



Topseal Systems Ltd



GreenTop Installation Manual

22nd November 2010



Roof Preparation

For any application where the roof must contain water permanently for its entire lifespan including Green Roofs the recommended application is to install 2 X 450g/m² laminates into the main body of the roof and the installation of Topseal to adhere to the general specification.

Pre-Installation Checks

Loadings:

An extensive green Sedum roof can weigh up to 60kg/m² when saturated and the Wildflower up to 150kg/m². Always ensure that the joist loadings are sufficient before installing the green roof. Before fitting the green roof the laminated areas must cure for one week to allow for the exhaustion of all of the styrene from the GRP.

Drainage

Always ensure the roof is free of standing water before specifying the green roof. Poorly drained areas will require a different drainage layer. This needs to be noted in the initial specification.



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Pitch

Pitches at 19 degrees or more will require drip line irrigation incorporated into the specification and additional retention strips to hold the sedum and substrate in place. Green roofs can be installed onto a pitch of up to 45 degrees.

Perimeter

For a standard sedum green roof, a raised perimeter of 75mm minimum will be required. There are three potential ways of achieving this:

- Lining an existing parapet wall (see diagram A1 further on.)
- Using a metal retention trim (see A2 and general instructions below depending on whether it is a new or existing GRP roof.)

1/ If the metal strip is to be applied onto a new GRP roof then Install the roof with drip trims around the perimeter and allow the roof to cure before fitting the retention strips.

2/ For installation onto an existing GRP roof, the raised edge trims should either be removed using an angle grinder and the trims replaced with drip trims around the perimeter (preferred option) or the strips can be installed in-board of the raised edge trims



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3/ The strip can be fixed in place with PU adhesive applied to the perimeter of the roof.

4/PU adhesive is used to bond each of the retention strips together. A smooth finish can be obtained using a moistened finger to smooth the PU adhesive

5/ The Metal strip should be bonded to the roof following the instructions for bonding to metal

6/ Once the retention trim has been bonded to the laminate coat it in G4 PU primer and allow to cure for 3-4 hours. Topcoat the strip while it is still tacky and before it has completely cured (around 6-8 hours)

- Incorporating a 75mm x 50mm timber into the roof (see A3 and general instructions below depending on whether it is a new or existing GRP roof.)

1/The timber should be well fixed to the deck with mechanical fixings and PU adhesive where possible (see diagram T1.)

2/ Slate battens should be fixed around the perimeter to accommodate A250 edge trim (see diagram T2.)

3/AT 195 internal and external angle trims are used to cover the side and top of the timber (see diagram T3) using PU adhesive to bond the trims together and clout nails to hold the trims in place



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4/ An A250 (or other selected profile) should be attached to the outer edge and bonded to the perimeter batten with PU adhesive to encapsulate the entire timber.

5/ The upstand should then be bandaged twice over all joints

6/ After the bandaged joints and area has been sanded and tissue bandage applied if necessary the area can then be topcoated with the rest of the area.

Preparing the main body of the roof

- Apply the edge details to be finished as above.
- Stagger the joints for the Chopped Strand Mat rolls by cutting (or tearing for a seamless joint) one of the second layer outer lengths in two to provide both of the outer sections.
- Catalyse the roofing resin to allow for an extended working time.
- When the first 1m wide section of roof has been laminated and has been consolidated, roll out the half sized roll over the top and apply 3 rollers full of resin over that area (approx 0.6kg/m²) and consolidate as required.



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- When the second 1m wide section of the roof has been laminated and consolidated, roll out the second roll of mat for the second layer so that it overlaps the first half roll used on the first section by 50mm and overlaps the first half of the second meter wide section. Use 6 rollers full of roofing resin (1.2kg/m²) to wet out the mat.
- Extra care will need to be taken on the last section if access is difficult as both the second to last and end half rolls will need to be applied at the same time after each m² of the first layer of laminate is consolidated.
- Alternatively the second layer can be applied at 90 degrees to the first after it has cured enough to walk on.
- After the two layers of laminate have been applied, sand them down and topcoat as normal.
- The roof is now ready for the green roof installation.



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Adapting an existing GRP roof

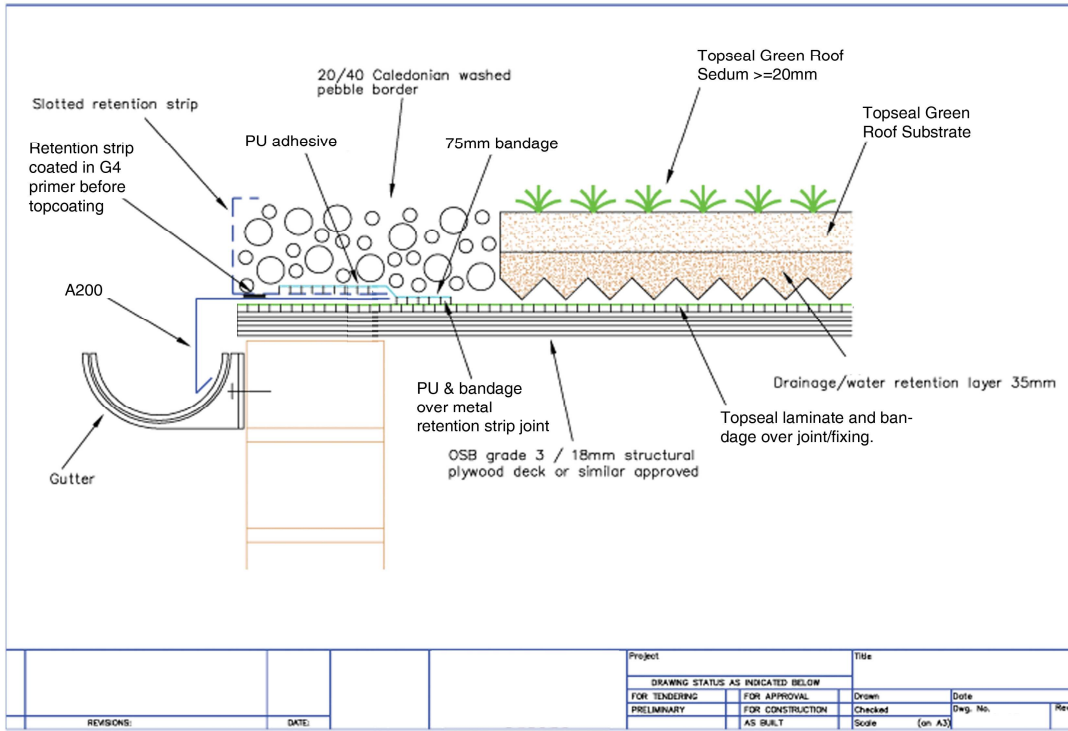
- The existing raised edge trims will need to be removed using an angle grinder
- The drip trims can be retained in place as these will have a slotted retention strip fitted over the top to allow drainage.
- The existing roof will need to be prepared by power washing thoroughly and a light sanding with 40 grit sand paper.
- Wiping the surface with an acetone soaked cloth will remove contaminants. The roof is now ready for the GRP laminate.
- Apply the edge details as above.
- Stagger the joints for the second laminate by cutting (or tearing for a seamless joint) one of the second layer outer lengths in two to provide both of the outer sections.
- Apply the laminate over the area following the usual instructions ensuring to work all the way to the perimeter so that the laminate overlaps the bandage applied earlier.
- Sand down the area and Topcoat as usual
- The roof is now ready for the green roof installation



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A2 Drip Edge Specification

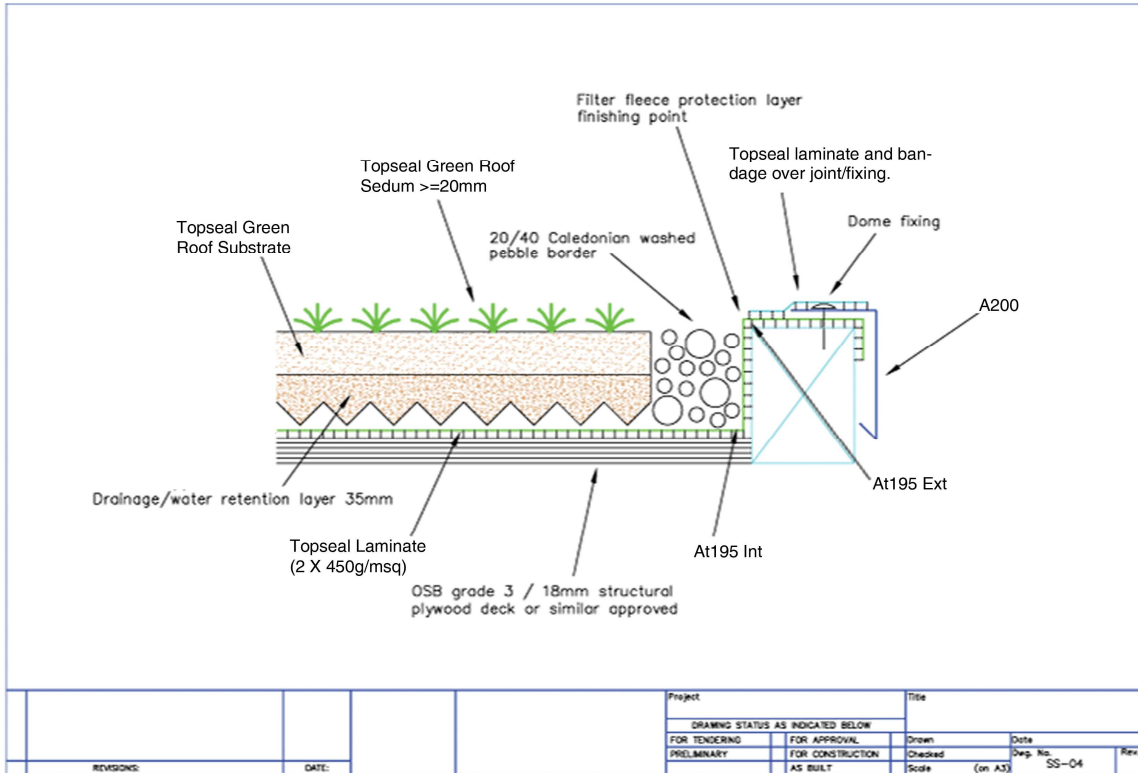




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A3 Drip Edge Specification





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A3 Drip Edge Specification

