

## Hot Melt Structural Waterproofing

Flat roof, podium, and plaza solutions



Photo Credit: University of Central Lancashire

A photograph of a modern multi-story building at Marischal Square, New Aberdeen. The building features a light-colored, vertically-slatted facade and large windows with dark frames. Some windows are illuminated from within, showing warm interior lights. In the foreground, there is a landscaped courtyard with a green lawn, a paved walkway, and some young trees. The sky is overcast.

**Marischal Square,  
New Aberdeen**

**BUILDING BOARD**

|                      |                                   |
|----------------------|-----------------------------------|
| Roof Size:           | 5,400 m <sup>2</sup>              |
| Waterproofing:       | Bauder Hot Melt system            |
| Architect:           | Muse Development & Morgan Sindall |
| Approved Contractor: | Briggs Amasco                     |

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 living and working spaces for people; and blue roofs to attenuate stormwater.

Customers choose us because of the way we do business, our robust advice on the right solutions, and our approach to delivering projects. We collaborate with clients to deliver the optimal solution for a building from our broad portfolio of systems.

# Hot Melt Structural Waterproofing System

## Monolithic, fully bonded installation for cold or inverted constructions

Hot-applied polymer-modified bitumen waterproofing in two layers with a polyester reinforcement. Safe2Torch guidance is followed for detail design where combustible materials are located.

### Specifying a hot melt system

Hot melt structural waterproofing is particularly advantageous for protected, inverted, or buried roofs such as biosolar roofs, blue roofs, green roofs, paved terraces, podiums, plazas, and car parks.

Cost-effective as a waterproofing system where the specifier may expect no future replacement costs. Once installed, its anticipated durability will match the expected life of the building.

Bauder's BBA 06/4350 certificate provides the UK's most comprehensive approval for a hot melt waterproofing system. At time of writing, Bauder is one of only two manufacturers whose BBA approval confirms a service life equivalent to that of the structure in which it is incorporated for certification that extends beyond maintenance-only pedestrian access to include fully trafficked decks, such as podiums and parking areas.

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

### CCPI-assessed product information

Bauder complies with the Code for Construction Product Information (CCPI) guidelines across our roofing portfolio. Our product information is assessed for accuracy and clarity, to ensure specifiers can rely on the data when selecting a Bauder hot melt solution.

### Outline of our hot melt system

- Can incorporate a range of insulations for inverted roof construction, including non-combustible options
- Online system and product evidence with up-to-date technical statistics, DoPs, testing outcomes, certification, approvals, accreditations, and conformity assessment
- CCPI-assessed system data

- Accessories, rooflights, and outlets complete the roof
- Range of guarantee packages to suit project and cover requirements

### Rooftops with an environmental focus

- Green roof systems
- Blue roof SuDs solutions
- Biosolar PV array



### Assessed properties

#### BBA Certificate 06/4350 stated:

- Fire testing to BROOF(t4) for external fire exposure on defined permutations of product build up
- Suitable for absolute falls (no back falls) on the structure
- Durability stated: Under normal service conditions, the system will provide a durable waterproofing for the service life of the structure in which it is incorporated

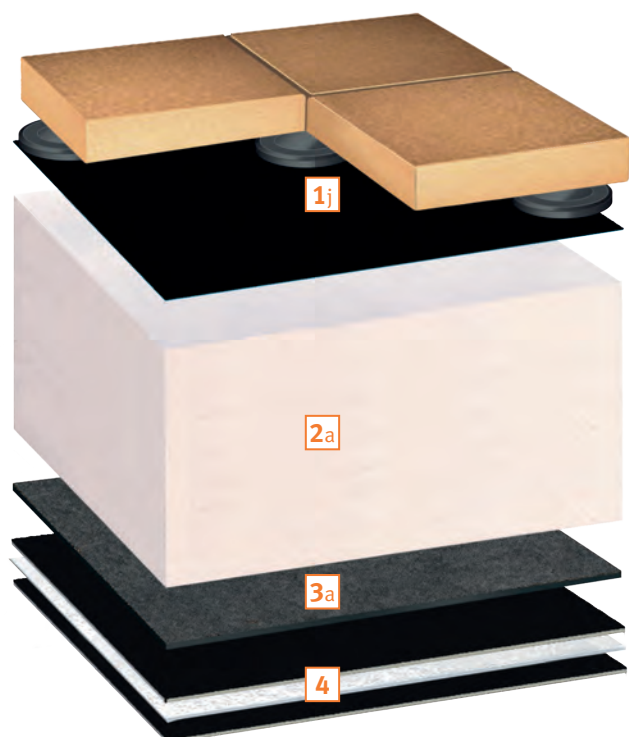
#### EPD Certification:

- Bitumen membranes
- BauderROCK
- BauderGLAS
- BauderJFRI
- BauderXPS

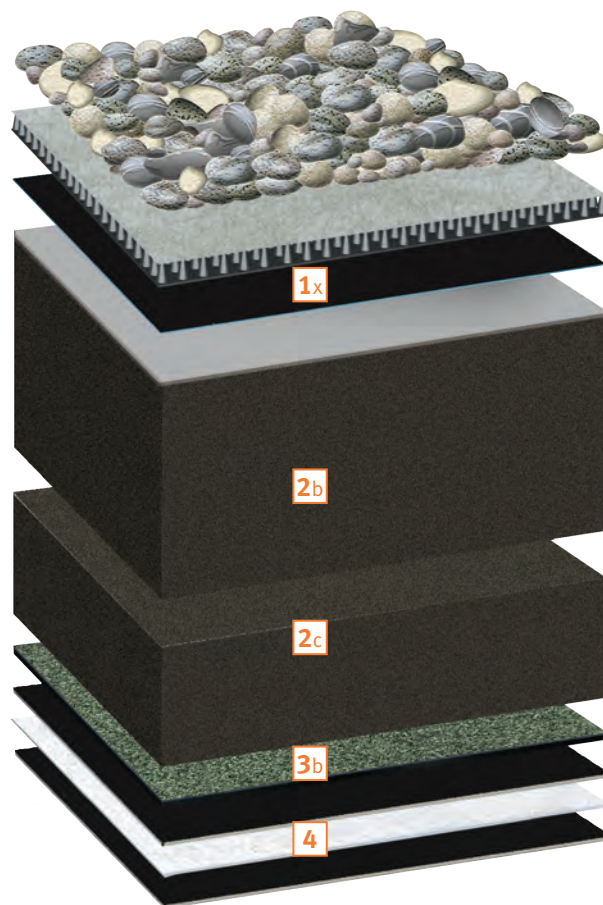


# Bauder Hot Melt System

## Configuration examples



Shown here with: BauderJFRI PREMIUM+ and hard landscaping



Shown here with: BauderGLAS as a multi-layer insulation and drainage/ protection layer and pebble ballast

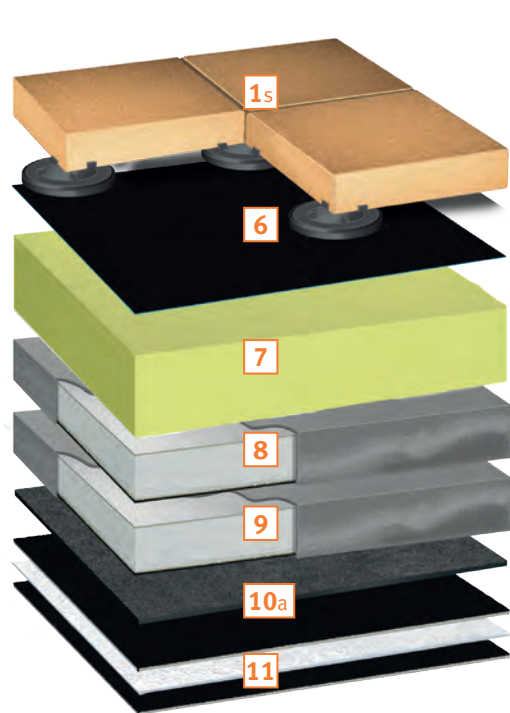
### SYSTEM DATA

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

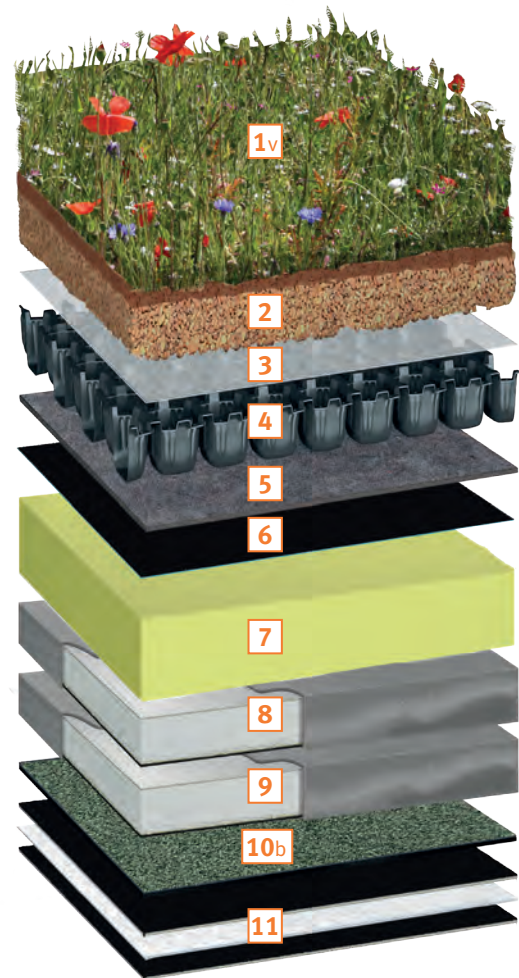
|          |                                                                                                 |                                                                                                                                                                                                               |
|----------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | <b>Water flow reducing layer</b>                                                                | <b>(j) BauderJFRI WFRL</b><br><b>(x) BauderXPS WFRL</b>                                                                                                                                                       |
| <b>2</b> | <b>Inverted insulation options</b> Range of thicknesses to meet thermal efficiency requirement. | <b>(a) BauderJFRI PREMIUM + / 300</b> (expanded polystyrene)<br><b>(b) BauderGLAS Inverted</b> (cellular glass)<br><b>(c) BauderGLAS Inverted</b> (cellular glass)                                            |
| <b>3</b> | <b>Access protection</b>                                                                        | <b>(a) Bauder AP1</b><br><b>(b) BauderPLANT E 42</b> (FLL-approved root-resistant 4.2 mm elastomeric bitumen membrane)<br><b>Bauder AP3</b> (not shown - specified for more aggressive landscaping scenarios) |
| <b>4</b> | <b>Structural waterproofing layers</b>                                                          | <b>Bauder Bakor 790-11 hot melt</b> (incorporating polyester reinforcement)                                                                                                                                   |

# Bauder Hot Melt System

## BauderVIP INV configuration examples



Shown here with: BauderVIP INV Insulation with hard landscaping



Shown here with: BauderVIP INV Insulation with BauderGREEN WB

| SYSTEM DATA                                                                                                                                                                                                                                              |                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <div>            (download product data sheets for more information <a href="https://bauder.co.uk/technical-centre">bauder.co.uk/technical-centre</a>)         </div> |                                                   |
| 1s Surfacing (Paved)                                                                                                                                                                                                                                     | Paving on Bauder pedestal supports                |
| 1v Vegetation (Extensive)                                                                                                                                                                                                                                | Extensive Vegetation (Project specific)           |
| 2 Extensive substrate                                                                                                                                                                                                                                    | BauderGREEN SUB-EM UK                             |
| 3 Filter fleece                                                                                                                                                                                                                                          | BauderGREEN FV 125 100                            |
| 4 Drainage layer                                                                                                                                                                                                                                         | BauderGREEN DSE 40                                |
| 5 Protection layer                                                                                                                                                                                                                                       | BauderGREEN FSM 600                               |
| 6 Water flow reduction layer                                                                                                                                                                                                                             | BauderXPS WFRL                                    |
| 7 Inverted insulation (Top layer)                                                                                                                                                                                                                        | BauderXPS (300) or (500)                          |
| 8 Inverted insulation (2nd base layer)                                                                                                                                                                                                                   | BauderVIP INV                                     |
| 9 Inverted insulation (1st base layer)                                                                                                                                                                                                                   | BauderVIP INV                                     |
| 10 Protection layer                                                                                                                                                                                                                                      | (a) Bauder AP1 • (b) BauderPLANT E 42             |
| 11 Waterproofing layers                                                                                                                                                                                                                                  | Bauder Bakor 790-11 hot melt (rubberised bitumen) |

# Green Roofs

## Living roofs create environmentally focused buildings and recreational spaces for people to enjoy

A Bauder green roof brings together the finished planting scheme and all its supportive components atop the waterproofing for intensive, extensive, and biodiverse systems.

There is significant scope for the design of soft landscaping for a green roof and an integrated approach is crucial for the success of the roof. We work with you from the earliest design stage onwards, to ensure your green roof project comes to fruition.

### Intensive green roofs

Publicly accessed rooftops and podiums where the combinations of finishes will impact the design, construction, drainage, and substrate depths to support the vegetation's requirements.

#### Finish options:

- lawns • flowerbeds • vegetable allotments
- shrubs • trees • water features • playground spaces
- sports facilities • access hard landscaping

### Extensive green roofs

Systems with low-maintenance and self-sustaining plant species requiring an appropriate depth of substrate to support the specified vegetation.

#### Finish options:

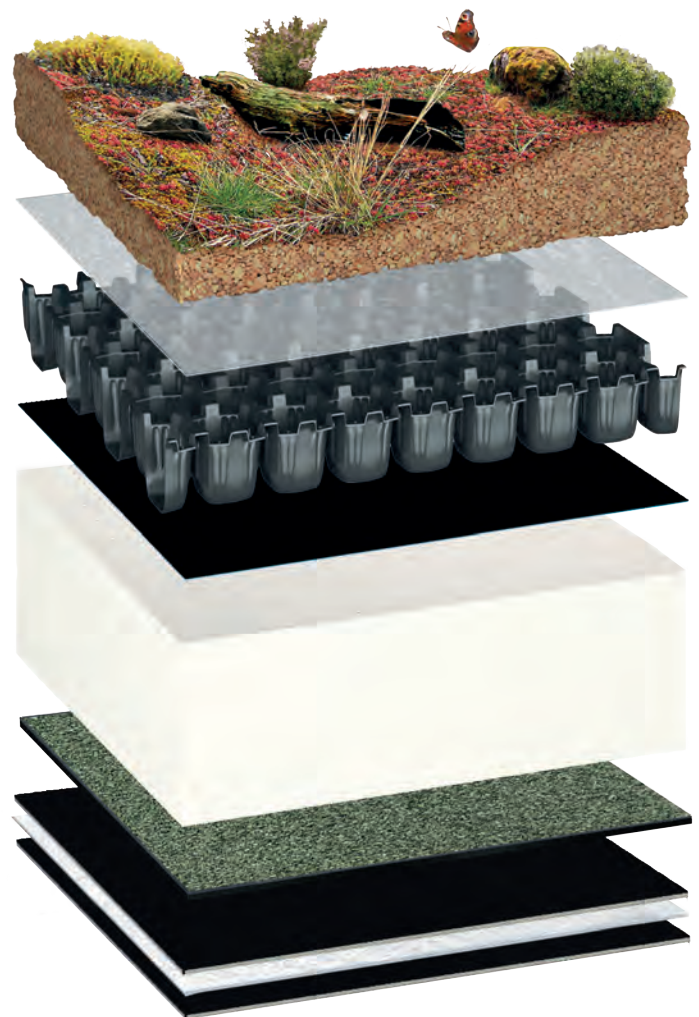
- plug plants • mature vegetation blankets
- seed mixes

### Biodiverse roofs

Specific vegetation and natural habitats created to replicate, as far as practical, the ecological requirements for the local area. The natural habitats created are designed to support a variety of plants, birds, animals, and invertebrates. The careful design and construction of these habitats is required to conform to the local Biodiversity Action Plan (BAP).

#### Finish options:

- native species plug plants, seed mixes, and vegetation blanket
- log piles • insect hotels • dew ponds



# Hard Landscaping Finishes

## Creating courtyards, podiums, and vehicular access

Hard landscaping construction can affect the design of your building project. Factors to consider include: paving and paths, roadways for vehicles, and situations where it's important to keep the total build-up height of the system while providing a flat-paved surface.

### Bedded paving

Create low-maintenance accessible areas such as walkways, access roads, and terrace spaces with container planting set atop the paving or decking.

### Pedestal-supported

There are three flexible solutions designed for open-jointed free-draining paving or decking finishes above the waterproofing:

#### Bauder adjustable pedestals

A simple, high-strength, low-cost pedestal. The units are fully adjustable with optional slope correctors and a full range of accessories.

#### Bauder slope-correcting pedestals

Fully adjustable pedestal range with integral slope corrector. The edging and spacing options solve a variety of paving, decking and grillage solutions.

#### Bauder non-combustible pedestals

The Bauder Non-Combustible (NC) Pedestal achieves class A1 according to BS EN 13501-1. The range comprises aluminium pedestals designed for use on roofs and balconies with broad bases to spread the load of the system.



# Blue Roofs

## Rooftop or podium level sustainable urban drainage solutions (SuDS) with a variety of landscape finishes

Three systems for attenuating different levels of stormwater for urban areas to meet the run-off limitations of the development site.

A BauderBLUE roof system can be constructed with a variety of landscape finishes including green roofs, biosolar PV array, or hard landscaping such as promenade tiles. There are different options available depending on the desired finish and the volume of water to be attenuated.

### BauderBLUE STORMsub system

This hybrid system utilises the water storage capacity of a green roof build up. The additional SUB-RE UK layer and RE 40 drainage and attenuation board act with the flow restrictor to control the water discharge off the roof.

#### Finish options:

- Extensive and biodiverse vegetation

### BauderBLUE STORMcell system

This high-volume system creates a void space between the waterproofing and the surface finish. The STORMcell system gives the greatest capacity for water storage, holding up to 95 litres/m<sup>2</sup>.

#### Finish options:

- extensive, biodiverse, and semi-intensive green roofs
- BioSOLAR G LIGHT • paving • stone ballast

### BauderBLUE STORMvoid system

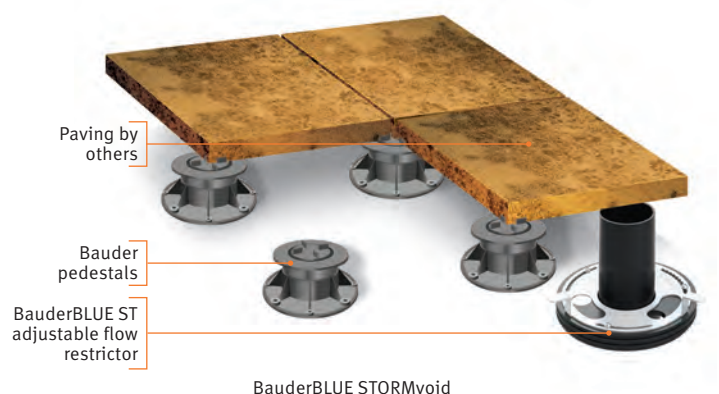
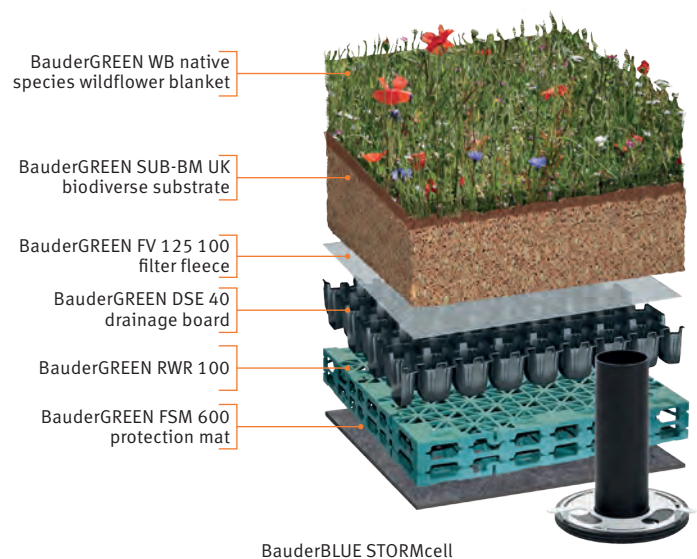
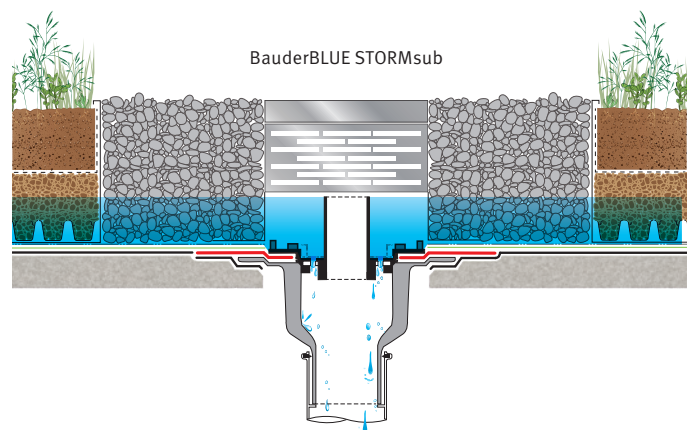
This simple system creates a void space with Bauder pedestals and paving finish to allow water movement to the flow restrictor outlet. Utilising Bauder pedestals ensures the entire system is covered by our guarantee.

#### Finish options:

- paving • metal decking

### Plus points

- Our specification service will confirm suitability of waterproofing system and type of blue roof for each roof area
- Technical drainage calculations to meet required discharge rate of the blue roof and its geographical location



# Biosolar Roofs

## Combining a solar PV array with a green or blue roof to bring net zero solutions into focus

BauderSOLAR G LIGHT is an integrated solution for mounting photovoltaic renewable energy on a green or blue roof where the substrate and vegetation provide ballast to secure the array.

### About the system

The BauderSOLAR G LIGHT mounting system allows the entire useable roof area to qualify as a green roof. The vegetation can focus on biodiversity and use 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

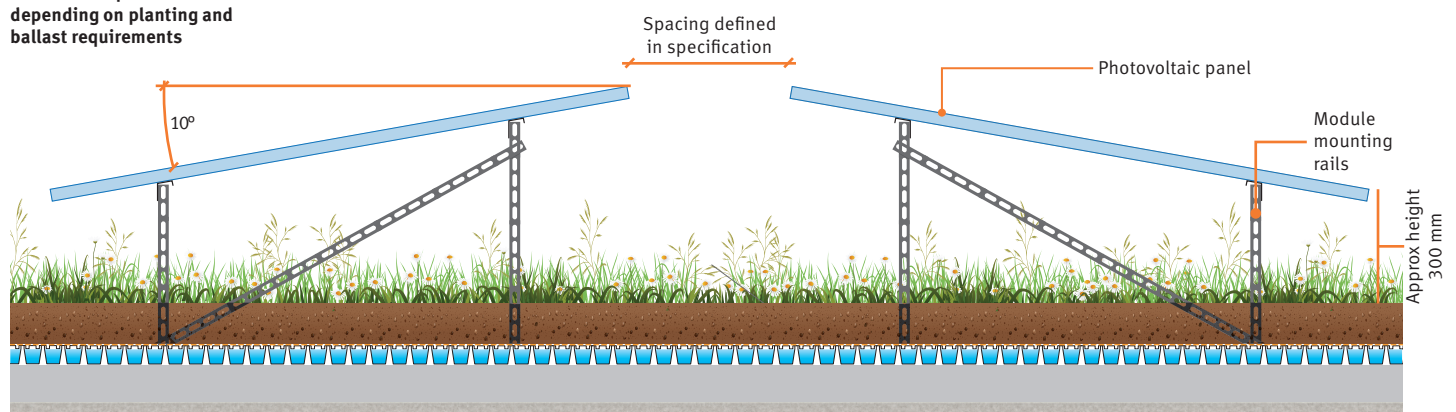
- Single source for integrated design and guarantee
- Responsibility for the waterproofing, green or blue roof, and solar PV installation
- Maximises the useable roof area as the entire space can qualify as a green roof
- Comprehensive range of guarantee packages to suit project and cover requirements

More information on specifying the right solution is available in our solar PV brochure or via our website:

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



Substrate depth variable depending on planting and ballast requirements



# Bauder Insulations

## Creating energy efficient podiums and flat roofs

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

### **BauderVIP INV** **I**

An inverted roof rigid vacuum insulation panel with a microporous core that is evacuated, encased and sealed in a gas-tight membrane. BauderVIP INV panels are encapsulated in a protective polyurea coating.

### **BauderJFRI** **I**

Rigid expanded polystyrene (EPS) insulation that offers resistance to the passage of water.

- BauderJFRI PREMIUM+
- BauderJFRI PREMIUM 300

### **BauderXPS 300 and 500** **I** **IU**

A rigid extruded polystyrene (XPS), this product is rebated on all four sides to ensure thermal continuity.

### **BauderGLAS Inverted** **I** **IU** **NC**

Non-combustible unfaced cellular glass insulation that achieves Euroclass A1 rating. Faced insulation achieves Euroclass E rating.

### **Water Flow Reducing Layers (WFRL)**

These separator sheets reduce the water flow between and below the insulation to decrease the cooling effect of rainwater.

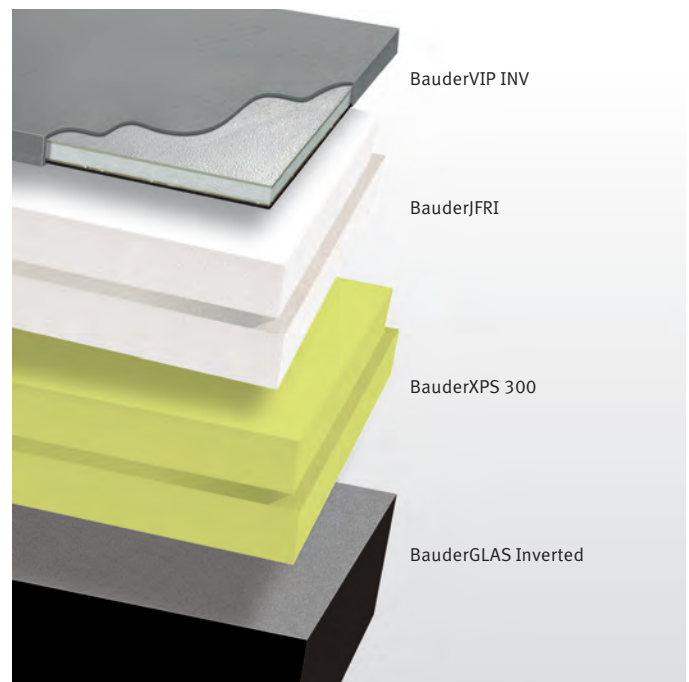
- BauderJFRI WFRL for JFRI and GLAS insulants
- BauderXPS WFRL for XPS insulants

More information on specifying the correct insulation for your project is available via our website:

[bauder.co.uk/insulation](https://bauder.co.uk/insulation)

#### **Key:**

**I** = inverted roof  
**IU** = inverted upstand  
**NC** = non-combustible



Water Flow Reducing Layers

# Rooflights, Outlets, and Accessories

## Completing the roof package

Our wide range of accessory and ancillary products complete the system and ensure compatibility across the entire roof.

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

### Rooflights

From modular units to specialist structural glazing, we offer full advice and guidance 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
- Full guarantee

### Rainwater outlets

Our insulated outlets offer thermal continuity at drainage points and the BRE-certified high thermal value of the rigid foam body prevents condensation forming on the underside of the outlet body.

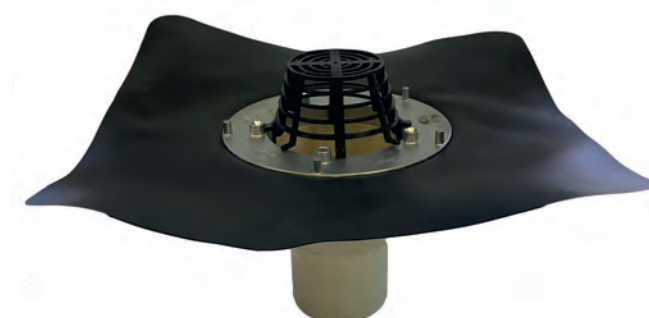
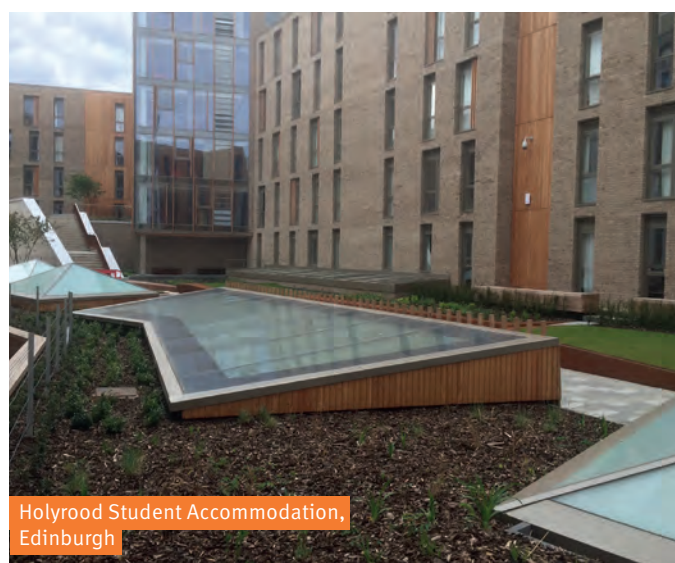
Our range of outlets covers flat roofs, green roofs, blue roofs, vertical gravity flow, parapets with a through chute to an external hopper, and tell-tale overflow.

- High-capacity and low-noise drainage
- Included within our waterproofing guarantees

### Accessories, ancillaries, and attachments

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

- Termination bars & trims
- Adhesives
- Sealants
- Primers



Hot Melt Outlet



BauderBLUE ST-HM

## Our Service

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

Delivering single-source flat roof solutions to ensure every Bauder roof is designed to meet project needs and reduce risk. Our system information is CCPI-assessed to provide accurate, unambiguous 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 install our roofing systems, receiving the support and expert advice needed to ensure a high-quality roof solution.

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

#### Our guarantee packages

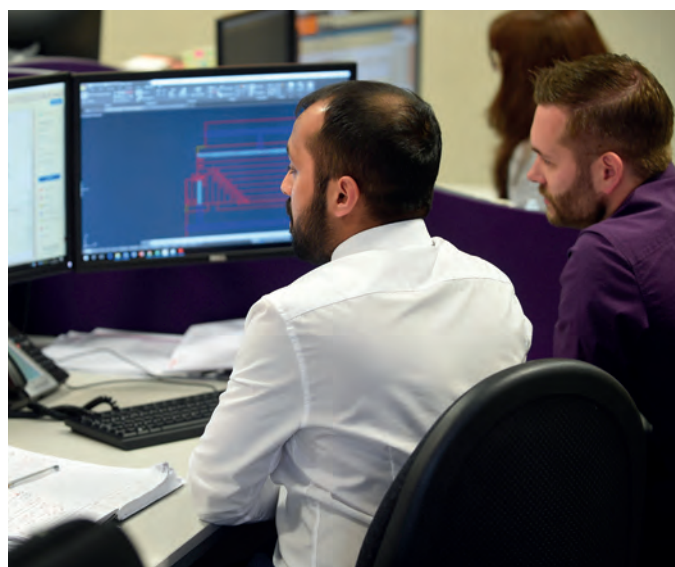
Bauder offers a range of guarantees depending upon the roofing system chosen and the project requirements. Sample guarantees are available upon request and are written in plain, easy-to-understand language, clearly stating what is included, excluded and required to comply with the guarantee terms.

#### Bauder guarantee cover options are:

- Owned by a European manufacturer of flat roofing systems with a turnover of more than €1 billion
- Available for differing durations, ranging from 10 to 30 years
- Offered at 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 email:

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



# Project Studies

## Benson House, Leeds

### Synopsis

Award-winning refurbishment project that transformed the existing podium car park into a landscaped deck with a new scheme to compliment the updated entrance.

The existing slab had backfalls and was levelled with hot melt before the full system was installed. The existing planters and upstand details were overlayed, the outlets replaced, and the roof area fully sealed.

### System summary

|                      |                                             |
|----------------------|---------------------------------------------|
| <b>Waterproofing</b> | Bauder Hot Melt system                      |
| <b>Green Roof</b>    | BauderINTENSIVE green roof with turf finish |

### Highlights

- City centre project with access restrictions
- Waterproofing tested throughout installation as access to the rest of the site for other trades was through the main working ground
- Full Bauder technical support



### BUILDING BOARD

|                      |                      |
|----------------------|----------------------|
| Roof Size:           | 1,500 m <sup>2</sup> |
| Specifier:           | DLG Architects       |
| Approved Contractor: | Protech Roofing Ltd  |

## Marischal Square, New Aberdeen

### Synopsis

Marischal square is an award-winning complex that transformed the centre of Aberdeen. Redevelopment of the site is now offices, restaurants, cafes, retail outlets, a hotel, and open courtyard public space. The clients sought a single source supplier for project continuity and guarantee for the podium, roofs, and terrace areas.

### System summary

|                      |                                                                                 |
|----------------------|---------------------------------------------------------------------------------|
| <b>Waterproofing</b> | Bauder Hot Melt system                                                          |
| <b>Green Roof</b>    | BauderINTENSIVE green roof with hard landscaping, planted beds, and turf finish |

### Highlights

- Single-source guarantee for all roof areas
- Accessible terraces with significant foot traffic
- Full Bauder technical and onsite support



### BUILDING BOARD

|                      |                                   |
|----------------------|-----------------------------------|
| Roof Size:           | 5,400 m <sup>2</sup>              |
| Client:              | Muse Development & Morgan Sindall |
| Approved Contractor: | Briggs Amasco                     |

# Project Study

## The Catalyst, National Innovation Centre, Newcastle

### Synopsis

Constructed in the heart of Newcastle for bespoke, flexible facilities to promote innovation, engage with local and national businesses, and support the development of new technology and innovations in data and the ageing sciences.

The client's objective was an integrated PV system that didn't compromise the integrity of the green roof solution being installed. Bauder designed and supplied a 30.78 kWp system, generating an estimated 26,140 kWh per annum. The BauderSOLAR G LIGHT system maximises the performance of both the green roof and solar PV systems.

### Advocacy

**Andrew Connell, Project Manager at Energize Electrical Services Ltd:**

*"Working with Bauder makes life so much easier because we can really tap into their expertise."*

*"The Bauder biosolar PV system is a straightforward and quick system to install; incorporating that with the excellent Bauder support team made the installation a dream to work on, and most importantly it looks great."*

### Systems summary

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| <b>Waterproofing</b> | Bauder Hot Melt system                                         |
| <b>Solar PV</b>      | BauderSOLAR G LIGHT                                            |
| <b>Green Roof</b>    | BauderBIODIVERSE with BauderGREEN WB native wildflower blanket |

### Highlights

- BREEAM Outstanding
- Integrated roof solution
- Tight works programme and delivery schedules
- Full Bauder technical support





**The Catalyst, National Innovation Centre,  
Newcastle**

**BUILDING BOARD**

|                      |                                  |
|----------------------|----------------------------------|
| Roof Size:           | 1,500 m <sup>2</sup>             |
| Waterproofing:       | Bauder Hot Melt system           |
| Architect:           | GSS Architecture                 |
| Approved Contractor: | Chemplas Ltd                     |
| PV Installer:        | Energize Electrical Services Ltd |

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