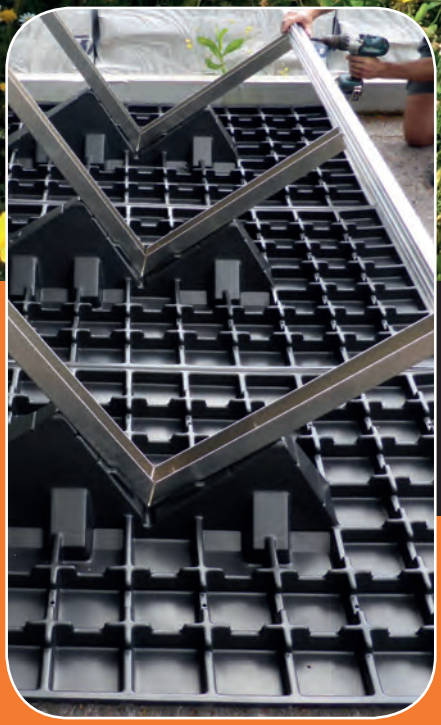
BAUDER



BAUDER BioSOLAR

INSTALLATION GUIDE

BioSOLAR Installation Guide

This guide describes the correct installation of the Bauder BioSOLAR mounting system and related components. This manual is only for use by trained professionals who are qualified to install Bauder solutions. Installation of the BioSOLAR system by the client is prohibited.

PREREQUISITES

1. This guide must be used in conjunction with a Bauder specification, project specific technical report and roof layout. Any deviation from the proposed orientation may reduce the energy yield of the system.
2. The Bauder waterproofing system MUST undergo a successful final inspection and be signed off prior to installation of any BioSOLAR or green roof component.
3. Sections 1 and 2 of this guide MUST be read and fully understood before installation works commence.

CONDITIONS

The Bauder guarantee may not be issued if:

1. The waterproofing fails to meet final inspection standards.
2. Any BioSOLAR or green roof component is incorrectly installed.

The instructions and information within this guide follow the standards and guidelines of the Green Roof Organisation (GRO), British Standards (BS), and European Standards (EN).

1.8 REGULATIONS, GUIDELINES AND STANDARDS

Our products are built in accordance with applicable standards and technical regulations and therefore correspond to all relevant technical standards. This applies to both material selection and structural design.

BSEN 62446	Grid Connected Photovoltaics
BSEN 61853-1	Defining Solar Photovoltaic Power
BSEN 1991-1-4	Wind Actions on Structures

SCOPE OF USE

Bauder BioSOLAR is designed for applications where both a green roof and solar PV solution are required in unison to meet planning and/or BREEAM requirements.

The green roof substrate and vegetation provide the ballast mechanism for the entire solution which removes the need for mechanical fixings to secure the units to the roof and maximises the available area for the plants.

TECHNICAL SUPPORT

If you require support or advice please contact:

- Tom Raftery (UK South) 07788 311602
- Chris Gordon (UK North & Ireland) 07545 642303
- Head Office 0845 271 8800

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1 Principles

1.1 Conditions for Installation

The array should be installed as per the project specific technical report and roof layout supplied by Bauder. Any deviation from the proposed orientation may reduce the energy yield of the system.

A module is considered shade-free if its entire surface area avoids any type of shading (even temporary) throughout the year and if it is fully exposed to sunlight. Even partial shading, for example, caused by chimneys, antennae, adjacent buildings, trees (keep in mind any future growth), lamp posts or green roof vegetation, may also reduce the yield. A shade analysis will be carried out prior to site installation although Bauder should be made aware of anything on site that could cause shading.

NOTE:
Even temporary shading through contamination (dust, bird droppings, detritus or leaves) can reduce the yield. You will find instructions on how to remove this contamination in section 12 'Maintenance'.

1.2 Specification

Bauder BioSOLAR is only designed to be installed with our extensive and biodiverse green roofs.

ROOF CONDITIONS

The Bauder BioSOLAR PV mounting system is applied under the following conditions:

- Where a Bauder biodiverse or extensive green roof is installed with a minimum of 110mm or 130mm extensive substrate. See project specific wind load calculation for correct depths.
- A nominally flat roof up to 3°.
- Roof installation over Bauder single-ply, bituminous roof membranes, and hot melt system.

1.2.1 REFURBISHMENT SCHEMES

In refurbishment schemes, the condition and type of waterproofing membrane must be taken into account. A roof survey should be carried out and where necessary the roof membrane should be replaced/overlaid to equal the expected lifespan of the PV array.

1.2.2 STRUCTURAL ANALYSIS / WIND UPLIFT

BioSOLAR mounting units are ballasted using Bauder Extensive / Biodiverse Substrate and all calculations are made using these load characteristics. Exceptions will be specified in the Bauder technical report. It is the client's responsibility to ensure the building's structure is suitable for the load of the system.

1.2.3 IMPOSED LOADS TO THE ROOF

It is important to pay attention to the project specific roof layout provided by Bauder as positioning of the Bauder BioSOLAR array will have been calculated to conform to the structural engineer report for imposed loads by the substrate ballast and the solar PV array.

The precise substrate depth required to ballast the array will have been stated at planning stage and be project specific. If clarification is required, contact Bauder.

If it is necessary to use the existing roof ballast, such as gravel or slabs, to put it into the profiles of the anchor boards, it must be removed and handled carefully.

Warning!
Weather conditions (wind/snow load) will result in excessive weight and uplift forces. Check the stability of the roof under these loads with a statistical analysis (BS6399, BSEN 1991 1-1-4).

1.3 Preparing the Roof

A compulsory final inspection of the waterproofing system by a Bauder site technician must be carried out prior to any component of the BioSOLAR mounting system or green roof product being laid. **The waterproofing system must be signed off before the installation of the green roof can start and is a mandatory requirement for guarantee eligibility.**

Before installation begins, brush off the roof area to remove all debris and carry out a visual inspection of the roof to identify any physical damage. Bauder must be informed immediately if damage is found before starting any installation of the BioSOLAR system.

If a penetration is required for cable connections, ensure this is located and detailed prior to work commencing.

Test and ensure the water supply at roof level is working sufficiently prior to the vegetation order and delivery.

1.4 Delivering & Storage of Products

The BioSOLAR mounting system and green roof components can be delivered and stored on site. Vegetation and seed mixes should be delivered on the day of installation with quantities matching those to be installed on that working day

1.4.1 BIOSOLAR MOUNTING SYSTEM

The substructures and additional system components are supplied on pallets.

Check delivery upon receipt of the goods based on the enclosed delivery note. Bauder will not be liable for further expenses in the case of subsequent deliveries if you later discover that any material is missing.

Check the goods visually for any external damage.

Contact Bauder immediately in case of any damage. Use the assembly instructions to familiarise yourself with the components of the BioSOLAR system and their use before you start the installation.

1.4.2 GREEN ROOF DELIVERY & STORAGE

Substrates should not be placed directly on the waterproofing. Instead, lay the protection and drainage components on the area used for storage to prevent damage to the waterproofing layer and double handling of the material.

Delivery of seed mixes require a dry store.

1 Principles *continued*

1.5 Lifting

The installation programme will require planning and adequate crane time so that the products can be lifted to the roof and sited so as to not overload the structure, and installed in sequence.

Ideally the material should be lifted and loaded in sequence with bulk items placed in the correct position.

1.6 Installation Precautions

- **Cutting of products** should only be carried out on a cutting board or scaffold plank so that the waterproofing layer is protected from damage.
- **Hot Works** some of the components will require heat for application which may require a hot works permit. Installing FSM 600 protection layer requires laps to be heat joined with a gas torch or hot-air welder. It is not necessary to use the trigger on the gas torch for the laps as the running pilot flame is sufficient to melt the mat and create a join.
- **Outlets** must be kept clear at all times.
- **Vegetation barrier** refer to Bauder specification regarding the width of barrier. Note - this is a fire break and must not be altered. Ballast from builders' merchants often contain sharp stone and flint and is not suitable. (Refer to green roof specification)
- **Establishment & Aftercare of the Vegetation** Most green roof failures are due to lack of aftercare or damage caused by following trades. To prevent disputes, make sure the main contractor is aware of their responsibilities, preferably in a formal written document or email for future records. Post installation rules:
- No storage of any materials on the green roof.
- No trafficking by anyone across the roof.
- Regular, sufficient and appropriate watering for the first 10-12 weeks for seeded vegetation.
- Providing nutrients to vegetation is a necessity for ongoing success and the application of fertiliser between March and September is recommended.
- **Substrates** need to be installed and spread with a spazzle (a rake with no teeth) or shovel, a rake is best avoided as the prongs can damage the underlying green roof components or waterproofing.

1.7 Ballasting the Array

When ballasting, please pay attention to the project specific roof layout provided by Bauder and the precise substrate depths indicated. This will ensure that the additional loads imposed will be positioned according to the tolerances of the roof structure.

The green roof installation guide must be observed when filling the profiles of the Anchor Boards and DSE40 infill boards. The minimum depth is 130mm of extensive substrate. If other substrates are to be used please contact Bauder for clarification of depth requirement.

1.8 Record Keeping

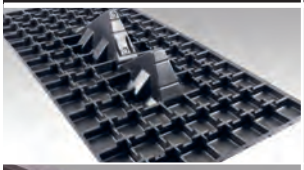
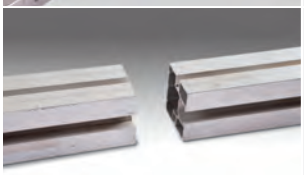
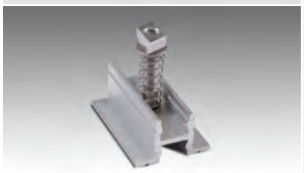
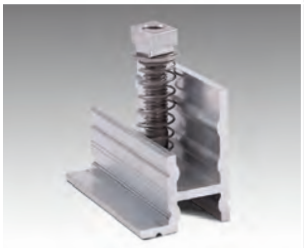
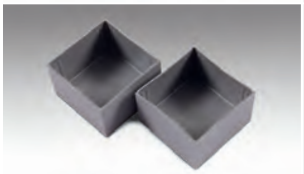
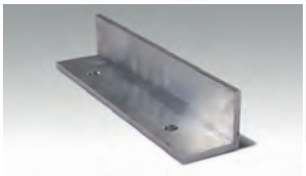
Keeping full records and photographic verification of the installation are vital and could demonstrate all works were carried out appropriately should any issues be raised at a future date.

We recommend the following be included

- Waterproofing completed, trims correctly fixed and inspection by the Bauder site technician completed.
- Drainage trims installed straight and true.
- Protection layer in place and continued up the upstands.
- Drainage board fitted correctly around details.
- Filter fleece installed.
- Depth of substrate is measured and watered prior to broadcasting seed mix and correct.
- Vegetation laid and fertiliser being applied.

2 Components Tools & Installation

2.1 BioSOLAR Parts List

ITEM	NAME	DESCRIPTION
	Anchor Board	Profiled substructure for containing substrate ballast and mounting BioSOLAR array.
	Quick-Fix Angle Bracket	Aluminium angle bracket for mounting Module Carrier Rail.
	Module Carrier Rail	Profiled rail for mounting framed modules.
	Screw M8 x 55mm Type A2	55mm fixing screw for Quick-Fix Angle Bracket to Anchor Board.
	Screw M8 x 15mm Thread Forming Torx Fixing	15mm fixing screw for: - Module Rail to Angle Bracket. - External Profile Connectors.
	Middle Clamp	Clamp for fixing modules in a row.
	End Clamp	Clamp for fixing module at the end of a row.
	Module Carrier Rail End Caps	Plastic cap to protect cut ends of Module Carrier Rail.
	External Profile Connector	Profile to connect rails of over 6m up to 24m.

2.2 Tool Kit List

DOCUMENTATION
- BioSOLAR Technical Report.
- Roof plan for the project.
- Q37 green roof specification.
- CAD detail drawings.

TOOLS
- Cordless power drill/screwdriver **WITH** torque limitation or torque wrench;
  - Allen drill bit size 6mm.
  - Precision star drill bit eg: Torx Tx45 or Tx40.
- Tape measure or folding ruler.
- Chalk line and chalk/pen.
- Pliers.
- Utility knife, scissors.
- Hacksaw or angle grinder.
- Cutting board (large and thick enough to ensure no damage to the waterproofing membrane).

HOT WORKS
- Gas torch for joining the FSM600 protection layer.
- Associated fixing items.

ADDITIONAL ITEMS FOR SUBSTRATE INSTALLATION
- Spazzle (rake with no teeth – used for spreading the substrate).
- Shovels.

2.3 Installation Sequence

Green roof components and BioSOLAR product installation order. Individual instructions are on relevant pages within this installation guide.

Separation Layer (if specified)

Protection Layer

BioSOLAR Anchor Boards

Quick Fix Angle Brackets

Module Carrier Rails

Drainage Layer

Filter Fleece

Substrate

PV Panels

Electrical Connection

Vegetation

IMPORTANT - All elements of the Bauder BioSOLAR mounting system **MUST** be installed prior to the PV panels being positioned and connected.

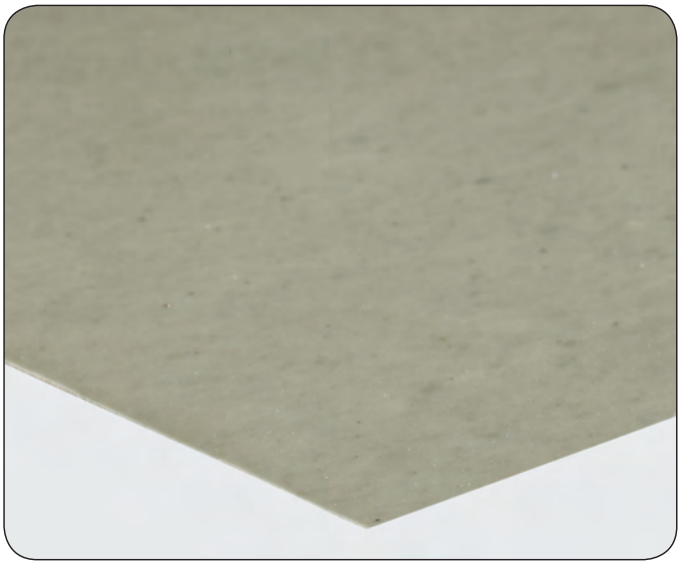
3 Separation Layer (if specified)

3.1 PE Foil

Polyethylene foil plastic sheet which acts as a separation/ slip layer between the waterproofing and the green roof build-up and is generally used on roof pitches up to 3°.

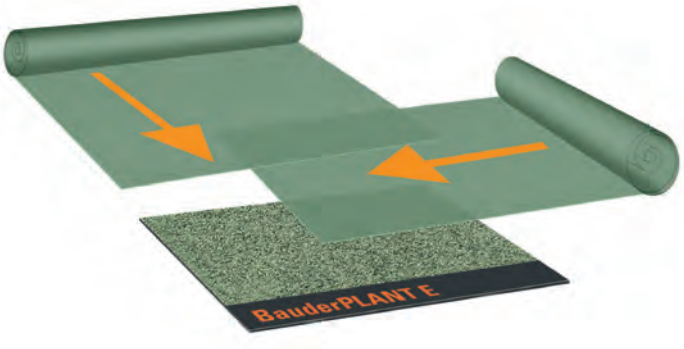
Technical data	
Thickness	Ca. 0.2mm
Weight	190g/m²
Size	50m x 4m; folded on 1m roll
Coverage	200m²

Cutting - refer to section 1.6, use a flat blade or scissors and a protection board.



INSTALLATION

- Unroll and unfold PE Foil into a single layer. Overlap by minimum 150mm at all joints.
- Lay out to cover entire roof area.
- Mark the location of outlets and ensure the PE Foil is removed from these positions to maintain drainage.
- Extend beyond the finished surface level at all upstands. Trim later as required upon completion of the landscaping.
- Do not extend PE Foil up the perforated face of pre-installed drainage trims.
- Install a second layer of PE Foil laid at 90°to the first layer.



Protection Layer 4

4.1 FSM-600

Heavy duty protection layer made from polyester and polypropylene fibres.

Technical data	
Thickness	4mm
Weight	600g/m²
Size	2m x 30m
Coverage	60m²

Cutting - refer to section 1.6, use a sharp knife or scissors and a protection board.
Hot works - use the pilot running flame of a gas torch to gently melt the mats together, it is not necessary to use the trigger on the gas torch; alternatively use a hot air welding gun on a low setting, see section 1.6

INSTALLATION

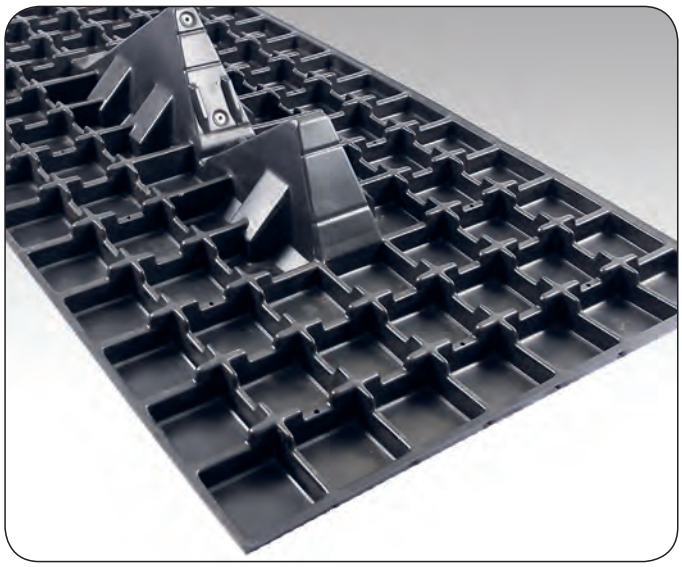
- Lay out to cover entire roof area overlaps to be a minimum of 150mm or as determined in the specification.
- Adhere laps lightly through use of a heat gun or pilot running flame on the gas torch.
- Extend beyond the finished surface level at all upstands. This will later be trimmed upon completion of the landscaping.
- Do not extend FSM Mat up the perforated face of drainage trims.
- Cut oversized hole above each outlet.
- Check outlets are clear of protection mat.
- On completion of the vegetation installation, trim the FSM Mat level with the vegetation barrier. Use a cutting board against upstands etc to cut against.

5 Anchor Boards

5.1 Anchor Boards

Profiled substructure for containing substrate ballast and mounting BioSOLAR array.

Technical data	
Depth	60mm
Weight	8kg
Size	970mm (w) x 1980mm (l)
Coverage	1.9m²



INSTALLATION

- Clean the roof area and make sure it is clear of any stones or other objects.
- Place the boards on the roof in the approximate location. Refer to Bauder project specific dimensioned layout for location.
- A string line can be used to ensure the boards are in a straight line, as indicated in right hand side picture.

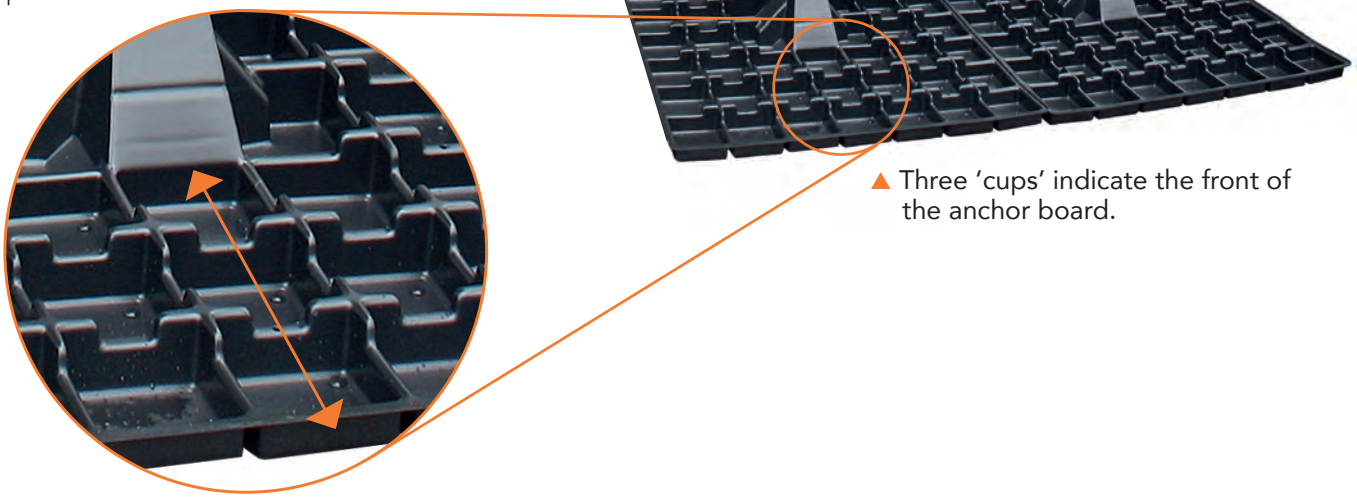
Tips

- Filling the Anchor Boards with water will help hold them in place.

5.2 South Facing Installations

INSTALLATION

- Place the boards approximately 50mm apart with the short edge to the south. Orientation of the anchor boards is vital - the front of an anchor board has three 'cups' in front of the profile 'V' and the rear has four 'cups'.



▲ Three 'cups' indicate the front of the anchor board.

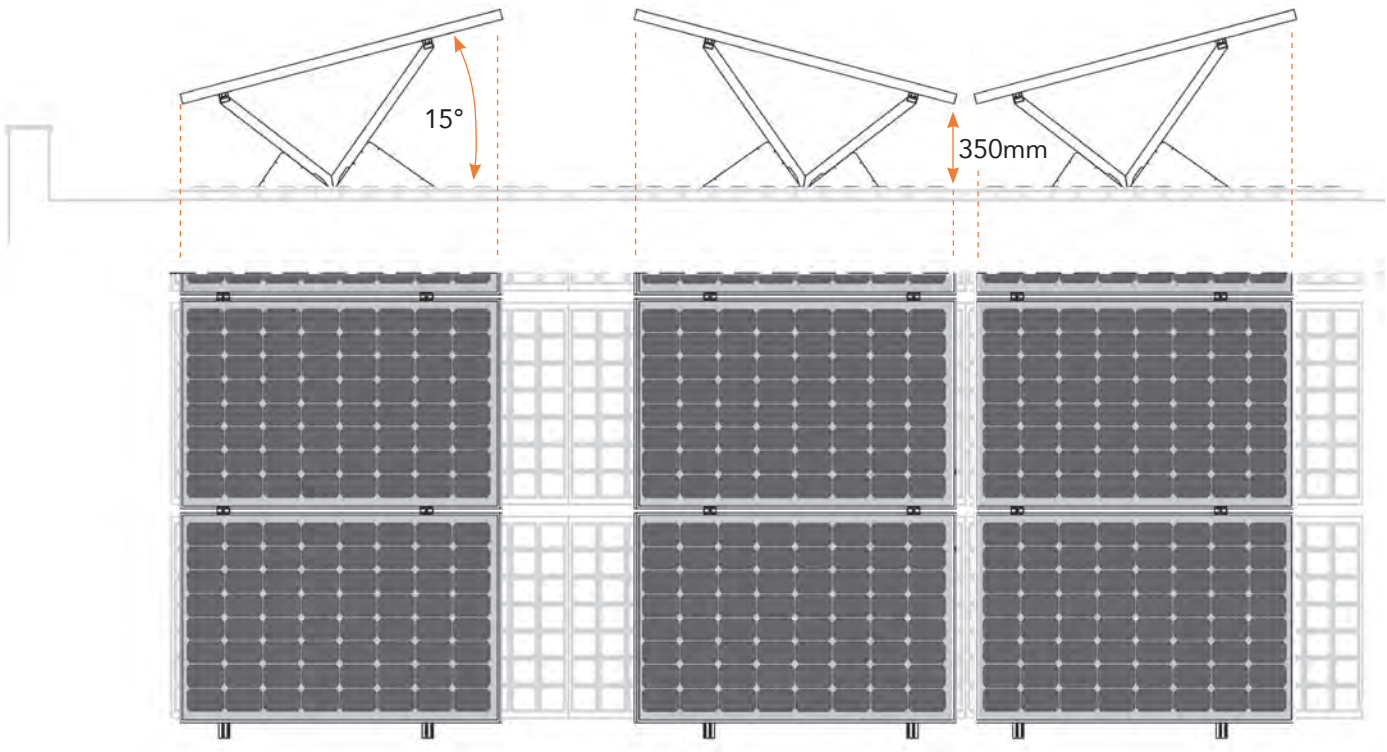
- Maximum allowable distance between mounts is 0.5m. Where an obstacle such as an SVP needs to be incorporated, other boards should be butted together to ensure that same number of Anchor Boards are installed in row. There must always be a ratio of one board to one module.
- Lay a module mounting rail into the anchor boards to ensure they are aligned.
- Position all Anchor Boards as per the roof plan.

5 Anchor Boards

5.3 East West Installations

INSTALLATION

- Locate the front first run of the anchor boards as shown in the corresponding Bauder roof plan. The short edge can be identified on the plan as it is coloured green. Orientation of the Anchor Boards is vital - the front of an Anchor Board has three 'cups' in front of the 'V' profile and the rear has four 'cups'.
- A chalk line can be used to provide a datum for the edge of the first run of the Anchor Boards.
- Locate the next run of anchor boards adjacent to the first run, butting the boards against each other but not overlapping the flange. This board will be in the opposite orientation to the previous run of boards.
- Position all boards as per the project specific Bauder roofplan.

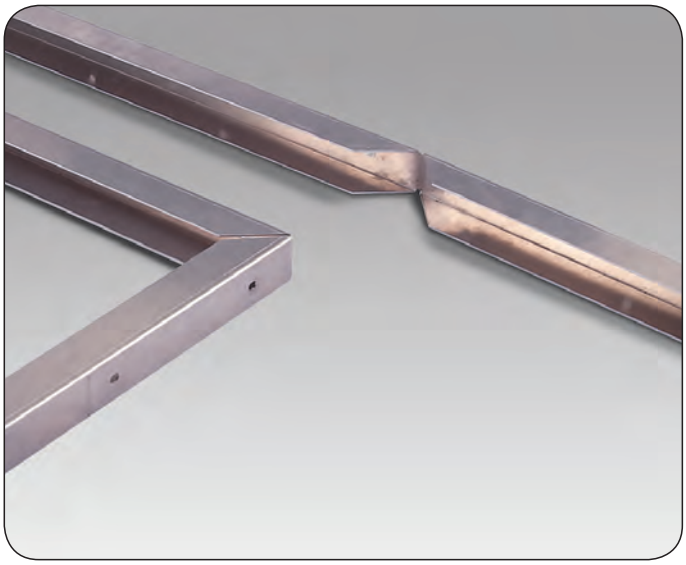


Quick Fix Angle Bracket 6

6.1 Quick Fix Angle Brackets

Aluminium angle bracket for mounting module rail

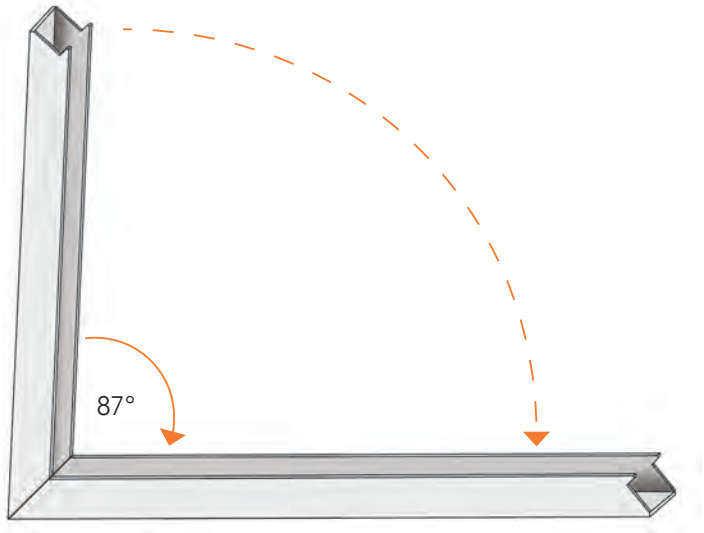
Technical data	
Weight	1.5kg / unit
Size	900mm long



INSTALLATION

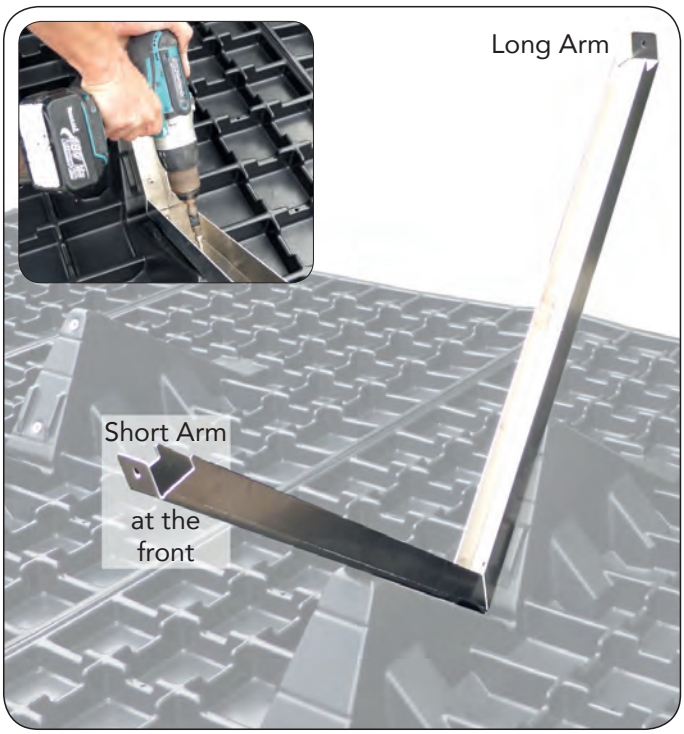
- Position the bracket in to the moulded 'V' profile of the Anchor Board with the **short arm** to the front.
- The bracket is then attached using 4 No. M8x55mm screws. Tightening torque: 15-20 Nm.

1. Screw all of the 4 screws in loosely.
2. Screw in an upper screw until it forms a small flange between the screws and profile. Push the bracket in the direction of the trough to ensure a completely flat fit.
3. After that, tighten the lower screws on the same side.
4. Repeat the same process on the other side.



Tips

- Install the Quick Fix Angle Brackets prior to the substrate to prevent the screw holes in the Anchor Boards becoming clogged with substrate.



7 Module Carrier Rail

7.1 Module Carrier Rail

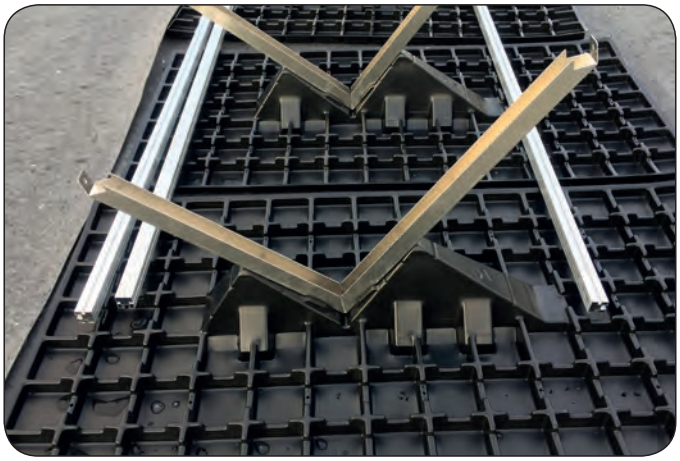
Profiled rail for mounting framed modules.

Technical data	
Weight	1kg / lm
Size	6m x 50mm x 50mm

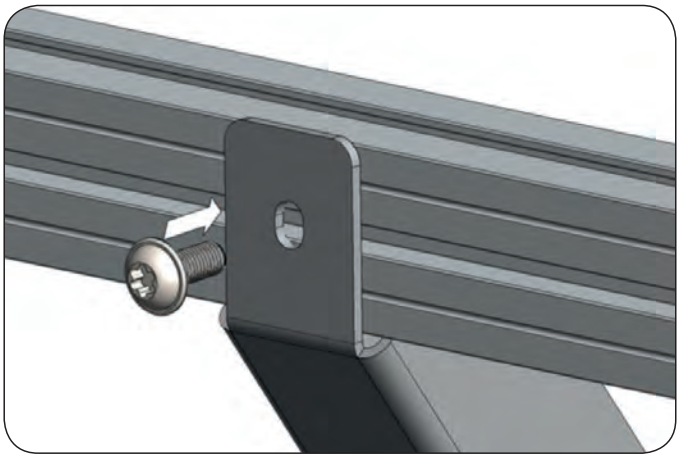
Cutting - refer to section 1.6 use a hacksaw or angle grinder and protection board.

INSTALLATION

- Layout the module carrier rails.
- Each module carrier rail is screwed onto the Quick Fix Angle Bracket with the thread-forming self tapping M8 x 15mm screws.

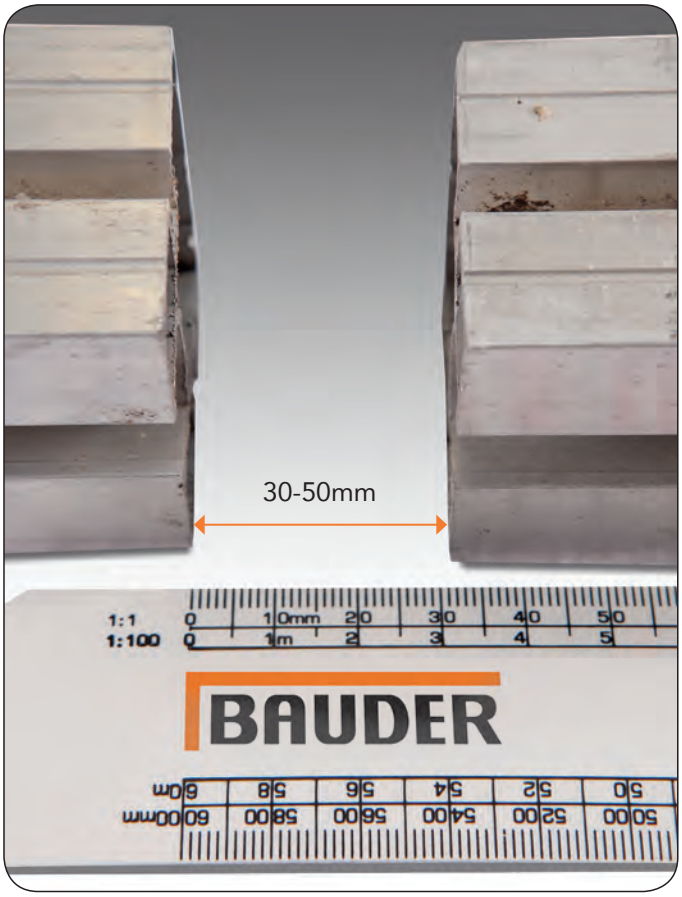


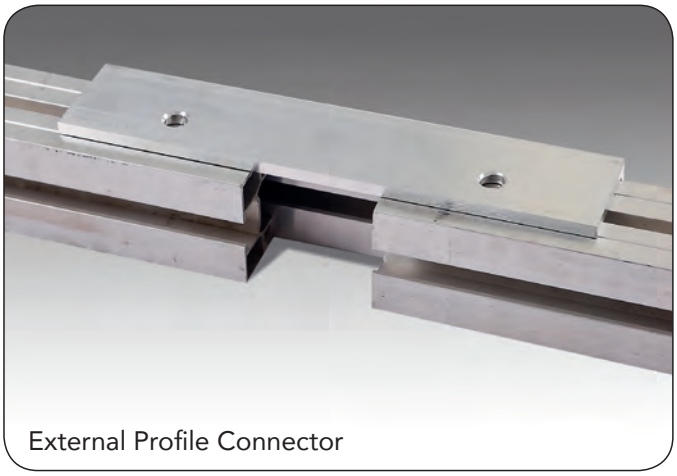
Installation of carrier rail fixing can be stiff. Particularly in cold conditions. Only fully fix once rails are in desired location.



7.2 External Profile Connector

- Leave a gap of 30-50mm between Module Carrier Rails. It is important to ensure that when the PV panels are installed, they do not span over a rail joint.
- Connect module carrier rail lengths with an external profile connector. Fix in place with 2 self-tapping screws, M8 x 15mm.

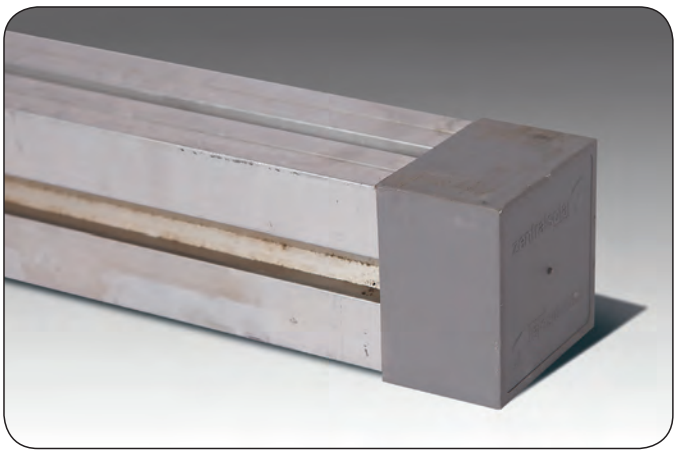




External Profile Connector

7.3 Module Rail End Caps

- Place module rail end caps on the ends of each module rail.



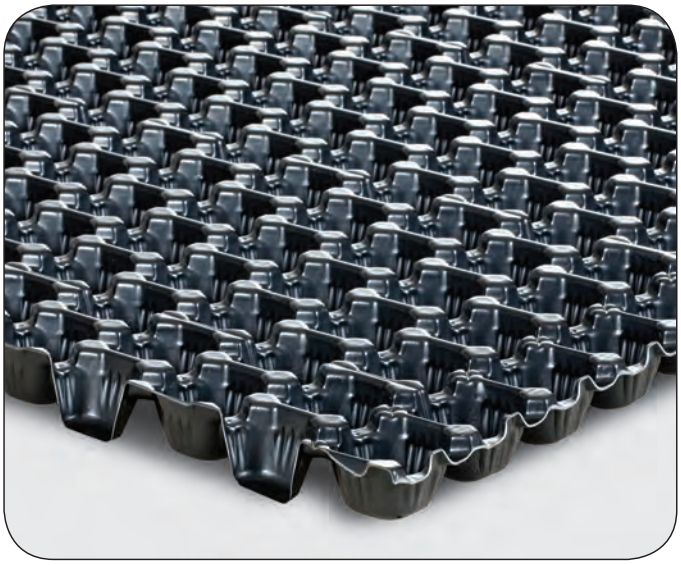
8 Drainage Layer

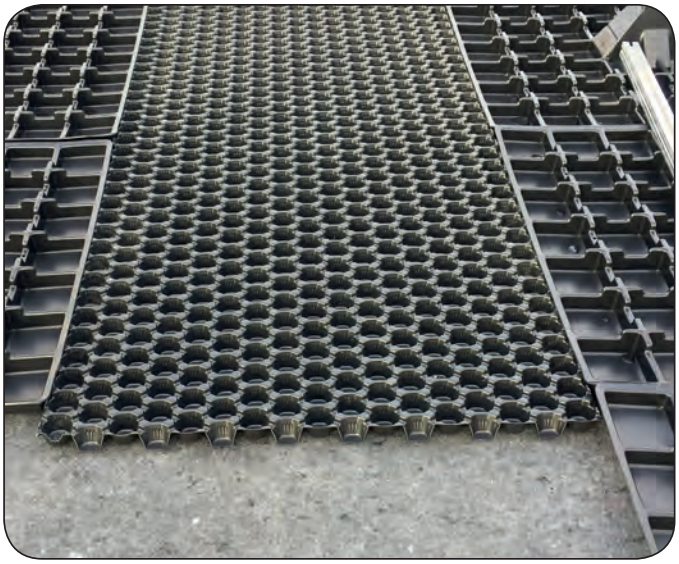
8.1 DSE40

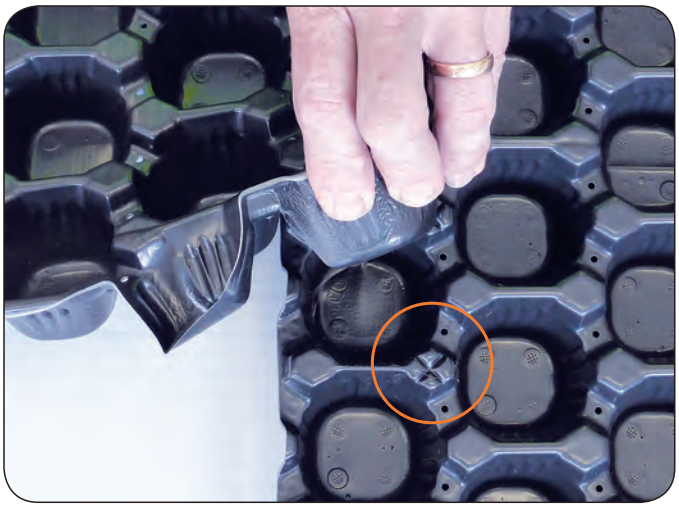
Water storage and multi-directional drainage layer manufactured from 100% recycled high density polyethylene (HDPE).

Technical data	
Thickness	40mm
Size (w x l)	1.04m x 2.03m
Weight	1.8kg/m² dry
Water Storage	13.5 litres/m²

Cutting - refer to section 1.6 use a hacksaw and protection board.







INSTALLATION

- Bauder DSE40 is laid in between the anchor boards. Where possible, the array will be designed to give a distance between anchor boards of 1m, this will avoid cutting of DSE40 board.
- Lay each sheet (open cells up) over entire area so they overlap by one full cell, as marked by 'X' on each sheet.
- Stagger the joints, brick pattern.
- For installation to outlets, edge trims etc, please refer to Bauder Green Roof Installation guide.

Tips

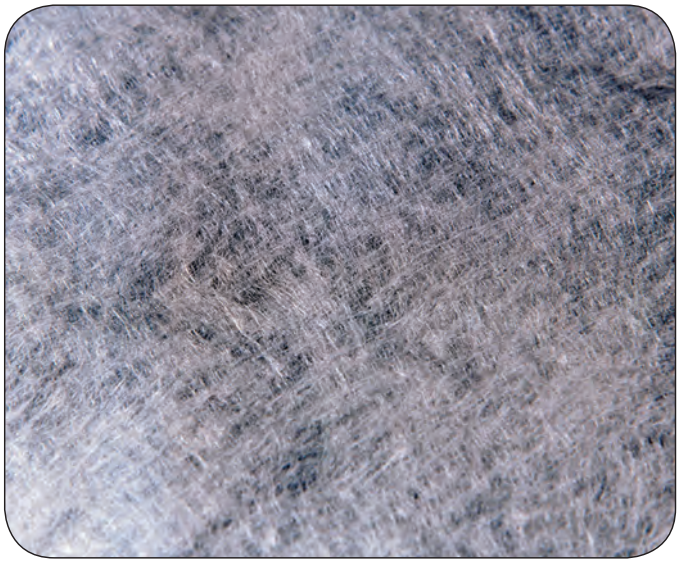
- Filling the DSE40 boards with water will help hold them in place.

9.1 Filter Fleece to DSE40 Drainage layer for BioSOLAR

Geotextile fleece to retain substrate fines, preventing them from entering the drainage system.

Technical data		
Thickness	1mm	
Size (w x l)	1m x 100m	2m x 100m
Weight	12.5kg/roll	25kg/roll

Cutting - refer to section 1.6, use flat blade knife or scissors.

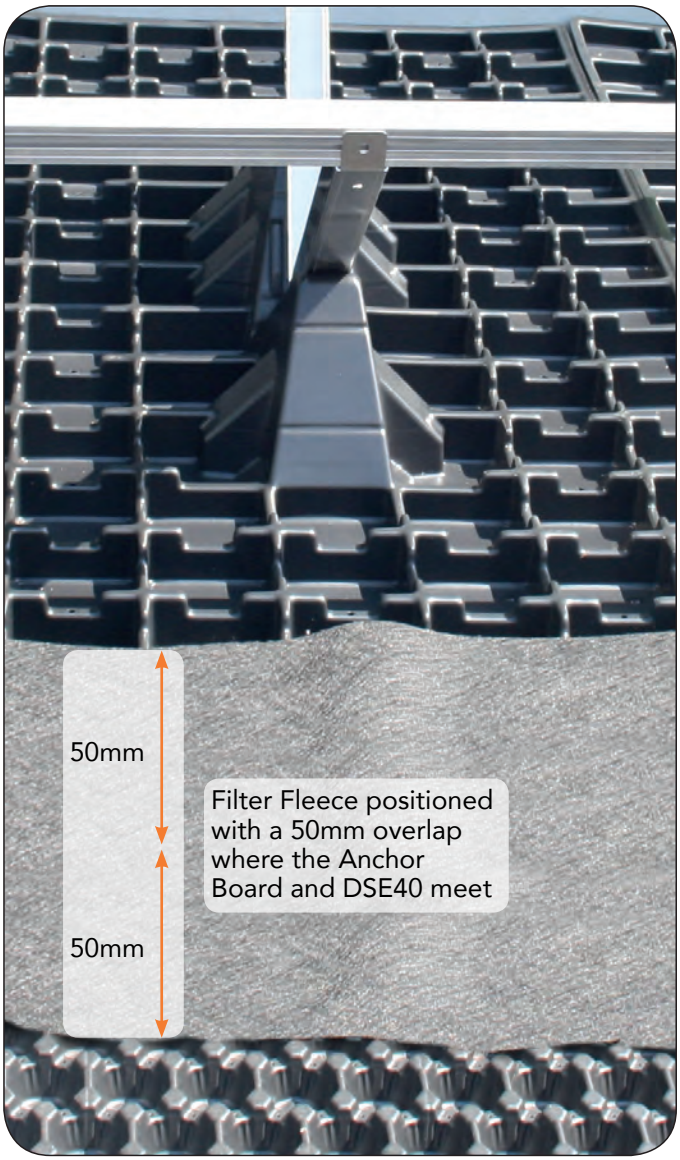


INSTALLATION

- Lay out over entire roof area that will be covered with substrate. Lap the Filter Fleece by 150mm on all joints.
- Extend beyond the finished surface level. This will be trimmed later, as required, upon completion of the landscaping.
- When substrate is being installed up to a drainage trim, place a 300mm strip up the inside of the trim to prevent substrate fines from washing out.
- Where substrate is being installed without drainage trim, dress Filter Fleece up the inside of the pebbles and the substrate to separate the two materials.

Tips

- Filter Fleece can be weighed down with substrate to hold it in place.



10 Substrate

10.1 Biodiverse Substrate for BioSOLAR

FLL Compliant lightweight, low nutrient, and free draining growing medium.

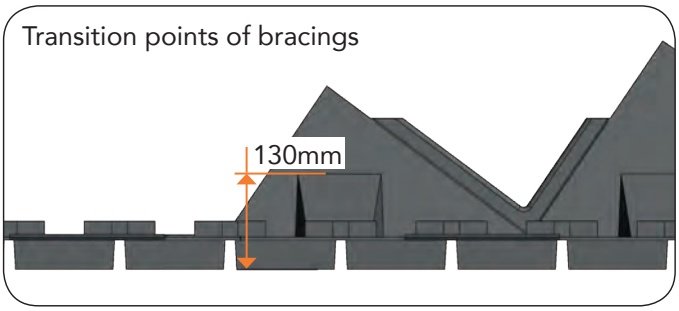
Spreading - refer to section 1.6, spread with a wheelbarrow, spazzle or shovel.
Ordering and delivery - confirm quantities and prepare a loading out plan of the roof prior to calling off the order. Read and refer to section 1.4.

INSTALLATION

- Ensure correct protection, drainage and filter fleece layers have been installed prior to spreading loose substrate material.
- Mark the roof with the location for each bulk bag prior to loading out the roof.
- When installing extensive substrate use lengths of timber to help set the required finished depth. Use a string line to keep control of the depth of substrate.
- Minimum depth of substrate on the Anchor Boards is 130mm.
- If using bulk bags, care should be taken to maintain a controlled pour.
- Spread substrate to correct depth over entire area then add any remaining material required for settlement on top.
- Lightly rake to smooth the surface.
- Biodiverse substrate is normally installed with an undulating finish.
- It is vitally important that the correct depth of substrate is installed throughout the Anchor Board. The transition point of the bracings can be used as a datum for the filling height. This corresponds to a height of 130mm.
- See the technical report for required depth.
- Lightly rake to smooth the surface.
- Any green roof items such as mounding or items required for habitat creation should be done after the 'ballasting' volume is laid, using additional material.

Tips

- The back of a hard rake can be used instead of a spazzle to spread the substrate to correct depth.
- Substrate should not be worked when saturated or frozen.
- Damping the substrate can minimise airborne dust.




Substrate **MUST** be installed prior to the PV Modules

11.1 Bauder Flora 3 Seed Mix

A broad mix of low growing and some shade tolerant species. Tackifier and mycorrhizas assist with installation and establishment process.

Technical data		
Supply Form	5kg bag	20kg bag
Sow rate	100g/m²	
Coverage	50m²	200m²

Storage - refer to section 1.4, in cool, dark and dry conditions, maximum of 1 year. If the seed mix becomes damp prior to installation it must be discarded.
Seeding - ideally sow in Spring or Autumn. Do not seed in midsummer unless there is adequate irrigation, do not sow in strong winds, or frosty conditions.

INSTALLATION

- Seeding the roof can only commence once the PV array has been electrically connected, fully tested and commissioned.
- Ensure the substrate is at the correct level and is raked out to give a smooth finish.
- Water the substrate thoroughly prior to spreading the Flora 3 Seed Mix.
- Seed using the Bauder Spreader Trolley to achieve sow rate of 100g/m².
- Do not water or rake afterwards.
- Do not traffic or disturb the seeded area otherwise germination of the seed will be affected.

AFTERCARE

- Follow instructions in section 12.

Tips:

- Habitat piles and dead woods should not be arranged **between** the rows of PVs.
- Take photos of roof following completion to record condition.
- Record that aftercare advice has been given to main contractors or building owner regarding watering, trafficking and storage on the roof.

12 Maintenance Recommendations

The BioSOLAR array should be maintained by trained professionals at fixed intervals (it is recommended that this inspection is carried out annually). The following points should be checked in the process:

- Dirt on the modules: Type and degree of dirt.
- Security of the anchoring system including fixings and ballast.
- Condition of visible cable connectors.
- Establishment of vegetation.

MAINTAINING THE SOLAR MODULES

Module Maintenance

Please follow module manufacturer's guidelines for specific maintenance requirements. If you are unsure regarding any aspect of maintenance please contact the Bauder technical office to discuss requirements.

Module Cleaning

Please note that cleaning the modules can increase yield. This particularly applies to dirt caused by fallen leaves or bird droppings, which could lead to partial shading. Yield decreases due to snow are negligible since these take place during seasons of lowest yield.

The tilt and self-cleaning glass nature of the solar modules ensures that dust and dirt are generally adequately removed by rain. Snow will also slide off. If the modules should become particularly dirty they should be cleaned using warm water (not exceeding 40°C) and a soft cleaning device.

Upon request we are happy to advise on suitable cleaning agents that we have found to perform exceptionally well against streaking and fingerprints.

Caution!

Never use abrasive cleaners, such as pad brushes when cleaning the modules. When using high pressure washers ensure to keep a minimum distance of 50cm from the surface of the module. Use a cleaning agent with a concentration of no more than 20% glass cleaner.

Maintaining the Mounting System

The BioSOLAR mounting system requires minimal maintenance although a visual inspection should be carried out to ensure the following:

- Bauder extensive substrate has not eroded and correct depth of ballast is in place.
- All visible fixings are secure and there has been no movement of mounts/modules.
- No vegetation is growing around/through mount fixings.

MAINTAINING THE GREEN ROOF

The following is a guide to the maintenance necessary to keep a biodiverse green roof in good condition. The information relates to installations that have been completed for one full growing season and where establishment maintenance has been effective.

Establishment maintenance relates to the surface watering and weeding required for the first 10-12 weeks after installation is required until the planting has rooted into the growing medium and can be considered established.

General Vegetation Maintenance

The Bauder biodiversity green roofs are designed to meet BREEAM requirements will include a species mix selected to provide a balanced plant community on the roof and will require basic maintenance if this is to be sustained in the long term.

Maintenance is best carried out biannually, during Spring and Autumn. Some deposited leaf litter may be considered as contributory to the biodiverse environment, which is acceptable so long as provision is made to ensure that this has no negative effect on other plants or the PV array.

Note - Specifically designated biodiversity areas should be disturbed as little as possible during maintenance so as not to upset any micro-habitats that may have colonised.

Maintenance Procedures

- In the late Autumn the vegetation is to be strimmed back to a 50-70mm height and the unwanted waste matter removed and lowered to ground level for composting/disposal. **Care must be taken to ensure that any solar cables are moved out of the way before any strimming/cutting takes place.**
- If required in the Spring, apply an 80g/m^2 dressing of Bauder slow release organic fertiliser to the vegetated surface.
- We recommend removing unwanted leaf litter that has fallen onto the roof surface in the Spring and Autumn, to ensure that this does not smother the vegetation beneath.
- Open the lids of all inspection chambers and ensure they are free from blockage and water can flow freely.
- Any vegetation which has encroached into drainage outlets, inspection chambers, walkways and the vegetation barriers (pebbles) should be removed. If movement/settlement of the pebble vegetation barrier has occurred, additional washed stone pebbles similar to the existing should be added.
- Remove any weed growth that will exceed 30mm in height, if invasive or undesirable (if necessary this can be sprayed with a Glyphosate based herbicide). Any vegetation that shades the modules, however thin will have an impact on PV output and must be cropped.
- Damage to the landscaping should be reported to the building owner.

BAUDER GREEN ROOF MAINTENANCE SERVICE

With over 30 years' experience in the design and supply of green roofs throughout the UK and Ireland, Bauder can offer unparalleled experience and expertise in green roof maintenance including sedum, biodiverse and wildflower.

Our Service

Bauder's experienced team will provide the client with a tailor-made maintenance programme for the green roof. A typical Bauder Maintenance Programme includes:

- Full inspection and evaluation of your green roof.
- Application of organic slow release granular fertilizer.
- Removal of leaves and debris.
- Removal of unwanted vegetation.
- Inspection and clearance of outlets.
- Examination and testing of irrigation.

This work is undertaken by Bauder's experienced maintenance engineers who will carry out the necessary risk assessments and comply with all current health and safety legislation throughout the duration of the work. Finally, the client will be provided with a bespoke report with photographic verification outlining the condition of the planting and any areas requiring on going treatment. To discuss your specific requirements, please call our green roof service team for a no obligation quote.

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