minutes after spraying. CC cannot be over hydrated and an excess of water is always recommended. Minimum ratio of water:CC is 1:2 by weight. Do not jet high pressure water directly onto the surface as this may wash a channel in the material. Once hydrated, the material remains workable for 1 to 2 hours. Do not rely on rainfall to hydrate CC.

Setting: CC hardens to 80% strength in 24 hours and is ready for use.

FOR INSTALLATION SEE:

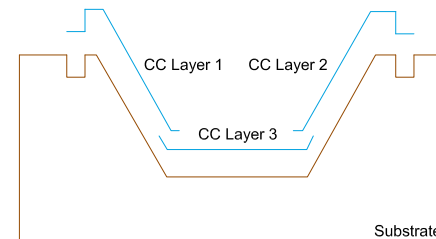
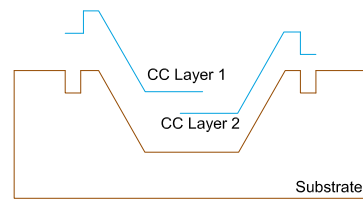
[CLICK TO SEE DITCH LINING ANIMATION](#)

[CLICK TO SEE BEST PRACTICE INSTALL](#)

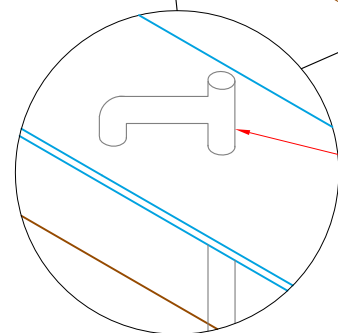
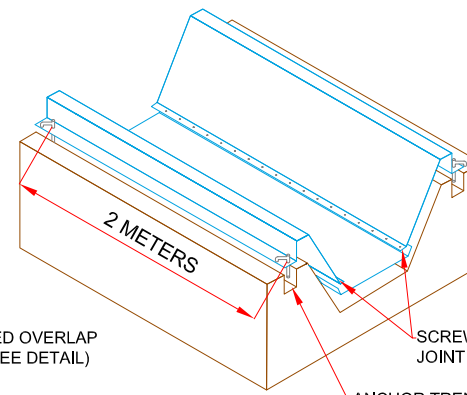
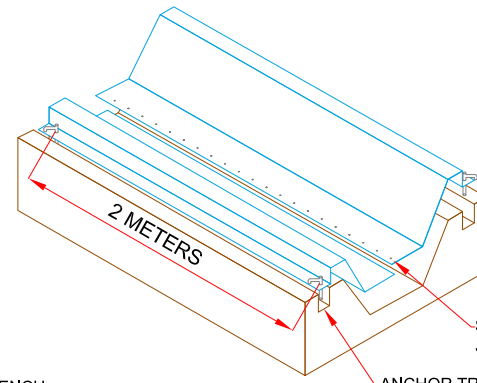
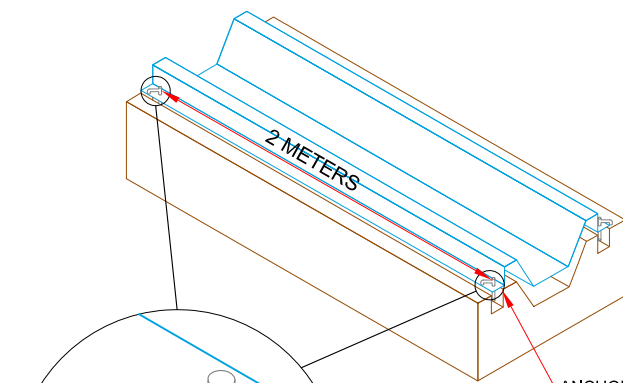
[CLICK TO SEE REQUIRED EQUIPMENT LIST](#)



DITCH PROFILE TO BE CUT TO DESIGN REQUIREMENTS. VEGETATION AND PROTRUSIONS TO BE REMOVED



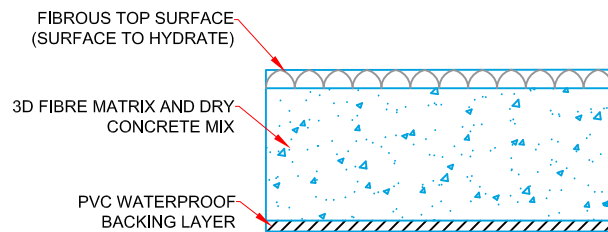
**CONCRETE CANVAS
DITCH LINING LONGITUDINAL CROSS SECTIONS**



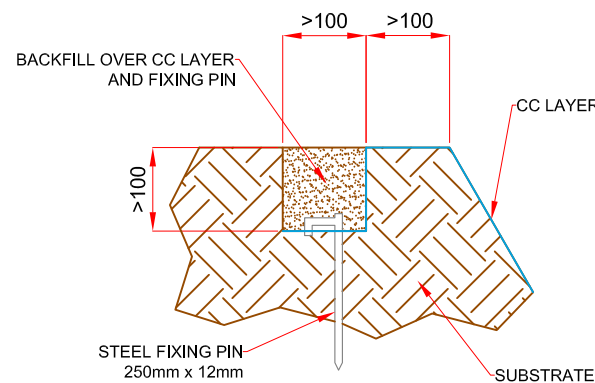
FIXING PIN MINIMUM EVERY 2 METERS APART ON EACH SIDE AND AT EVERY OVERLAP JOINT

CONCRETE CANVAS ANCHOR TRENCH FIXING DETAIL

**CONCRETE CANVAS
LONGITUDINAL LAYUP ISOMETRIC VIEW**



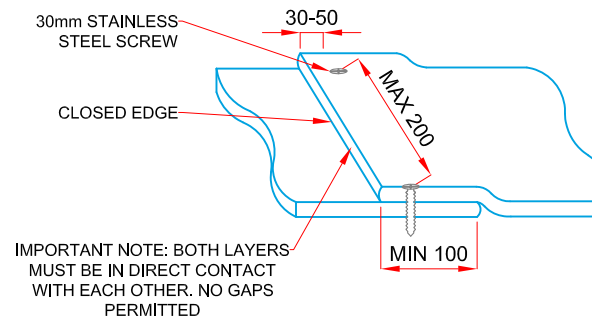
**CONCRETE CANVAS
CROSS SECTION**



**CONCRETE CANVAS
ANCHOR TRENCH DETAIL**

IMPORTANT NOTE: ANCHOR TRENCH IS REQUIRED TO PREVENT UNDERMINING FROM SURFACE WATER AND PROVIDE A NEAT EDGE TERMINATION.

(ANCHOR TRENCH DIMENSIONS ARE INDICATIVE AND MAY VARY ACCORDING TO THE GROUND CONDITIONS, FLOW RATES AND PROFILE GEOMETRY.)



**CONCRETE CANVAS
SCREWED OVERLAP JOINT**

NOTES:
Ditch liner to be Concrete Canvas Geosynthetic Cementitious Composite Mat (CC).
SPECIFICATION:
CC Type: CC8
Thickness: 8mm
Dry density: 12kg/m²

Compressive strength (ASTM C109 - 02 (initial crack)): 40MPa

Abrasion resistance (DIN 52108): Max 0.1g/cm²

Manning's value (ASTM D6460): n=0.011

Chemical resistance
Acid, Alkaline, Hydrocarbon, Sulphate resistance (BS EN 14414): CC to pass minimum requirements

Age testing - Freeze-Thaw, Soak-Dry, Heat-rain, Water Impermeability (BS EN 12467:2004) CC to pass minimum requirements

TITLE:
CONCRETE CANVAS
DITCH LINING
LONGITUDINAL DETAIL

DRAWING NUMBER:
CC-L-DLL-001-REV2

DATE: 31 JAN 2017	REVISION: 0
SCALE: N.T.S.	PRODUCED: VM

CONCRETE CANVAS

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