

## Single Ply Membrane Systems

Flat roof solutions





Oughterard National School  
Oughterard

#### BUILDING BOARD

Roof Size:	3,400m <sup>2</sup>
Waterproofing:	Bauder Thermofol System
Specifier:	JJ Rhatigan
Approved Contractor:	Deane Roofing & Cladding

Bauder is a leading European manufacturer of flat roof waterproofing membranes and insulation to make buildings watertight and thermally efficient; photovoltaic systems for renewable energy generation; green roofs to support the environment and create better living and working spaces for people; and blue roofs for stormwater attenuation and prevention of localised flooding.

Customers choose us because of the way in which we do business, for our robust advice on the right system, and our approach to delivering projects. We work alongside clients to deliver the best solution for a building from our broad portfolio of systems.

# Single Ply Membrane Systems

## Lightweight and fast track flat roof waterproofing

Strong and flexible membranes composed predominantly of synthetic polymer involving polyvinyl chloride (PVC) and flexible polyolefin (FPO). Suitable for new build and refurbishment projects. CCPI verification for our systems ensures specifiers have unambiguous and accurate information when selecting a Bauder solution.

### Specifying a single ply membrane system

Single ply roofing systems are advantageous if the project has load bearing considerations. The membranes are durable and resistant to European climate conditions, yet incredibly lightweight, typically 2-3kg/m<sup>2</sup>. There is the potential to upgrade with our extensive green roofs, solar PV, and biosolar systems.

Precise test standards and results are stated in Bauder product technical data sheets and using our specification service will confirm suitability to each project.

### CCPI verified product information

We have adopted the new Code for Construction Product Information (CCPI) across our roofing portfolio to have information verified for accuracy and clarity to ensure specifiers can rely on the data when selecting a Bauder single ply solution.

### Outline of our single ply systems

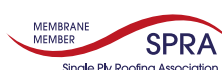
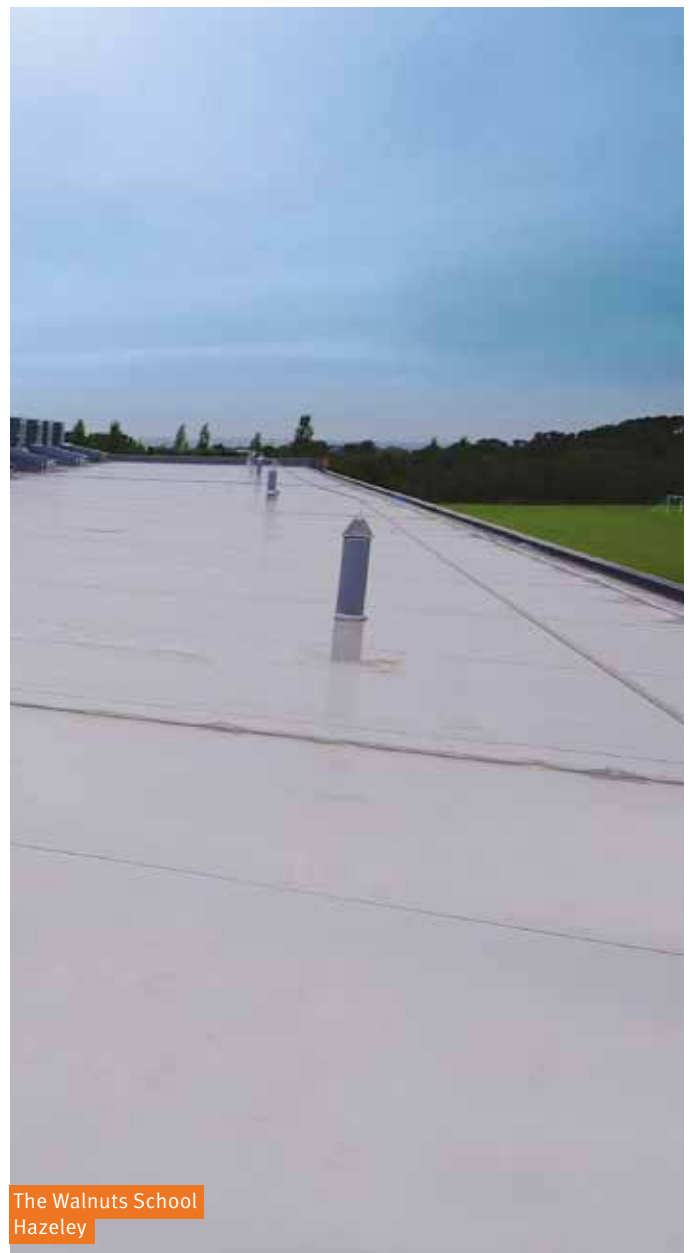
- Portfolio for new build and refurbishment projects.
- Range of insulations for warm or inverted roof construction, and bespoke PIR infill system to refurbish profiled metal roofs.
- Online system and product evidence with up-to-date technical statistics, DoCs and DoPs, testing outcomes, certification, approvals, accreditations, and conformity assessment.
- Accessories, rooflights, and outlets complete the roof.
- Guarantee options to fulfill cover requirements for the project.

### Rooftops with an environmental focus

- Extensive green roof systems.
- Solar PV array.

### Achieving technical objectives

- BBA verified properties for approved roof systems.
- Non-combustible insulation options when required.
- Acoustic solutions with third party testing.
- Tapered insulation to create falls on a flat roof.
- FM approved mechanically fastened roof systems.
- CCPI verified system data.



# Waterproofing the Roof

## Our single ply systems for new builds and refurbishments

There are two types of single ply membrane waterproofing systems within our portfolio with adhered, mechanically fastened, or loose laid installation options. CCPI Verification for our systems ensures specifiers have unambiguous and accurate information when selecting a Bauder solution.

### Bauder Thermofol System

Our industry popular PVC single ply waterproofing system utilising high grade polymer formulation for a flexible membrane that is easy to install. The system can feature extruded profiles to enhance the aesthetic appearance and membranes are available in a range of colours and thicknesses.

#### Enhance with:

- Extensive green roofs
- Solar PV
- Biosolar PV

### Bauder Thermoplan System

Our FPO single ply waterproofing system utilises high grade polymer formulation for a membrane that has no inherent memory and will not shrink. The membrane is available in two colours and different thicknesses.

#### Enhance with:

- Extensive green roofs
- Solar PV
- Biosolar PV

### Bauder Profiled PIR Infill Overlay System

This solution incorporates a PIR insulation infill that is cut to match profiled sheet metal and roof structures, typically comprised steel, composite panels, or aluminium. The system includes a flatboard FA PIR insulation and a single ply membrane to provide an overlay solution that can increase thermal performance of the building.



# Delivering Rooftop Environmental Solutions

## Making flat roofs more useful

To accelerate towards Net Zero Carbon, we have sustainably focused solutions that reduce energy wastage, contribute to the environment, generate renewable energy and help building specifiers meet Government policy.

### Insulating roofs

Reducing building energy usage through effective insulation. There are different options depending on project requirements for a warm or inverted roof, and the building usage.

At product level, our ECO FF PIR insulation utilises the biomass-balance approach with 80% organic biomass-based raw materials as feedstock to reduce the amount of fossil derivatives in the formulation.

Further information on page 20.

### Creating a sustainable environment

Each green roof brings back a piece of nature and the roof space can be vegetated with low maintenance plants for a simple solution. A Bauder green roof combines the finished planting scheme and all its supportive components with a secure waterproofing system. Read more on page 17.

### Using the roof to generate energy

A flat roof is the ideal place for a solar photovoltaic (PV) installation to generate site-sourced electricity. An additional opportunity is to specify a biosolar solution which embraces an integrated green roof. See pages 18 - 19.





CFPR & Future Space Expansion Growth  
University of West England, Bristol

**BUILDING BOARD**

Roof Size:	3,177m <sup>2</sup>
Waterproofing:	Bauder Thermofol System
Client:	University of the West of England
Specifier:	John Perkins Construction
Approved Contractor:	Urban Roof

# Bauder Thermofol System

## Industry popular flexible flat roofing membrane system

Our Thermofol PVC system includes polymers to create a flexible waterproofing membrane that is heat welded.

### When to specify

The Bauder Thermofol System is suited for lightweight and fast track construction projects for new build, refurbishment, and overlay scenarios. The PVC formulation gives resistance to chemicals and micro-organism attack making it suitable for extensive green roofs. The system can also be specified with the BauderSOLAR F and BauderSOLAR G LIGHT PV arrays.

### Enhance with:

- Extensive green roofs
- Solar PV
- Biosolar PV

### Characteristics of the system

- Membrane thicknesses available 1.2, 1.5, 1.8, and 2.0mm.
- Thermofol membrane is reinforced with pre-coated polyester cross weave matting.
- CCPI verified system data.
- Acoustic solution with third-party testing.
- FM Approved Assemblies as defined on the FM online database 'RoofNav'.
- Comprehensive range of guarantee packages to fulfil cover requirements for the project (dependant on system/product selection). For more information contact our technical dept for a sample guarantee outlining cover level, terms and conditions.

### Verified properties

#### BBA Certificate 06/4354:

- Fire classification B<sub>ROOF</sub>(t4) to BS EN 13501-5 tested to TS 1187 test 4 for external fire exposure on defined permutations of product build up.
- Fire properties – membranes deemed “unrestricted” in certain circumstances as categorised in BBA certificate.
- Service life > 35 years.

#### EPD Certification:

- Membranes.
- Insulations.

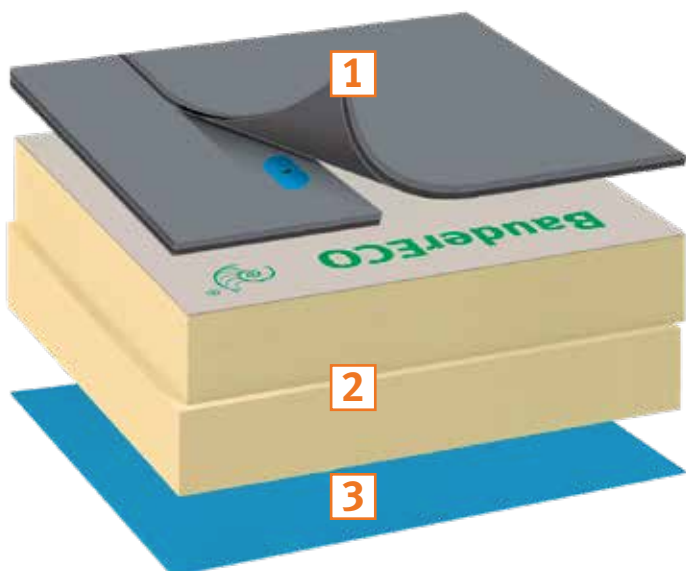
#### FM Approval:

Defined assemblies are approved for mechanically fastened systems and it is possible for ballasted installations to achieve compliance when FM guidelines are followed.

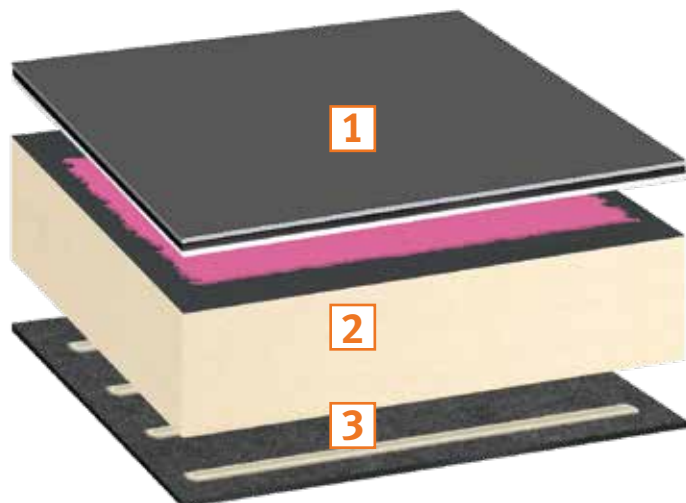


# Bauder Thermofol System

## Configuration examples



Mechanically fastened installation



Adhered installation

### SYSTEM DATA

[↓](https://www.bauder.co.uk/technical-centre) (download product data sheets for more information [bauder.co.uk/technical-centre](https://www.bauder.co.uk/technical-centre))

#### 1 Cap sheet

Confirmation must be sought for BauderSOLAR PV systems as installation conditions apply.

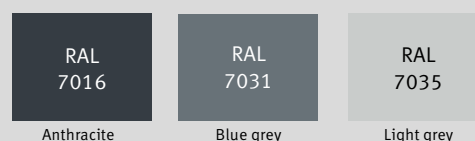
#### BauderTHERMOFOL U 12 FR\*, U 15 FR, U 18 FR & U 20 FR

Mechanically fixed membrane with pre-coated cross-weave polyester reinforcement.

#### BauderTHERMOFOL U 15 V FR

1.5mm polyester reinforced membrane (PVC) with 2mm polyester fleece laminated to the underside used in adhered installations.

Membrane finish colours



\*U 12 FR is not suitable for BauderSOLAR solutions

#### 2 Warm roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

**BauderPIR FA** (flatboard and tapered)

**BauderECO FF** (sustainable PIR flatboard)

**BauderVIP** (slimline silica vacuum core with protection facings)

**BauderROCK** (flatboard and tapered mineral wool)

**BauderGLAS** (flatboard and tapered cellular glass)

#### 3 AVCL

#### BauderSYN DB-PE 100

0.16mm Polyethylene membrane for mechanically fixed and ballasted systems.

#### BauderTEC KSD FBS

Mica Self-adhesive elastomeric bitumen membrane; mica finished upper surface for adhesive bonding of insulation.





# Bauder Thermofol System

## Project gallery



Australia House, West Suffolk College  
Bury St Edmunds

### BUILDING BOARD

Roof Size:	1,650m <sup>2</sup>
Waterproofing:	Bauder Thermofol System
Main Contractor:	BAM Construction
Specifier:	Pick Everard, Bury St Edmunds
Approved Contractor:	C-Eco Roofing Limited



Battle of Britain - The Wing  
Capel-le-Ferne



The Mary Erskine School (ESMS)  
Edinburgh



**The Walnuts School  
Hazeley**

**BUILDING BOARD**

Roof Size:	2,000m <sup>2</sup>
Waterproofing:	Bauder Thermoplan System
Roofing Contractor:	Voland Asphalt Ltd.
Specifier:	Voland Asphalt Ltd.

# Bauder Thermoplan System

## Advanced synthetic waterproofing technology

Durable FPO single ply system with high UV resistant properties suitable for exposed and buried installations.

### When to specify

Bauder Thermoplan FPO system is a lightweight and fast track roofing solution for new build, refurbishment, and overlay scenarios. The formulation, an alloy of thermoplastic and rubber, gives resistance to chemicals and micro-organism attack making it suitable for extensive green roofs. The system can also be specified with our BauderSOLAR F and BauderSOLAR G LIGHT PV arrays. The membrane is available in two colours.

### Enhance with:

- Extensive green roofs
- Solar PV
- Biosolar PV

### Characteristics of the system

- Membrane thicknesses available 1.5, 1.8 and 2.0mm.
- Thermoplan membrane has a pre-coated cross weave polyester reinforcement.
- Acoustic solution with third-party testing
- FM Approved Assemblies as defined on the FM online database 'RoofNav'.
- CCPI verified system data.
- Comprehensive range of guarantee packages to fulfil cover requirements for the project (dependant on system/product selection). For more information contact our technical dept for a sample guarantee outlining cover level, terms and conditions.

### Verified properties

#### BBA Certificate 04/4120:

- Fire classification B<sub>ROOF(t4)</sub> to BS EN 13501-5 tested to TS 1187 test 4 for external fire exposure on defined permutations of product build up.
- Fire properties – membranes deemed “unrestricted” in certain circumstances as categorised in BBA certificate.
- Service life > 30 years.

#### EPD Certification:

- Membranes.
- Insulations.

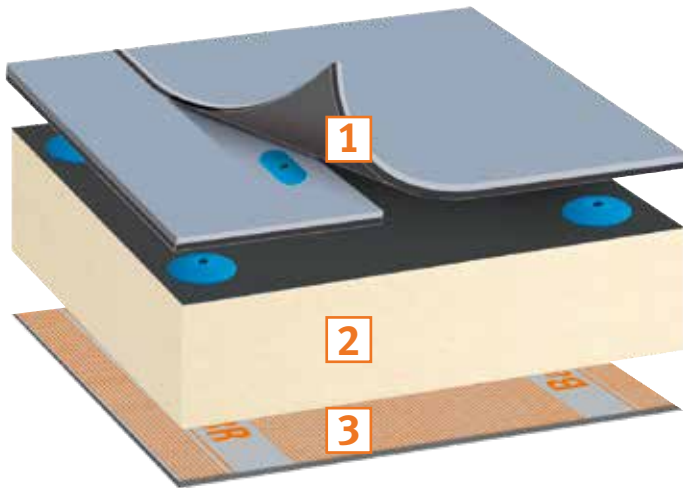
#### FM Approval:

Defined assemblies are approved for mechanically fastened and ballasted installations.

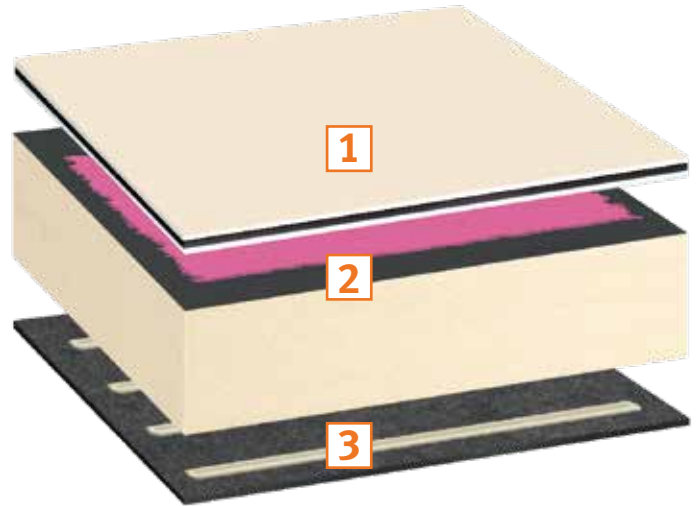


# Bauder Thermoplan System

## Configuration examples



Mechanically fastened installation



Adhered installation

### SYSTEM DATA

 (download product data sheets for more information [bauder.co.uk/technical-centre](https://bauder.co.uk/technical-centre))

#### 1 Cap sheet

Membranes of 1.5mm and thicker can be used for both BauderSOLAR PV systems.

Membrane finish colours

#### BauderTHERMOPLAN T 15 and T 20

Mechanically fixed membrane with pre-coated cross-weave polyester reinforcement.

#### BauderTHERMOPLAN T 15 V

1.5mm membrane used in adhered installations with 2mm polyester fleece laminated to the underside.

RAL  
7001

Silver grey

RAL  
1013

Pearl white

#### 2 Warm roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

**BauderPIR** (flatboard and tapered)

**BauderVIP** (slimline silica vacuum core with protection facings)

**BauderROCK** (flatboard and tapered mineral wool)

**BauderGLAS** (flatboard and tapered cellular glass)

#### 3 AVCL

#### BauderTEC DBR 06

Self-adhesive elastomeric bitumen membrane with aluminium foil-facing for mechanically fixed systems.

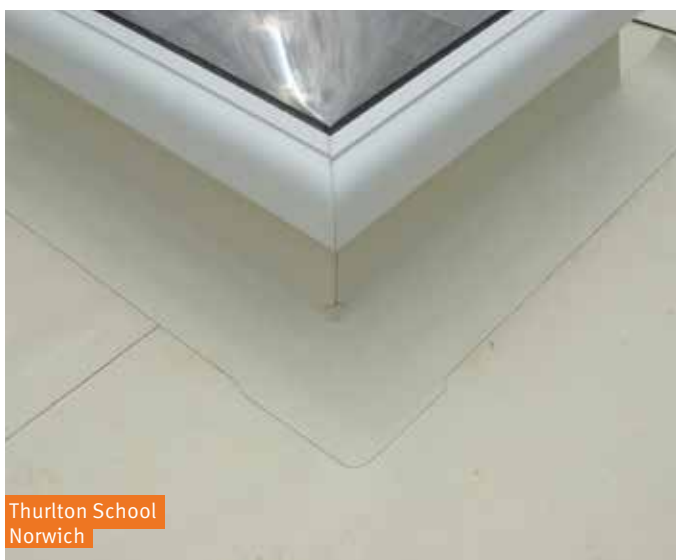
#### BauderTEC KSD FBS

Self-adhesive elastomeric bitumen membrane; mica finished upper surface for adhesive bonding of insulation.



# Bauder Thermoplan System

## Project gallery



# Bauder Profiled PIR Infill Overlay System

## Upgrading profiled metal roofs

The system incorporates a PIR insulation infill that is cut to match profiled sheet metal and roof structures. The system then adds a BauderPIR FA flatboard insulation and a single ply membrane to complete the overlay solution.

### When to specify

The Profiled PIR overlay system is primarily intended for refurbishing profiled sheet metal roofs or increasing the thermal performance of existing insulated cladding systems, bringing the construction up to current building regulation requirements.

The PIR insulation infill boards are cut on site to ensure they match the existing sheets and can support the FA PIR above. U-values are calculated using the thickness of both the PIR infill and FA PIR flatboard insulation boards.

### Characteristics of the system

- Overlay and upgrade profiled metal roofs.
- Suitable for both Thermofol and Thermoplan systems.
- Single source supply.
- FM Approved Assemblies for Thermofol as defined on the FM online database 'RoofNav'.
- Comprehensive range of guarantee packages to suit project and cover requirements.

### Verified properties

#### BBA Certificate 06/4354 for Thermofol and 04/4120 for Thermoplan:

- Fire classification B<sub>ROOF(t4)</sub> to BS EN 13501-5 tested to TS 1187 test 4 for external fire exposure on defined permutations of product build up.
- Fire properties – membranes deemed “unrestricted” in certain circumstances as categorised in BBA certificate.
- Service life > 30 years for a Thermoplan system and > 35 years for Thermofol

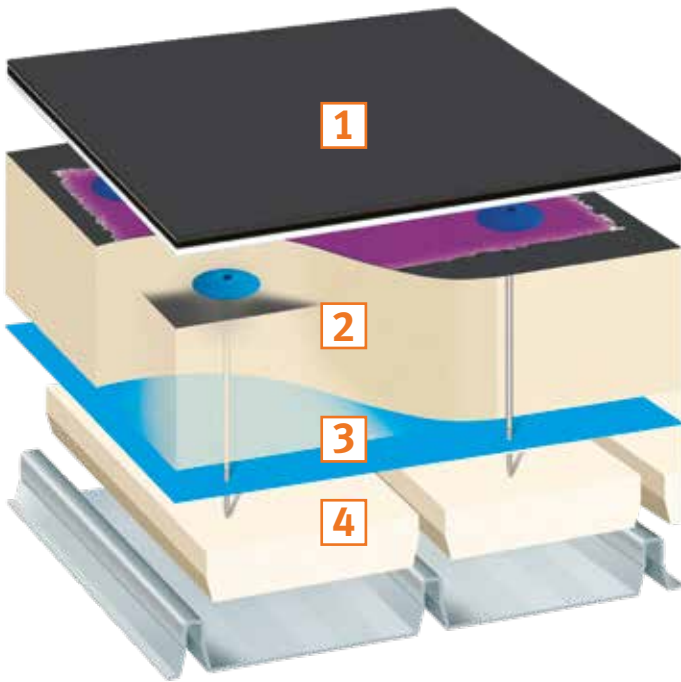
#### EPD Certification:

- Our membranes and insulations have recognised environmental product declarations (EPD).



# Bauder Profiled PIR Infill Overlay System

## Example configuration



Insulation is mechanically fastened



### SYSTEM DATA

[\(download product data sheets for more information bauder.co.uk/technical-centre\)](#)

<b>1</b>	<b>Waterproofing membrane</b> Adhered or mechanically fastened	<b>BauderTHERMOFOL</b> <b>BauderTHERMOPLAN</b>
<b>2</b>	<b>Warm roof insulation</b> Range of thicknesses to meet thermal efficiency requirement.	<b>BauderPIR FA</b> (mechanically fastened flatboard)
<b>3</b>	<b>AVCL</b>	<b>BauderSYN DB-PE 100</b>
<b>4</b>	<b>Profiled PIR Infills</b>	PIR insulation infills cut to match the existing roof sheets

**Centre for Agriculture and Bioscience International (CABI)  
Oxfordshire**

**BUILDING BOARD**

Roof Size:	2,044m <sup>2</sup>
Roof Systems:	Bauder Thermofol System and BauderGREEN XF301 sedum blanket
Specifier:	Scott Brownrigg
Main Contractor:	Barnwood Construction
Approved Contractor:	Malone Roofing





# Green Roofs

## Living roofs create environmentally focused buildings

A Bauder green roof brings together the finished planting scheme and all its supportive components atop the specified waterproofing.

We provide the complete package for the single ply waterproofing system and associated landscaping components for extensive green roofs.

### Substrate extensive green roofs

Designed to be comparatively lightweight and support low maintenance plant species which are generally self-sustaining, wind, frost, and drought tolerant.

#### The vegetation finish can comprise:

- Biodiverse habitat to encourage a wider spread of birds, insects, and plant species.
- Pre-grown vegetation blankets for wildflowers or sedum species.
- Plug-plants where the selection and location of each plant can be clearly identified.
- Seeded roofs for a specified selection of seed blends to suit particular locations.
- Inclusion of a biosolar PV array with seeded vegetation (see page 18).

### Sedum system extensive green roof

All in one system comprising mature sedum species pre-grown on an integrated blanket with 20mm of substrate. The system has been developed for use directly over our waterproofing.

Our specification service will confirm suitability of the waterproofing systems for each roof area.

More information on selecting the right green roof for your project is available in our green roof brochure or via our website [bauder.co.uk/green-roofs](https://bauder.co.uk/green-roofs)



# Biosolar Roof

## BauderSOLAR G LIGHT combines a solar PV array with a green roof to bring net zero solutions into focus

Integrated solution for mounting photovoltaic renewable energy on a green roof where the substrate and vegetation provide the ballast to secure the array.

### About the system

The BauderSOLAR G LIGHT system is suitable for both new build construction and retrofit projects and allows for the entire roof area to qualify as a green roof. The vegetation can focus on biodiversity and uses a seed mix of native species plants for further BREEAM credit rating.

The vegetation assists in maximising solar energy generation as the green roof preserves ambient rooftop temperatures helping to keep the modules at optimal output.

### Plus points

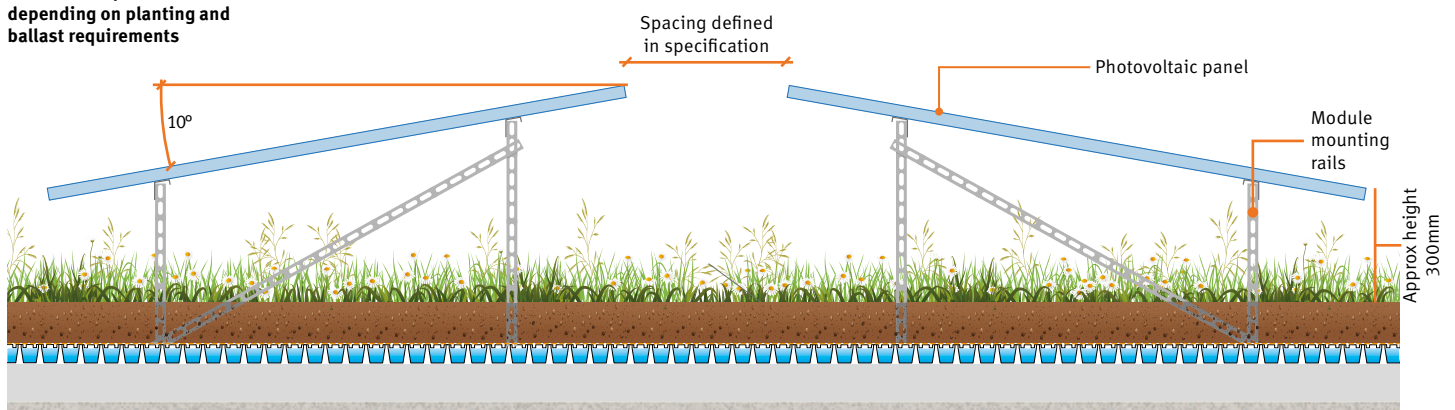
- Specified on Thermofol and Thermoplan systems.
- Installation method reduces risk.
- Single source for integrated design and guarantee responsibility for the waterproofing system and Solar PV installation.
- Maximises the roof area as entire space can qualify as a green roof.
- Comprehensive range of guarantee packages to suit project requirements.

More information on specifying the right for your project is available in our solar PV brochure or via our website

[bauder.co.uk/biosolar](http://bauder.co.uk/biosolar)



Substrate depth variable depending on planting and ballast requirements



# Solar PV Roofs

## BauderSOLAR systems give flat roofs the power to create on-site renewable energy

The ideal space for a Solar PV array to ensure maximum output of energy. The BauderSOLAR F systems are designed to ensure the integrity of the waterproofing system beneath is upheld.

### About the systems

BauderSOLAR F and BauderSOLAR F XL are lightweight in design, ranging from 9 to 12.5kg/m<sup>2</sup>, depending on module selected, and do not require the additional weight loading of ballast to counteract wind uplift.

The solar PV module and the substructure combine to form a single unit, that is secured to the roof without any penetration of the waterproofing or roof deck.

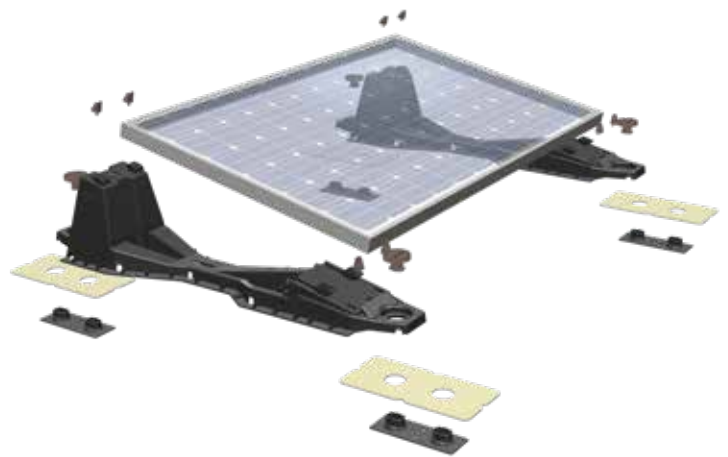
As module manufacturers strive to increase the efficiency of solar modules, the industry is moving to larger format cells and module structures.

BauderSOLAR F XL System utilises modules up to 1015mm wide ensuring we can provide our clients with the most efficient solar solutions for their flat roof projects. BauderSOLAR F fits modules up to 1060mm wide to embrace the refurbishment sector where an existing PV array is being replaced.

### Plus points

- Installation with no penetrating fixings to reduce risk.
- Single source for integrated design and guarantee responsibility for the waterproofing and Solar PV installation.
- Lightweight, weighing 9 to 12.5kg/m<sup>2</sup>, depending on client module choice.
- Easy to maintain
- Comprehensive range of guarantee packages to suit project requirements.

More information on specifying the right solution for your project is available in our solar PV brochure or via our website [bauder.co.uk/solar-pv](https://bauder.co.uk/solar-pv)



# Bauder Insulations

## Creating energy efficient flat roofs

Effectively insulating a roof improves the energy efficiency of the building which has positive effects on the environment. The Bauder range of insulants ensures the right outcome is specified for the building.

### BauderECO

Certified biomass balanced Polyurethane insulation for a sustainable PIR flatboard in Thermofol systems.

### BauderPIR **W T**

Efficient, strong, inert, with good compressive strength making it suitable for all kinds of load bearing decks.

### BauderVIP **W S**

Vacuum insulation panel designed to provide high thermal performance in areas with limited installation height and is ideally suited for roof terrace applications.

### BauderROCK **W T N**

Mineral fibre insulation, when unfaced, achieves Euroclass A1 rating. The insulation has exceptional acoustic and fire resistance properties. Faced insulation for warm roofs achieves A2-s1,d0 rating.

### BauderGLAS **W I T N**

Cellular glass insulation that gives high compressive performance and the unfaced and inverted achieve Euroclass A1 rating. Faced insulation for warm roofs achieves Euroclass E rating.

### Tapered insulation

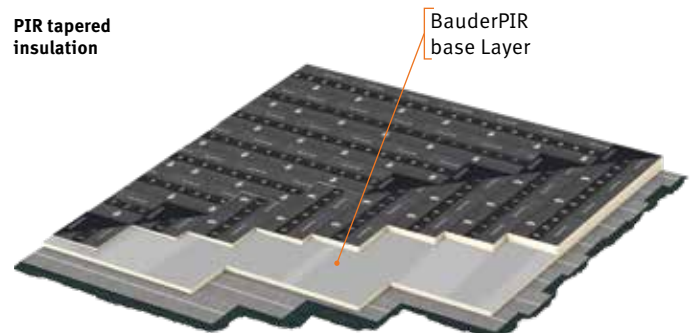
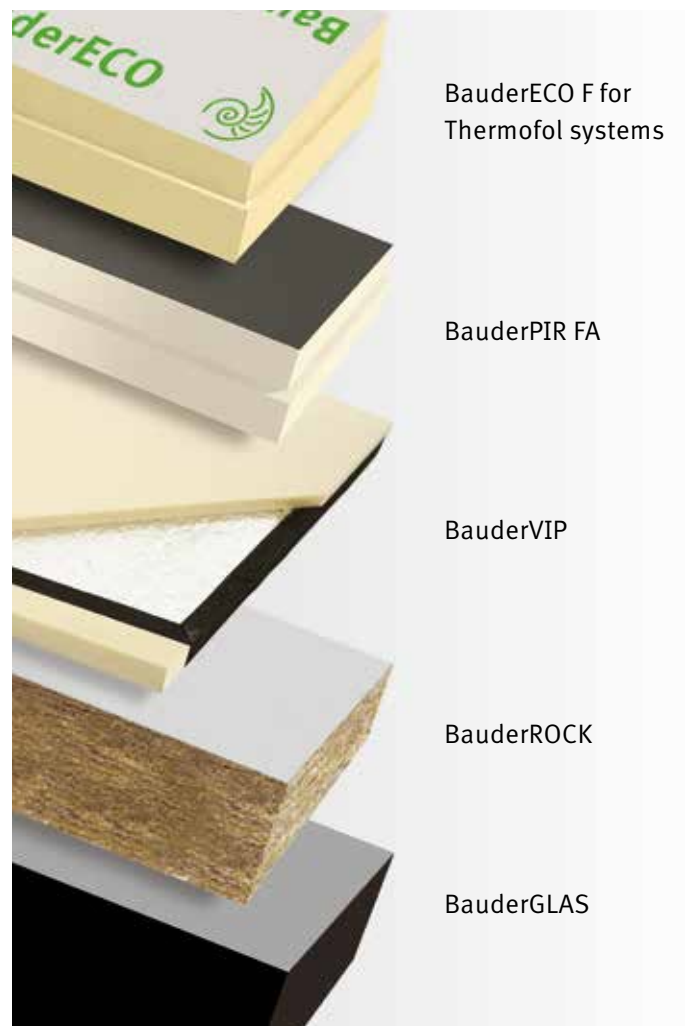
A cost-effective method for creating falls on a warm roof and available with BauderPIR, BauderROCK, or BauderGLAS.

### Design service

Our technical department design bespoke schemes to comply with BS 6229:2018, supply U-value calculations in accordance with BS 6946 Annex E, confirm the thickness required, and provide a layout design for tapered schemes aid installation on site.

### Key:

- I** = inverted roof
- N** = non-combustible
- S** = specialist insulation
- T** = tapered available
- W** = warm roof



# Rooflights, Outlets, and Accessories

## Completing the roof package

Our range of accessory and ancillary products offer a comprehensive selection to complete the system and ensure compatibility across the entire roof.

Your dedicated technical manager will assist you in selecting the right items for your project.

### Rooflights

We can satisfy your rooftop glazing requirements from standard modular units to specialist structural glazing and can advise you in the selection of suitable rooflights.

- Manufactured to comply with current Building Regulations and Health & Safety requirements.
- Fully compatible with our waterproofing systems.
- Ventilation options.
- Comprehensive guarantee.

### Single ply outlets

Specifically designed and created for our Thermofol and Thermoplan systems, the outlet flanges are finished in our PVC or FPO membranes to allow direct welding of the single ply waterproofing to the flange.

They are available for flat roofs and green roofs as vertical gravity flow, parapets with a through chute to an external hopper, and emergency overflow.

- Robust, durable, shock and impact-proof.
- High capacity and low noise drainage.
- Included within our waterproofing guarantees.

### Accessories, ancillaries, and attachments

Our range covers many of the other items for the installation or finish of a roof and includes:

- Walkway membrane
- Primers
- Prefabricated metal
- Cleaners
- Lightning conductor clips
- Fixing bars
- Pre-formed corners
- Protection fleeces
- Soil vent pipe covers
- Adhesives



Thermofol PVC letterbox parapet outlet



# Our Service

## It's all about the right specification, supportive technical advice, and installation quality

Delivering single-source flat roof solutions point to ensure every Bauder roof is designed cohesively to meet project needs and reduce risk. Our system information is CCPI verified to provide unambiguous and accurate information to specifiers selecting a Bauder solution.

### Our service to you

We assist you with the design of the detailing, writing the specification for the flat roof solution, and recommend suitable approved contractors to tender for the project. The service is without charge, and we work with you to ensure your roof specification meets all your needs and that of the building. Our area technical managers play a vital role in the success of every project and will work closely with you to develop the most appropriate, budget aware and practical solution.

### Our installations

Bauder approved contractors deliver the installations of our roofing systems and receive the support and expert advice they need to ensure a high-quality roof solution.

Once your roofing works commence, our experienced team of site technicians monitor and inspect the workmanship to ensure our standards are fulfilled.

### Our guarantee packages

Bauder offers a range of guarantees depending upon the roofing system chosen and the project requirements. Sample guarantees are available upon request and are written in plain and easily understood language, clearly stating what is included, excluded and required to comply with the guarantee terms.

#### Guarantee cover options

- The guarantees are backed by a European manufacturer of flat roofing systems with a turnover of more than €1 billion.
- Bauder guarantees are available for differing durations, ranging from 10 to 25 years (for some systems this is 30 years).
- Bauder guarantees offer various levels of cover and can include.
  - Materials supplied by Bauder.
  - Specifications, design and advice provided by Bauder.
  - Workmanship of the Bauder Approved Installer

For sample guarantees outlining cover level and full terms and conditions please contact

[technical@bauder.co.uk](mailto:technical@bauder.co.uk)



# Project Gallery

## Clarín College, Athenry, County Galway

Clarín College  
Athenry, County Galway

### BUILDING BOARD

Roof Size:	8,550m <sup>2</sup>
Waterproofing:	Bauder Thermofol System
Design:	Smith Kennedy Architects Healy Partners Architects
Main Contractor:	JJ Ratigan & Co
Approved Contractor:	Priority Roofing and Cladding Ltd

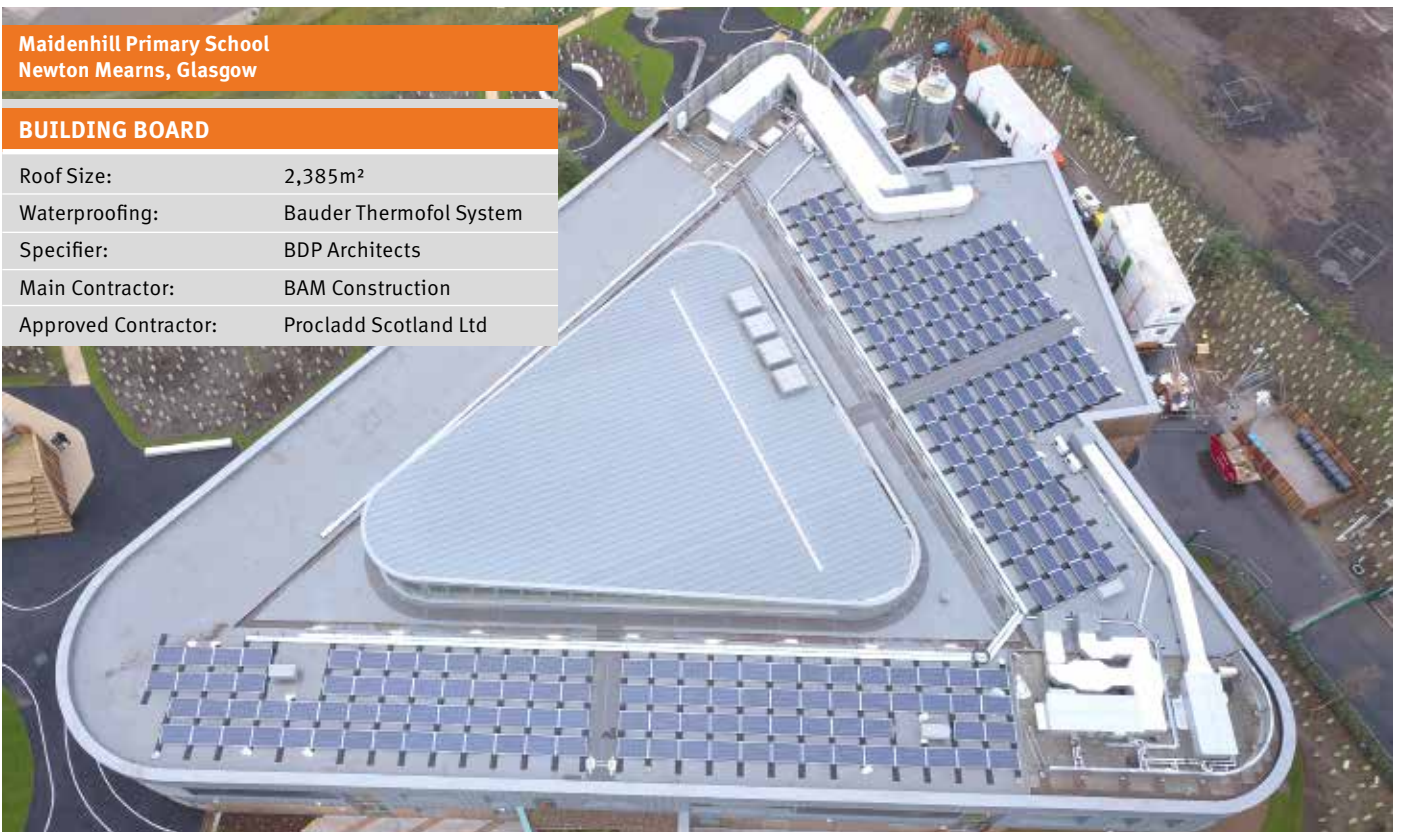


## Maidenhill Primary School, Newton Mearns, Glasgow

Maidenhill Primary School  
Newton Mearns, Glasgow

### BUILDING BOARD

Roof Size:	2,385m <sup>2</sup>
Waterproofing:	Bauder Thermofol System
Specifier:	BDP Architects
Main Contractor:	BAM Construction
Approved Contractor:	Proclad Scotland Ltd



# Project Study

## Clarín College, Athenry, County Galway

### Synopsis

A design and build, two-storey education facility located in Athenry consisting of digitally equipped classrooms, specialist rooms, sports hall, study halls, recreation areas, staff amenities and extensive external facilities.

Acoustic performance of 35dB indoor ambient noise level (IANL) was applied across all areas of the school, with control of reverberation being a key consideration in the gym.

The insulation needed to be non-combustible and achieve a U-value of 0.15Wm<sup>2</sup>k which exceeds the thermal requirements as described in the Irish Building Regulations Technical Guidance Document L for flat roofs in schools.

### System summary

**Roof aesthetics** Profiles for standing seam effect

**Waterproofing** Bauder Thermofol System

**Insulation** BauderROCK including acoustic infills to the troughs of the perforated metal deck over the gym.

### Highlights

- Fire safety specification.
- Acoustic performance for all roofs.
- U-value achieved by non-combustible insulation.
- Early requirement for internal works to proceed required self-adhesive bitumen membrane air and vapour control layer for provisional waterproofing.
- Technical and design support.





# Project Study

## The Wing, Battle of Britain Memorial, Folkestone

### Synopsis

The visitor centre at the Battle of Britain Memorial is a monument to aircrew who flew in the Battle of Britain. It is sited on the White Cliffs at Capel-le-Ferne, near Folkestone, on the coast of Kent.

The client wanted the new visitor centre building to replicate the shape of the iconic Spitfire wing and to be waterproofed with a roofing system that would be aesthetically pleasing due to its high visibility.

### The challenge

A particularly demanding element of the installation was the amount of intricate detailing requirements due to the elliptical shape and 5° pitch of the wing areas. Additionally, the memorial site had to remain open throughout the works causing logistical challenges.

### System summary

**Waterproofing** Bauder Thermofol System

**Insulation** 160mm BauderPIR

### Highlights

- 700m<sup>2</sup> roof.
- Thermofol single ply in anthracite colour to mimic the wing of a Spitfire WW2 plane.
- Project completed on time and within budget.
- Full Bauder technical and on-site support.



# Project Study

## Enterprise Zone, University of West England (UWE), Bristol

### Synopsis

The building needed a replacement waterproofing and during re-roofing works the university took the opportunity to enhance the roof with a solar PV array as part of its wider plan for commitment to sustainability. The 12,000m<sup>2</sup> roof was overlayed with the Bauder Thermofol single ply system and the BauderSOLAR F system added with 1,731 solar panels installed to produce over 400MWh of electricity each year. The university will use all the energy generated, reducing energy purchase from the national grid, and saving around 200 tonnes of carbon.

### Advocacy

**Fabia Jeddere-Fisher, Energy Engineer at UWE:** *“The system we chose means the mounting units are welded into place, reducing load, and the need for roof penetrations and thereby risk of leaks. The University will use 100% of the power generated, equal to the amount of nearly 200 homes with solar panels. As a large organisation we want to set an example for others to undertake similar projects.”*

### System summary

**Waterproofing** Bauder Thermofol System  
**Solar PV** BauderSOLAR F

### Highlights

- 12,000m<sup>2</sup> overlay solution with solar PV array.
- 1,731 modules installed.
- Over 400 MWh per year energy generated.
- UWE quadrupled its solar generating capacity.

BUILDING BOARD	
Roof area:	12,000m <sup>2</sup>
PV scheme:	1,731 modules; 402 MWh
Client:	University of West England
Specifier:	Parsons Brinckerhoff
Approved Contractor:	Mitie Tilley Roofing
PV Installer:	Dulas



# Project Study

## Centre for Agriculture and Bioscience International (CABI), Oxfordshire

### Synopsis

Construction of a new centre for an inter-governmental, not-for-profit organization that improves people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment.

The client's objective for the new headquarters was to construct a two-storey, low carbon building that made a statement, whilst also blending into the surrounding countryside with sedums and a biodiverse landscape to attract insects and birds. The Bauder sedum system was specified for the main roof area atop Thermofol PVC waterproofing with PIR warm roof insulation.

### Project challenge

The curve of the roof at some points reached over 30 degrees that posed a challenge to the roofing contractors to safely install the Bauder solution to the required standard. The pitch also defined that BauderGREEN RS 22 retention strips be installed at 1m intervals to safeguard the vegetation blanket against shear force and wind uplift.

### System summary

<b>Green roof</b>	Bauder Sedum System with BauderGREEN XF301 Biodiverse Extensive Landscaping
<b>Waterproofing</b>	Bauder Thermofol System
<b>Insulation</b>	BauderPIR FA Insulation

### Highlights

- Highly energy efficient building.
- Pitch of roof curve reaches over 30 degrees at some points.
- Maintenance access and safety systems.
- Tight works programme.
- Full Bauder technical support.



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