

## Reinforced Bitumen Membrane Systems

Flat roof solutions





**Jodrell Bank Observatory  
Manchester**

**BUILDING BOARD**

Roof Size:	502m <sup>2</sup>
Waterproofing:	Bauder Total Roof System PLUS
Specifier:	SDA Consulting
Approved Contractor:	BBR Roofing Ltd

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

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.

# Reinforced Bitumen Membrane Systems

## Robust flat roof waterproofing

Our solutions suit both new build and refurbishment. Installations follow Safe2Torch guidance for detail design where combustible materials are located. CCPI verification for our systems ensures specifiers have unambiguous and accurate information when selecting a Bauder solution.

### Specifying a bitumen membrane system

Key advantages of these systems are the lifespan and their ability to sustain foot traffic as well as loads associated with the installation and maintenance of typical rooftop plant. Some systems are suitable to upgrade with a green roof, blue roof, or solar PV system.

Precise test standards and results are stated in Bauder 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 portfolio to have information verified for accuracy and clarity to ensure specifiers can rely on the data when selecting a Bauder RBM solution.

### Outline of our RBM systems

- Five systems in the RBM portfolio of solutions for new build and refurbishment projects.
- Safe2Torch detailing design.
- Insulations for warm or inverted construction.
- Online system and product evidence with up-to-date technical statistics, DoCs and DoPs, testing outcomes, certification, approvals, accreditations, and conformity assessment.
- CCPI verified system data.
- Accessories, rooflights, and outlets complete the roof.
- Comprehensive range of guarantee packages to suit project and cover requirements.
- Fire testing per system build-ups.

### Rooftops with an environmental focus

- Green roofs.
- Solar PV and biosolar PV systems.
- Blue roofs for SuDS and water attenuation.

### 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.



Lady Margaret School  
London



Budbrooke Primary School  
Warwick



# Waterproofing the Roof

## Our RBM systems for new builds and refurbishment projects

There are five waterproofing systems within our reinforced bitumen membrane portfolio all with a range of guarantees to meet the individual needs of projects.

### Bauder Total Roof System Plus (BTRS PLUS)

Our premium waterproofing system utilising the latest manufacturing technology utilising both APP + SBS modified bitumen. Once the project includes a green roof, our root resistant BauderSMARAGD is specified as the cap sheet (BTGRS PLUS).

#### Enhance with:

- Green Roofs
- Blue Roofs
- Solar PV
- Biosolar PV

### Bauder Total Roof System (BTRS)

Our high quality Bauder Total Roof System offers a range of membranes, each with their own attributes, so the specified solution meets the needs of each project. When a green roof is added, the BauderPLANT E cap sheet is used (BTGRS).

#### Enhance with:

- Green Roofs
- Blue Roofs
- Solar PV
- Biosolar PV

### Bauderflex

This system offers a commercial alternative for the specifier on a prudent budget. The system uses BauderPLANT E 42 cap sheet for green roofs (Bauderflex Green).

#### Enhance with:

- Green Roofs
- Solar PV
- Biosolar PV

### System Airtech

When hot works need to be minimised, our torch-free solution uses self-adhesive membranes and hot air welding across the entire roof.

### BauderTHERM SL 500

Single-layer torch-applied overlay membrane specifically for refurbishment projects to lengthen the operational lifespan of the existing waterproofing.

Please note - this system is not currently CCPI verified.



Airdale Academy  
Cambridge



# Use the Roof to Deliver Green Solutions

## Making flat roofs more effectual

Working towards Net Zero is important to us and we have sustainably focused solutions that drive positive change for the environment, reduce energy wastage, 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 24.

### Creating a sustainable environment

Each green roof brings back a piece of nature and on some buildings a recreational space can be created for people to enjoy. A Bauder green roof combines the finished planting scheme and all its supportive components with a secure waterproofing system. Read more on page 20.

### Attenuating stormwater run-off

A blue roof offers a sustainable drainage method designed to attenuate stormwater on a flat roof for up to a 48 hour period via a restrictive flow outlet. Particularly useful for urban areas where options for ground-based attenuation systems are limited or where construction is being carried out within flood sensitive areas. See page 21.

### Using the roof to generate energy

A flat roof is the ideal place for a solar photovoltaic (PV) installation to generate site-sourced electricity. Combining PV with an integrated green roof system forms our BauderSOLAR G LIGHT solution. Pages 22-23 have more information.





**Meridian High School  
Croydon**

**BUILDING BOARD**

Roof Size:	2,046m <sup>2</sup>
Roofing System:	Bauder Total Roof System PLUS
Specifier:	Daniel Connal Partnership
Approved Contractor:	Skyler Contracting Ltd.

# Bauder Total Roof System Plus (BTRS PLUS)

## Our RBM waterproofing with durability in mind.

Our BTRS PLUS system utilises the latest manufacturing technology with a dual formulation cap sheet, uniting both APP and SBS polymer bitumen modifications for strength and flexibility.

### When to specify

BTRS PLUS is a fully bonded system designed for use in both new build and refurbishment projects within warm and inverted roof constructions with a choice of insulations.

The system incorporates BauderKARAT cap sheet and BauderTEC KSA DUO 35 self-adhesive membrane that jointly provide a waterproofing solution with a verified service life in excess of 35 years. When a green roof is specified the BauderSMARAGD root resistant cap sheet is incorporated and our Bauder Total Green Roof System Plus (BTGRS PLUS) is formed.

### Enhance with:

- Green Roofs
- Blue Roofs
- Solar PV
- Biosolar PV

### Plus points

- Two-layer 8.7mm combined waterproofing.
- APP/SBS dual modified bitumen 5.2mm cap sheet with glass-polyester composite reinforcement.
- Incorporates self-adhesive membranes.
- CCPI verified system data.
- Safe2Torch detailing design.
- 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 10/4744:

- 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.

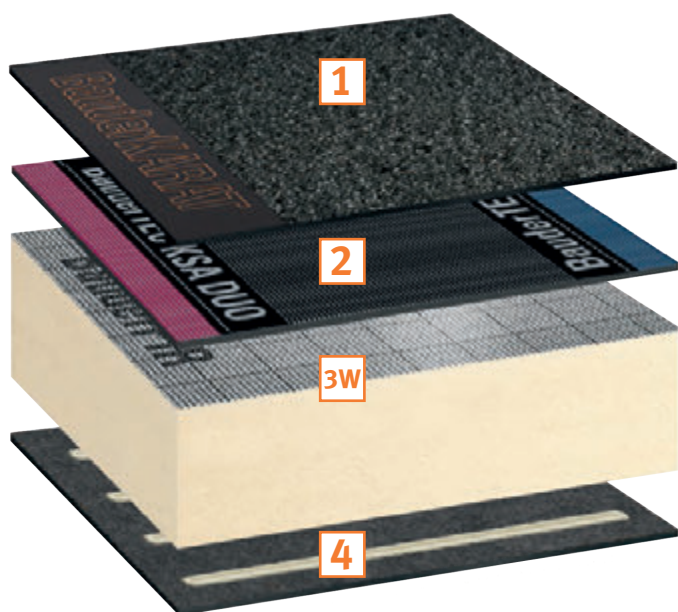
#### EPD Certification:

- Bitumen Membranes.
- PU Insulation - Aluminium Facing.
- BauderROCK Insulation.
- BauderGLAS insulation.



# BTRS PLUS and BTGRS PLUS Systems

## Configuration examples



BTRS PLUS System



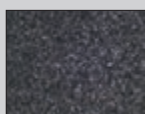
BTGRS PLUS System

### SYSTEM DATA

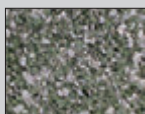
 (download product data sheets for more information [bauder.co.uk/technical-centre](https://www.bauder.co.uk/technical-centre))

#### 1 Cap sheet

Mineral finish colours



BauderKARAT  
Charcoal Grey



BauderSMARAGD  
Green-white

#### BauderKARAT

5.2mm dual modified APP/SBS bitumen with glass/polyester composite reinforcement.

#### BauderSMARAGD

FLL approved 5.2mm dual modified APP/SBS bitumen with glass/polyester composite reinforcement root resistant cap sheet for green roofs.

#### 2 Underlayer

#### BauderTEC KSA DUO 35

3.5mm SBS elastomeric self-adhesive bitumen membrane.

#### BauderFLEX G4E

#### 3w Warm roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

#### BauderPIR (flatboard and tapered)

**BauderVIP TE** (slimline silica vacuum core).

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

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

#### 3I Inverted roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

**BauderJFRI** (expanded polystyrene).

**BauderXPS** (extruded polystyrene).

**BauderGLAS** (cellular glass).

#### 4 AVCL

**BauderTEC KSD FBS** self-adhesive SBS elastomeric bitumen membrane.

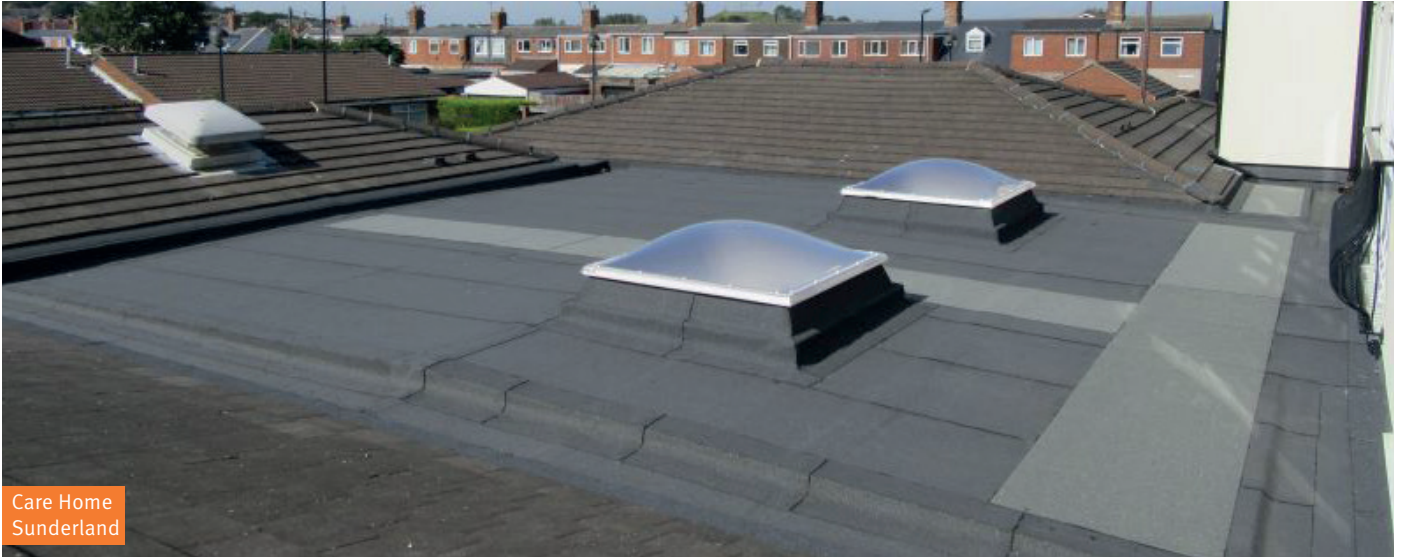
**BauderTHERM DS1 DUO** self adhesive membrane.

**Bauder Super AL-E** torch-on membrane.



# BTRS PLUS and BTGRS PLUS Systems

## Project gallery





**Arroe Park Hospital  
Birkenhead**

**BUILDING BOARD**

Roof Size:	1,150m <sup>2</sup>
Waterproofing:	Bauderflex
Approved Contractor:	Helix Roofing Contractors Ltd.

# Bauder Total Roof System (BTRS)

## Robust and durable bituminous waterproofing system

Our long-established BTRS system incorporates elastomeric bitumen membranes for strength and durability on flat roofs.

### When to specify

BTRS is a fully bonded system suitable for new build and refurbishment projects within warm and inverted roof constructions with a choice of insulations; also used as a system to overlay an existing roof that is thermally reliable and still meets current standards.

The Bauder K5K 5.2mm cap sheet comes in three mineral colour finishes and there is a selection of underlayers and AVCLs to suit specific project requirements. The system uses BauderPLANT E when a green roof is specified to form the Bauder Total Green Roof System (BTGRS).

### Enhance with:

- Green Roofs
- Blue Roofs
- Solar PV
- Biosolar PV

### Plus points

- 5.2mm SBS modified elastomeric bitumen cap sheet with polyester fleece reinforcement.
- System incorporates patented DUO membranes to minimise the use of flame.
- CCPI verified system data.
- Safe2Torch detailing design.
- Comprehensive guarantees to meet project needs.

### Verified properties

#### BBA Certificate 10/4744:

- 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:

- Bitumen Membranes.
- PU Insulation - Aluminium Facing
- BauderROCK Insulation.
- BauderGLAS Insulation.



Central Sciences Laboratories  
Keele University

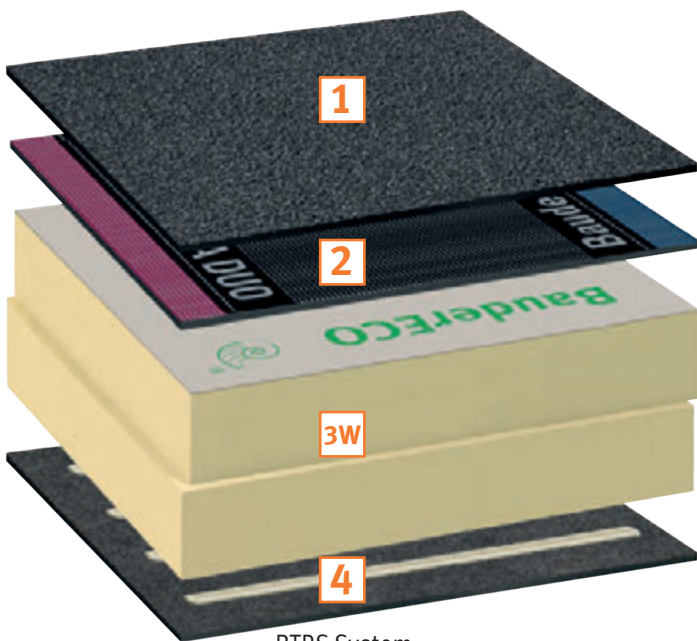
Credit: Jakt Photography



Oracle Linlithgow  
Scotland

# BTRS and BTGRS Systems

## Configuration examples



BTRS System



BTGRS System

### SYSTEM DATA

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

#### 1 Cap sheet

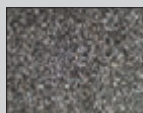
Mineral finish colours

##### BauderK5K

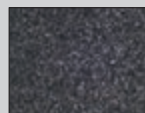
5.2mm SBS modified bitumen with polyester fleece reinforcement.

##### BauderPLANT E

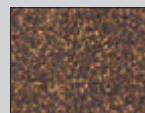
FLL approved 5.2mm root resistant cap sheet for green roofs



BauderK5K  
Grey Slate



BauderK5K  
Charcoal Grey



BauderK5K  
Brown



BauderPLANT E  
Green

#### 2 Underlayer

##### BauderTEC KSA DUO

3mm SBS elastomeric self-adhesive bitumen membrane.

##### BauderFLEX G4E

3.5mm bitumen membrane.

#### 3W Warm roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

**BauderPIR** (flatboard and tapered).

**BauderECO F** (sustainable PIR flatboard)

**BauderVIP TE** (slimline silica vacuum core).

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

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

#### 3I Inverted roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

**BauderJFRI** (expanded polystyrene).

**BauderXPS** (extruded polystyrene).

**BauderGLAS** (cellular glass).

#### 4 AVCL

**BauderTEC KSD FBS** self-adhesive SBS elastomeric bitumen membrane.

**BauderTHERM DS 1 DUO** self adhesive membrane.

**Bauder Super AL-E** torch-on membrane.

# BTRS and BTGRS Systems

## Project gallery





**Paxman Academy  
Colchester**

**BUILDING BOARD**

Roof Size:	2,500m <sup>2</sup>
Roofing System:	Bauderflex
Architect:	Concertus Design and Property Consultants
Main Contractor:	Barnes Construction
Approved Contractor:	GRM Roofing Company Ltd.

# Bauderflex System

## Reinforced bitumen membrane system

Our Bauderflex system offers an alternative to the specifier on a tighter budget as it uses thinner elastomeric bitumen membranes compared to BTRS and BTRS PLUS.

### When to specify

Bauderflex is a fully bonded system suitable for new build and refurbishment projects for warm or inverted roof construction with a choice of insulations; also used as a two-layer system to overlay an existing roof that is thermally reliable and still meets current standards. The system uses the BauderFLEX K4E 4.2mm cap sheet and comes in three mineral colour finishes. There is a selection of underlayers and AVCLs to suit specific project requirements and where a green roof is required the BauderPLANT E 42 is incorporated to form the Bauderflex Green Roof System.

### Enhance with:

- Green Roofs
- Blue Roofs
- Solar PV
- Biosolar PV

### Plus points

- 4.2mm SBS modified elastomeric bitumen cap sheet with polyester fleece reinforcement.
- CCPI verified system data.
- Safe2Torch design.
- 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 10/4744:

- 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 > 30 years.

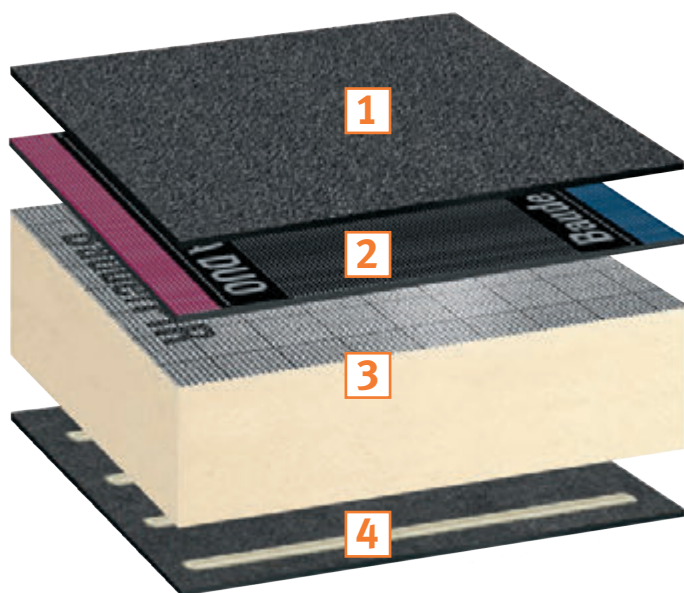
#### EPD Certification:

- Bitumen Membranes.
- PU Insulation - Aluminium Facing
- BauderROCK Insulation.
- BauderGLAS Insulation.

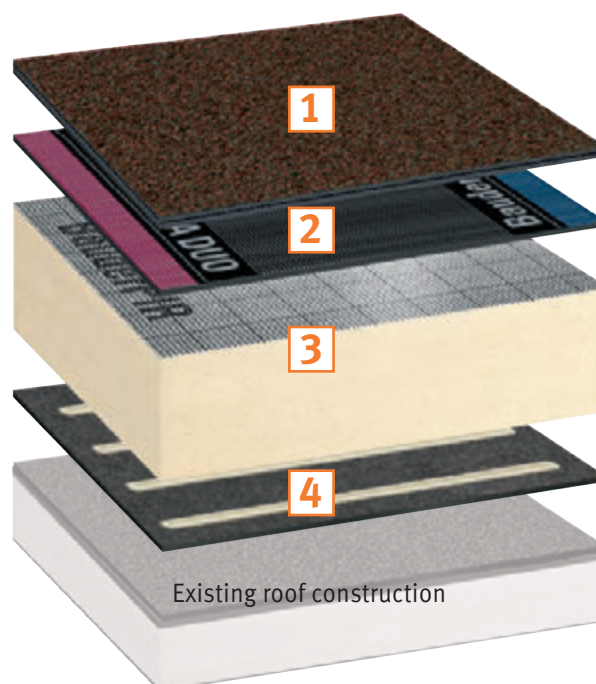


# Bauderflex and Bauderflex Green Systems

## Configuration examples



Bauderflex System



Bauderflex System as an overlay to an existing roof

### SYSTEM DATA

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

#### 1 Cap sheet

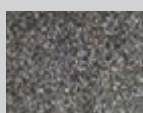
##### BauderFLEX K4E

4.2mm bitumen membrane with polyester fleece reinforcement.

##### BauderPLANT E 42

FLL approved 4.2mm root resistant cap sheet for green roofs.

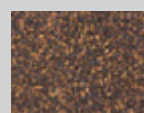
Mineral finish colours



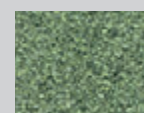
BauderFLEX K4E  
Grey Slate



BauderFLEX K4E  
Charcoal Grey



BauderFLEX K4E  
Brown



BauderPLANT E 42  
Green

#### 2 Underlayer options

**BauderTEC EGV 35 TF** 3.5mm bitumen membrane.

**BauderTEC Sprint DUO** 2mm self-adhesive bitumen membrane.

#### 3 Warm roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

**BauderPIR** (flatboard and tapered).

**BauderVIP TE** (slimline silica vacuum core).

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

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

#### Inverted roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

**BauderJFRI** (expanded polystyrene).

**BauderXPS** (extruded polystyrene).

**BauderGLAS** (cellular glass).

#### 4 AVCL

**BauderTEC KSD FBS** 2.5mm self-adhesive membrane.

**BauderTHERM DS 1 DUO** 4mm self adhesive membrane.

**Bauder EVA 35** 3.5mm bitumen membrane.

**Bauder Super AL-E** 3.5mm bitumen membrane.



# Bauderflex and Bauderflex Green Systems

## Project gallery



Church Building  
Edinburgh



Petersfield School  
Hampshire



Chelmsley Wood Shopping Centre  
Birmingham



Private Residence  
Canterbury



Cumbernauld Community Centre  
Glasgow



Ormiston Forge Academy  
Cradley Heath

# System Airtech

## Flame-free waterproofing system

Specifically developed to deliver a torch-free installation where site conditions prohibit the use of open-flame. The system combines self-adhesive membranes and hot air welding.

### When to specify

Airtech is a fully bonded system suitable for new build and refurbishment projects with a choice of insulations for warm roof construction. The system can also be used as a two-layer overlay to an existing roof that is thermally reliable and still meets current standards.

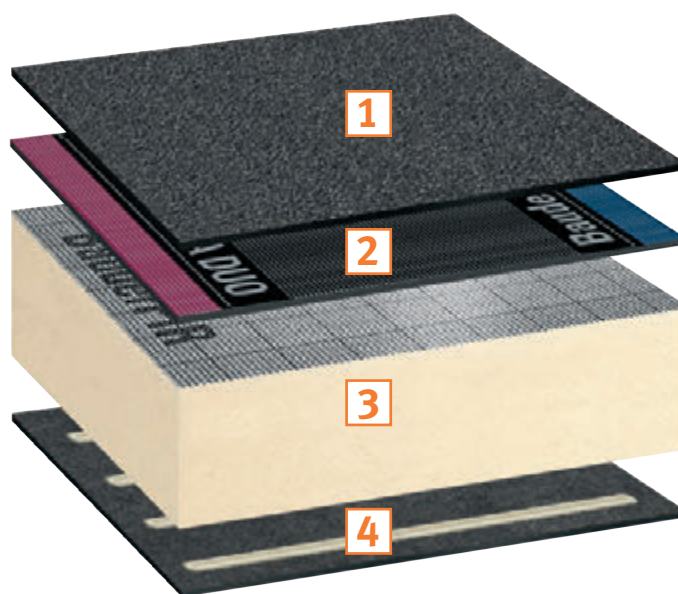
The system uses the BauderTEC KSO range of SBS modified cap sheets with three slate mineral colour finishes and installation that embraces self-adhesive membranes and hot air welding at all detailing and laps.

### Plus points

- Entire system features flame-free installation.
- Tested bond strength for adhesives.
- 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.

### EPD Certification:

- Bitumen Membranes.
- Insulations.



### SYSTEM DATA

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

<p><b>1 Cap sheet</b></p> <p>Mineral finish colours</p>	<p><b>BauderTEC KSO SN, BauderTEC KSO ALP SN, and BauderTEC KSO-P SN</b> 4mm bitumen membrane with polyester or glass reinforcement.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  Bauder KSO SN Grey Slate         </div> <div style="text-align: center;">  Bauder KSO-P SN Charcoal Grey         </div> <div style="text-align: center;">  Bauder KSO ALP SN Brown         </div> </div>
<p><b>2 Underlayer</b></p>	<p><b>BauderTEC KSA DUO</b> 3mm bitumen membrane.</p>
<p><b>3 Warm roof insulation options</b> Range of thicknesses to meet thermal efficiency requirement.</p>	<p><b>BauderPIR</b> (flatboard and tapered).  <b>BauderVIP TE</b> (slimline silica vacuum core).  <b>BauderROCK</b> (flatboard and tapered mineral wool).  <b>BauderGLAS</b> (flatboard and tapered cellular glass).</p>
<p><b>4 AVCL</b></p>	<p><b>BauderTEC KSD FBS</b> 2.5mm self-adhesive membrane.</p>

# BauderTHERM Stripes

## Overlay membrane to extend the life of an existing roof that is fundamentally reliable

Specifically for refurbishment projects when the thermal properties of the roof are satisfactory. The installation has two layers of membrane at all detailing and follows Safe2Torch guidelines.

### When to specify

For refurbishment projects where the existing bitumen-based waterproofing is reaching the end of its serviceable life but is still essentially watertight. If insulation exists it should still be thermally suitable, free from moisture contamination or degradation.

The system uses the BauderTHERM SL 500 membrane with thermally activated SBS elastomeric bitumen resin set in a 'stripes' bonding pattern to give an approximate 50% bond to the existing waterproofing.

### Plus points


- System features single membrane layer on the roof field area and two layers at all detailing.
- Bauder expects the existing roof to benefit from an extension to its service life > 15 years.
- 5.2mm thick, torch-bonded elastomeric bitumen membrane.
- 'Stripes' pattern of bitumen on the underside reduces the likelihood of inter-layer blistering after installation.
- Guarantee options to fulfill cover requirements for the project.

### EPD Certification:

- Bitumen Membranes.



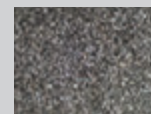
### SYSTEM DATA

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

#### 1 Cap sheet

#### BauderTHERM SL 500

Mineral finish colour



Grey Slate



Woodside Health Centre  
Glasgow

# Green Roofs

## Living roofs create environmentally focused buildings

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

We provide the complete package for the waterproofing system with root resistant cap sheet and associated landscaping components for all types of green roofs.

### Installed on:

- BTGRS PLUS • BTGRS • Bauderflex Green.

### Intensive green roofs with soft and hard landscaping

Designs may include flowerbeds, lawns, shrubs, and trees intermixed with paths, driveways and patios. The combinations of finishes will impact on the specified system construction, drainage, and components.

### 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:

- A 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 22).

### 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.

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)



# Blue Roofs

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

Three methods of attenuation delivering different levels of water management for urban areas to meet the needs of foreseeable rainfall at the development site.

A BauderBLUE STORM system can be constructed with a variety of landscape finishes including green roofs, biosolar PV array, or hard landscaping. 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 carefully control water discharge off the roof. Installed on BTGRS PLUS and BTGRS.

#### 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 28 litres/m<sup>2</sup>. Installed on BTGRS PLUS and BTGRS for soft landscaping finishes and BTRS PLUS and BTRS for hard landscaping.

#### Finish options:

- Extensive, biodiverse, and semi-intensive green roofs
- BioSOLAR G LIGHT
- Paving

### BauderBLUE STORMvoid System

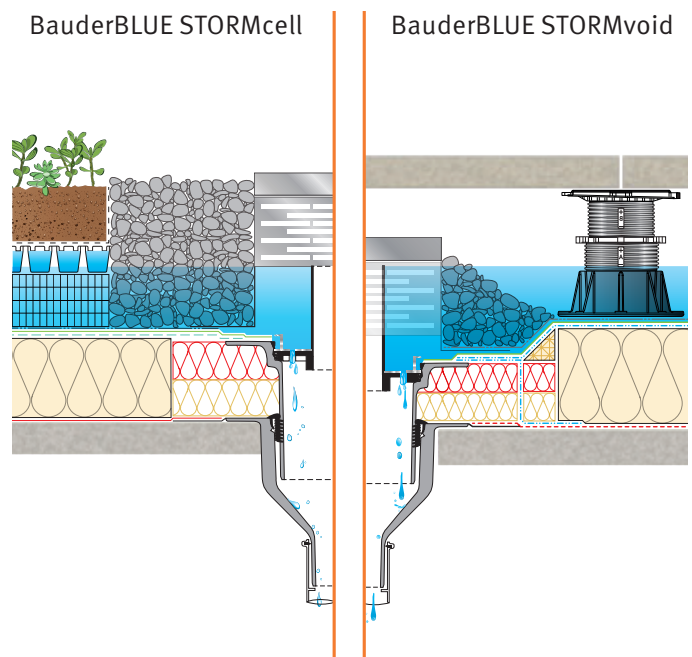
This simple system creates a void space with Bauder pedestals and hard landscaping finish to allow water movement to the flow restrictor outlet. Utilising Bauder pedestals ensures the entire system is covered by our guarantee. Installed on BTRS PLUS and BTRS.

#### Finish options:

- Paving
- Metal decking

### Plus points

- Rainfall attenuation.
- Simple low maintenance design.
- BauderBLUE roof solutions deliver project specific discharge rates to match the SuDS report for the site.
- Guarantee options to fulfill cover requirements for the project.



# Biosolar Roofs

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

Integrated solution for mounting photovoltaic renewable energy on a green or blue roof where the substrate and vegetation provide the ballasted installation mechanism to secure the array.

### About the system

The 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 use a seed mix of native species plants for further BREEAM credit rating.

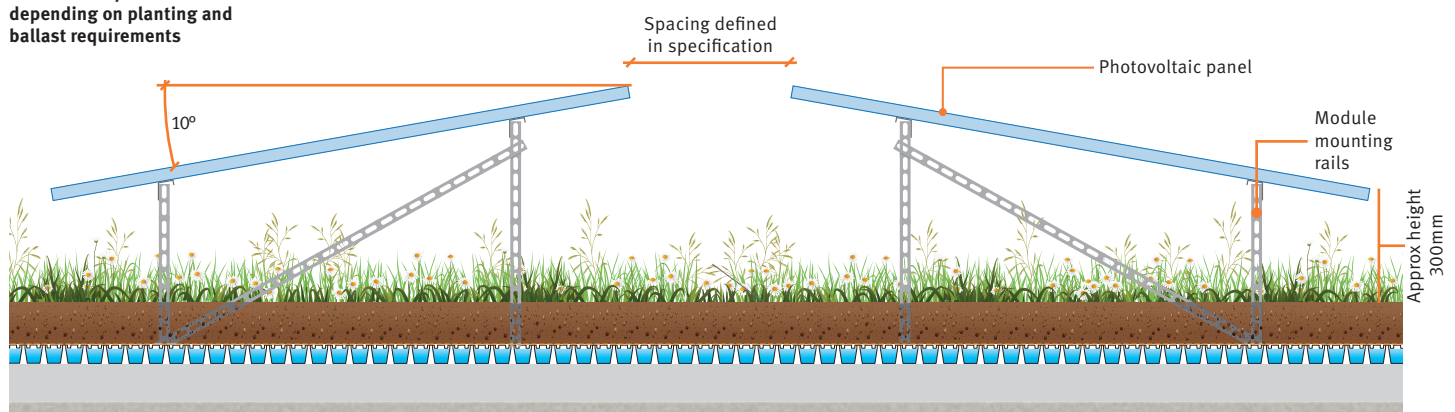
The vegetation maximises the solar energy generation as the green roof preserves ambient rooftop temperatures helping to keep the modules at optimal output.

### Plus points

- Specified on BTGRS PLUS, BTGRS and Bauderflex Green systems.
- Installation method with no penetrating fixings to ensure waterproofing integrity and reduce risk.
- Single source for integrated design and guarantee responsibility for the waterproofing and 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 solution 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 with 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.

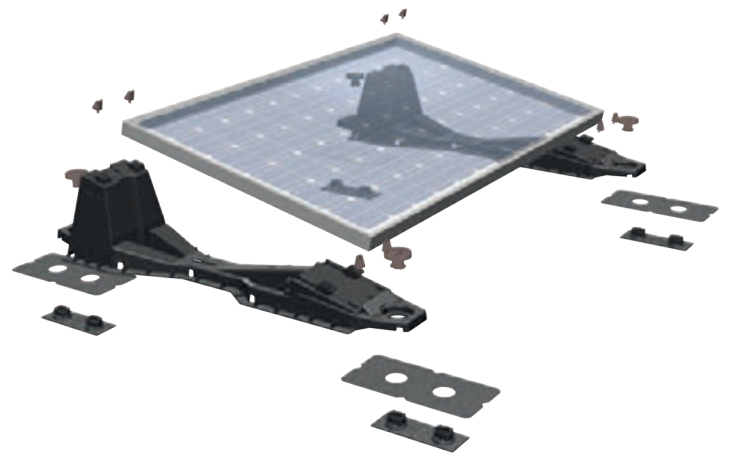
As module manufacturers strive to increase the efficiency of solar modules, the industry is moving to larger format cells and module structures.

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

- Specified on BTRS PLUS, BTRS and Bauderflex.
- 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)



Private Residence  
Suffolk



Freebournes Road  
Witham



# Bauder Insulations

## Creating energy efficient flat roofs to have a positive effect on the environment

The Bauder range of insulants ensures the right outcome is specified for the building and our tapered insulation is a cost effective method for creating falls on a warm roof.

### **BauderECO FF** **W**

Certified raw material biomass balanced insulation for a sustainable PIR flatboard within BTRS and BTGRS.

### **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 IU**

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 IU**

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

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

Lightweight, rigid expanded polystyrene (EPS) insulation that is resistant to the passage of water.

### **BauderXPS** **I IU**

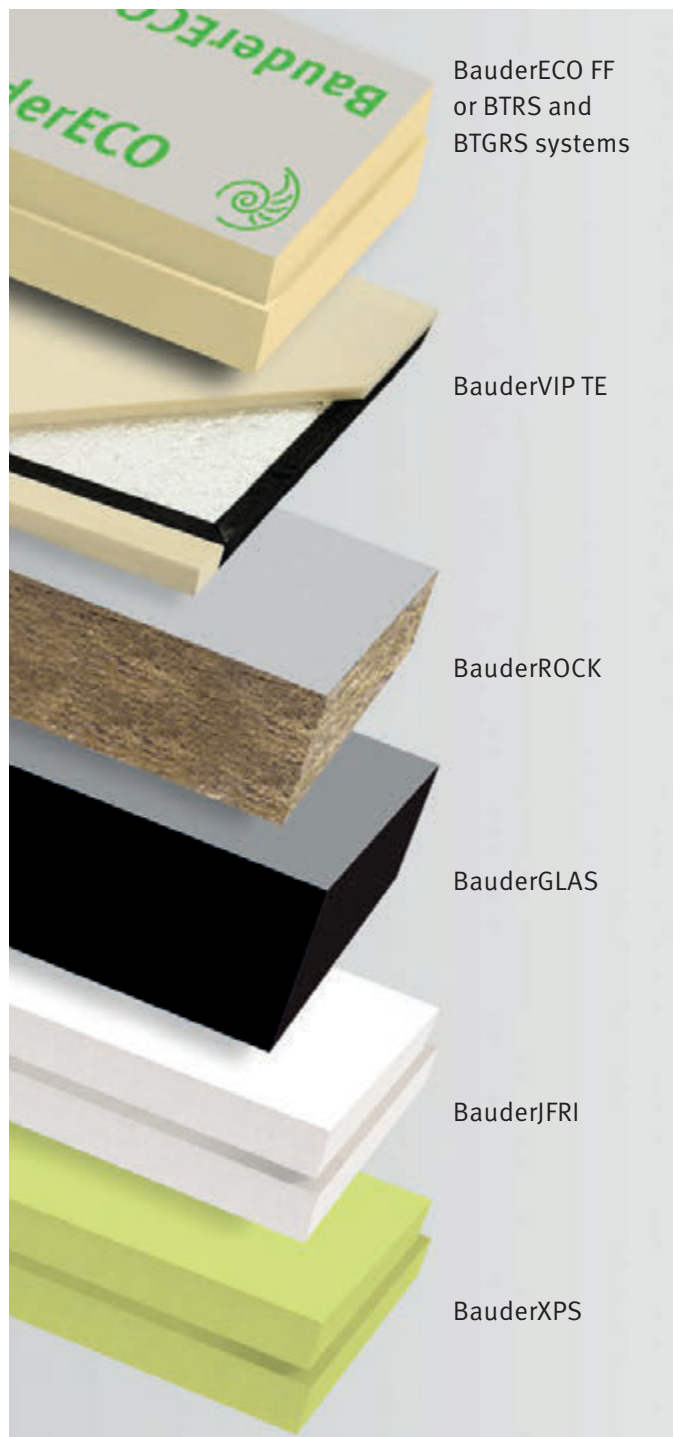
CO<sub>2</sub> blown extruded polystyrene insulation with high compressive strength and low water absorption.

### **Tapered insulation**

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

### **Design service**

Our technical department design solutions 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 to aid installation on site.



#### **Key:**

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



# Rooflights, Insulated 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.

### 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.
- BBA certified.

### Insulated rainwater outlets

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

They are available for flat roofs, green and blue roofs, vertical gravity flow, parapets with a through chute to an external hopper, and tell-tale 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 all the other items for the installation or finish of a roof and includes:

- Liquid detailing kits
- Lightning conductor clips
- GRP trims
- Soil vent pipe covers
- Adhesives
- Primers
- Sealant
- Acoustic membrane + infill



## 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 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

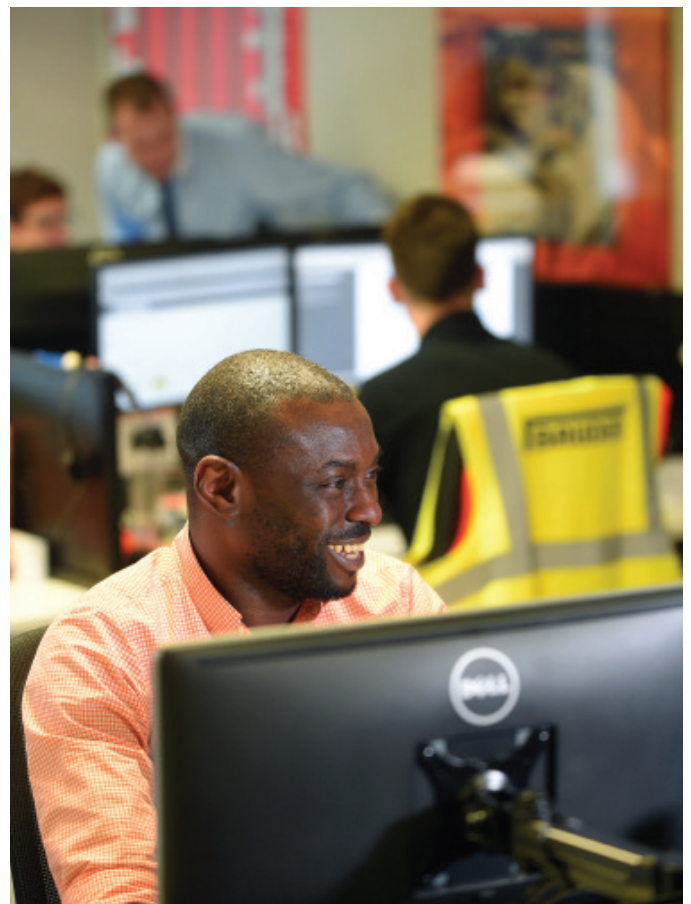
Bauder offers a range of guarantees depending upon the roofing system chosen and the project requirements. Sample guarantees are available upon request and are written in plain and easily understood language, clearly stating what is included, excluded and required to comply with the guarantee terms.

##### 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)





George Street  
Edinburgh

**BUILDING BOARD**

Roof Size:	889m <sup>2</sup>
Waterproofing:	Bauder Total Roof System
Project:	Refurbishment roof with a retrofit terrace

# Project Study

## The Burrell Collection, Glasgow

### Synopsis

The Burrell Collection is housed in an award-winning building in Glasgow that reopened in 2022 following a major refurbishment of the building to make it more sustainable, increase gallery space, and redisplay the art collection.

ARUP was tasked to improve and reinstate the entire envelope of the building. The goal for the failing metal standing seam roof was to replace it with a new waterproofing system incorporating falls to provide effective drainage and sustainable technology in the form of solar PV.

### Challenge

The building is Category A listed with rooftop features that had to be preserved. The current roof had insufficient drainage falls, and no capacity for additional outlets, so an effective drainage solution was required. Furthermore, the requirement for the renovation works meant that the replacement roof would need to serve as a thoroughfare for following trades moving and storing materials to refurbish other elements of the building envelope.

### Systems summary

<b>Waterproofing</b>	Bauder Total Roof System
<b>Insulation</b>	BauderGLAS tapered scheme
<b>Solar PV</b>	BauderSOLAR F

### Highlights

- 2,735m<sup>2</sup> overlay solution incorporating BauderGLAS insulation.
- Over 112.5 MWh per year energy generated.
- Technical calculations, solution design, and onsite support.
- Guarantee embraces all elements of Bauder roof solution.



BUILDING BOARD	
Roof Size:	2,735m <sup>2</sup>
Project Type:	Refurbishment with warm roof overlay
PV Array:	384 modules; 112.5 MWh per year
Specifier:	ARUP
Approved Contractor:	W.G. Walker & Co

# Project Studies

## Paxman Academy, Colchester

### Synopsis

New build academy school designed to accommodate 900 pupils and delivered as a Design and Build scheme under the Essex Construction Framework. The project brief was for a durable, cost-effective waterproofing system with a comprehensive guarantee, and full project support, all of which were met by Bauder and our Bauderflex solution.

### Systems summary

**Waterproofing** Bauderflex System  
**Insulation** 140mm BauderPIR FA-TE

### Highlights

- Bauder Euroglaze rooflights
- Full support for design, specification and on-site monitoring.



Rooftop image on page 14

### BUILDING BOARD

Roof Size:	2,500m <sup>2</sup>
Architect:	Concertus Design & Property Consultants
Main Contractor:	Barnes Construction
Approved Contractor:	G.R.M. Roofing Company Ltd

## Lloyd's Building, London

### Synopsis

The building in London, the centre of Lloyd's global operations, began construction in 1978 and opened in 1986. A Bauder roof survey identified the original waterproofing was at the end of its serviceable life and required refurbishment. The BTRS PLUS system was specified with BauderGLAS tapered insulation for improved roof falls.

### System summary

**Waterproofing** Bauder Total Roof System Plus  
**Insulation** BauderGLAS tapered scheme

### Highlights

- Bauder Euroglaze rooflights.
- Full support for design, specification and on-site monitoring.



### BUILDING BOARD

Roof Size:	3,418m <sup>2</sup>
Project Type:	Refurbishment of Grade 1 listed building
Specifier:	ARUP
Approved Contractor:	Inspire Contract Services Ltd

# Project Study

## Waitrose, Bagshot

### Synopsis

The Waitrose superstore constructed on a brownfield site in Bagshot, Surrey was specified with a wave-shaped roof with sedum blanket to replace the green space lost to the building's footprint. The client wanted to minimise the impact of the construction on the surrounding landscape and include a striking green roof that acts as a visual reminder to the importance of sustainability.

The BauderGREEN XF 301 sedum blanket provides instant coverage and greening of the building. The blanket features 11 species of sedums with some mosses and grasses to ensure plant diversity.

### The challenge

The tight schedule for the installation of the green roof resulted in Span Roofing craning to the roof and laying over 1,000m<sup>2</sup> of the lightweight sedum blanket each day.

All roofing works were completed on time and to budget ensuring there was no delay to the store's official opening.

### Advocacy

#### Jeffrey Thornton of Midas Group,

*"Bauder delivered high quality, professional support throughout the project, and Span Roofing demonstrated exception levels of workmanship in the installation of the green roof. This eco-friendly building is undeniably a benchmark for sustainable construction and its roof has played an integral part in achieving this."*

### Systems summary

<b>Waterproofing</b>	Bauder Total Green Roof System
<b>Green roof</b>	Bauder Sedum System

### Highlights

- 4,800m<sup>2</sup> BauderGREEN XF301 sedum blanket green roof.
- Roofscape blends the building into its surroundings.
- Project completed on time and within budget.
- Full Bauder technical and on-site support.





**Waitrose  
Bagshot**

**BUILDING BOARD**

Roof Size:	4,800m <sup>2</sup>
Roofing Systems:	Bauder Total Green Roof System and Bauder Sedum System
Architect:	Forum Architecture
Main Contractor:	Midas Group
Approved Contractor:	Span Roofing

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**Respecting the planet**

**Reducing use of materials**



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