Eco Green Roofs
Part Of The Eco Green Group

Product Data Sheet

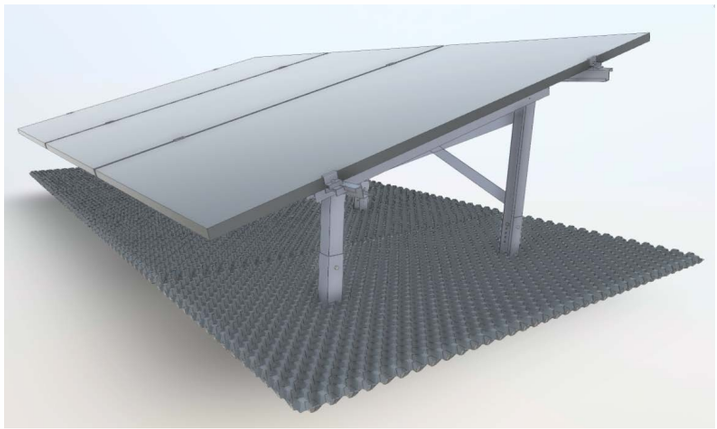
EGR SolarNature

Solar Mounting System

MADE IN UK

Load-supported solar mounting system for roof penetration-free mounting of PV modules or PV module series. Consisting of Base Plate, Mounting Frame and Drainage and Storage Board
Supplied with associated Easy Mounting Rails, Module Clamps, Rail Connector Kit and Wind Bracing.

- UK Manufactured
- Easier Install
- Faster Delivery from Order
- Improved ground clearance for improved plant durability
- Wider mount area to accept increasing panel sizes



Technical data	
Material	Aluminium {Base Plate and Mounting Frame) Recycled HDPR
Dimensions	L: 2 ,000 x W: 1 ,000 x H: 870 - 950 mm
Colour	Natural Aluminium {Base Plate and Mounting Frame) Black
Weight	Approx. 4.2 kg {Base Plate and Mounting Frame)
Accessories	• Easy Mounting Rails • Module Clamps • Rail Connector Kit • Wind Bracing
Water discharge capacity {DINEN ISO12958)	Measured at: o = 20 kPA, soft/hard, MD, with EGR Filter Fleece on the upper side i = 0.01 (=1% roof pitch):0.3321/(m*s) i = 0.02 (=2% roof pitch):0.7331/(m*s) i = 0.03 (=3% roof pitch):1.0011/(m*s) i = 1 (vertical):8.3281/(m*s)
Water reservoir	Large naps facing up = approx. 6.3 l/m^2

Area of use

For the construction of solar green roofs with extensive greening.

Specific properties

- Stability of the overall system proven in accordance with Eurocode 1
  Property-specific proof of stability can be provided (free of charge following receipt of order)
- Suitable for roof areas with a roof pitch of 0° to 5°
- Penetration-free assembly on the roof
- Available in inclines 10°, 15° and 20°

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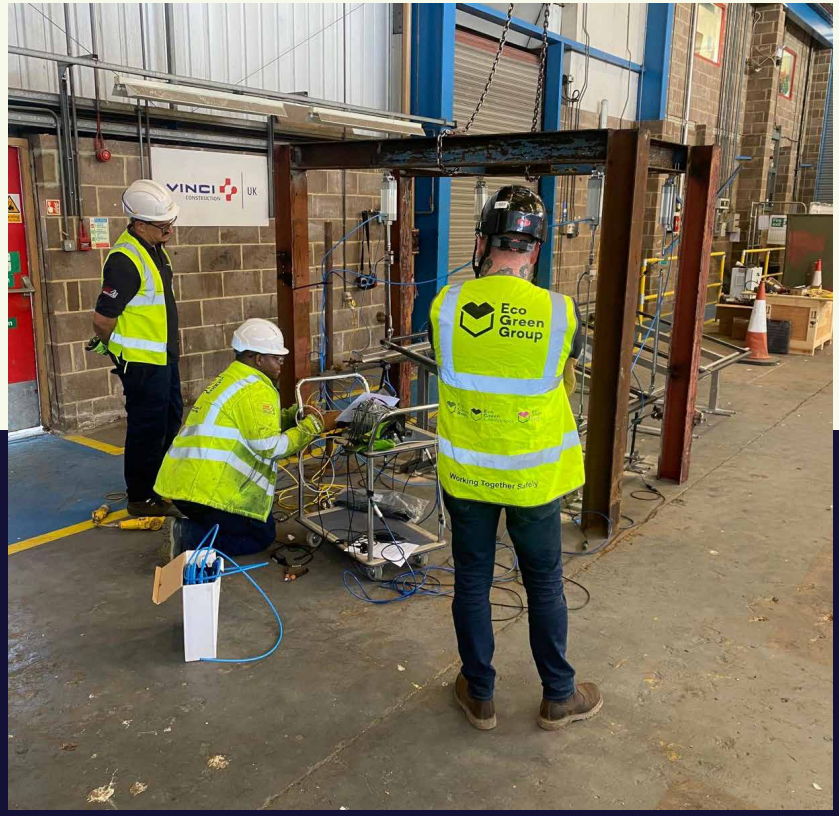
Eco Green Roofs™

Enhancing Biodiversity Whilst Generating Energy

SOLAR NATURE BROCHURE

Solar Nature



Our Solar Nature System is fully compliant with DfE External Fabric Specification, ensuring a streamlined and reliable solution for your roofing needs.

Key Features:

Our expertise is not just in the services we offer; it's in understanding and adapting to the unique needs of each client, ensuring flexibility and customisation in our approach.

- Designed for a fully integrated installation alongside waterproofing and solar components, with no penetrations required, protecting the integrity of the waterproofing layer.
- Wind tested to destruction
- Offers a single-point guarantee, minimising risk and providing peace of mind.
- Enables complete roof functionality to meet planning requirements, such as BREEAM certification and Biodiversity Net Gain (BNG) obligations.

"Our system underwent wind testing to the point of destruction, and the results were astonishing. It exceeded expectations, performing better than hurricane-force conditions. Even the testing team was surprised at its exceptional performance."

Danny Farquhar,
Associate Director

"With numerous Biosolar systems being installed on schools, our top priority was health and safety. By investing in testing that exceeds standard requirements, we aimed to ensure the highest level of safety for our system. We are delighted that the Solar Nature System has achieved such a rigorous level of testing."

Keith Hills,
Founder & Director

UK Manufactured

to reduce carbon footprint & minimise lead time

System has been certified to the following standards: EN 10025-2, EN 485-2, EN 15088:2006, EN 1994-1-4, BS EN 1090-2:2018

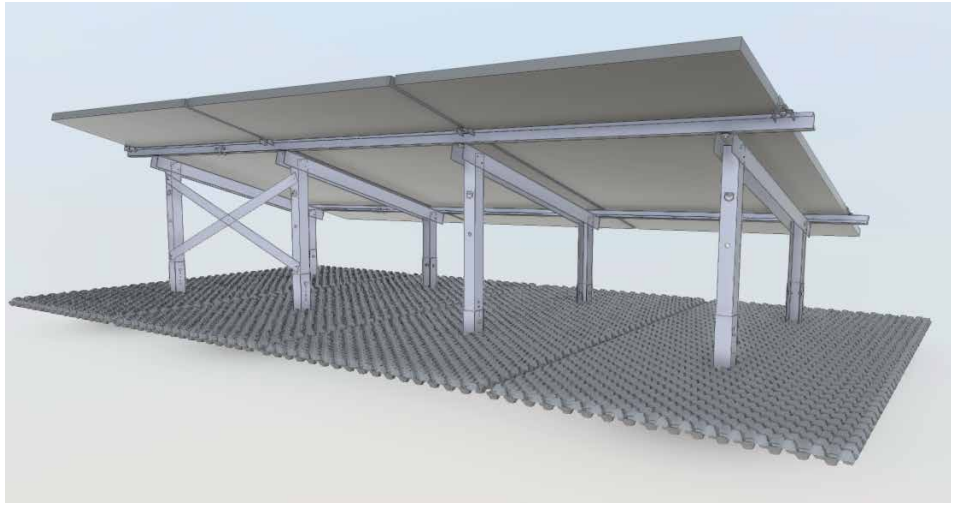
UN Sustainable Development Goals

The Biosolar will achieve the following:

Design considerations

Our Design team will design the Biosolar scheme from the very start. Collaborating to ensure that a fully compliant design is achieved.

- **Sizing:** Determining the optimal dimensions and capacity for the solar and green roof systems, ensuring they fit the available roof space and meet energy production targets.
- **Wind Uplift:** Evaluating the effects of wind forces on the roof and the solar panel system to prevent damage and ensure stability, especially in high-wind environments.
- **Shade Analysis:** Assessing shading factors from surrounding buildings, trees, or rooftop equipment to optimise solar panel placement for maximum sunlight exposure and energy efficiency.
- **Weight Loadings:** Ensuring that the Solar Nature system's weight is within the overall roof loading structural capacity, verifying that the combined weight of the system and any additional components align with the structural integrity and safety limits of the building.
- **Walkways:** Designing and installing safe, non-intrusive pathways for maintenance personnel to access solar panels and green roof systems without damaging the installation or vegetation.
- **Plant (e.g., air conditioning units, chillers)**: Integrating essential rooftop equipment into the overall design, ensuring that these systems coexist without interfering with the solar array or compromising the green roof's ecological and energy-generating functions.



Installation services

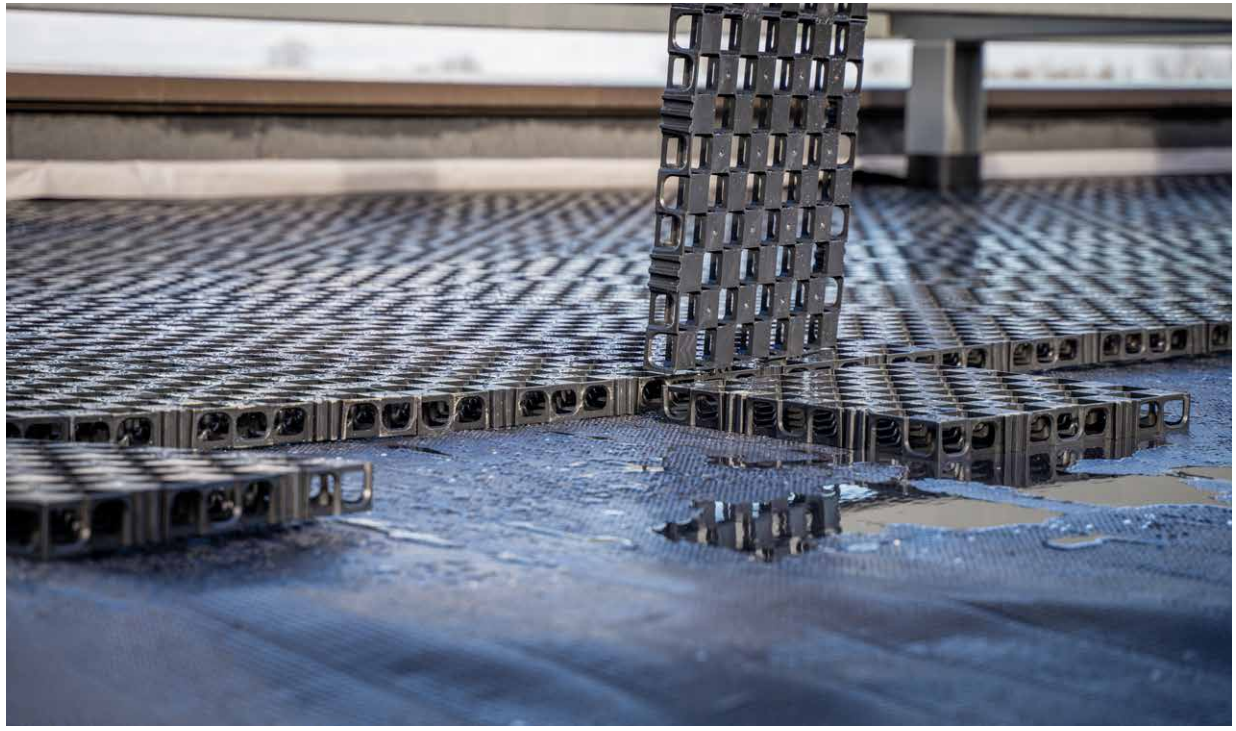
Quality & Assurance Teams

Network of Approved Installers

Full Collaboration with Waterproofing & M&E Contractors to Reduce Risk

Additional products

- Blue Roofs
- Green Slabs
- Handrail
- Landscaping
- Irrigation



SOLAR NATURE SYSTEM CASE STUDY

The solution

Eco Green Roofs, the sustainable roofing division of the Eco Green Group of Companies, was selected for this project based on its proven success in similar installations. The Solar Nature roofing system was chosen due to its efficiency, adaptability, and alignment with the school's energy requirements. The school also requested the inclusion of a ballasted handrail system to maximise safety and ensure compliance.

The process

Eco Green Roofs engaged early with the off-site main contractors and their in-house designers, allowing for a collaborative approach throughout the project. This early coordination enabled a seamless integration of the Solar Nature system into the building's infrastructure, covering all aspects from design and manufacturing to installation and compliance testing.

The outcome

The Solar Nature system was successfully installed, meeting all the DfE Technical Annexes 2G, 2H, and 2J criteria. The roofing system was designed to maximise energy output efficiently, providing the school with a sustainable energy solution. The inclusion of the ballasted handrail system ensured compliance with safety regulations while maintaining system integrity and performance.

Conclusion

This project demonstrates Eco Green Roofs' expertise in delivering bespoke, sustainable roofing solutions that comply with technical and regulatory standards. Through early engagement with the main contractors and their designers, the company ensured a smooth, successful project outcome, highlighting its ability to integrate green infrastructure effectively within the educational sector.

PROJECT MANAGEMENT:

The school required the installation of a Biosolar roofing system to align with the Department for Education's (DfE) Technical Annexes 2G, 2H, and 2J, which provide guidelines on sustainable building solutions for educational facilities. The objective was to maximise energy output and create an eco-friendly learning environment.

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