

Cold Applied Liquid Systems

Flat roof, terrace, balcony, and walkway solutions





Canberra House
Swindon

BUILDING BOARD

Roof Size:	985m ²
Project Type:	Refurbishment overlay
Waterproofing:	LiquiTOP System
Specifier:	Rapleys LLP
Approved Contractor:	Central Roofing & Building Services 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.

Cold Applied Liquid Systems

Lightweight seamless flat waterproofing

Flexible waterproofing. The systems easily form around complex detailing for roofs, terraces, balconies, and walkways.

Specifying singular cold applied system

These systems provide seamless waterproofing over the whole area and are completely cold applied, making them ideal for areas where hot works would be a risk. The cold liquid fully bonds to the substrate.

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

Outline of our cold applied liquid systems

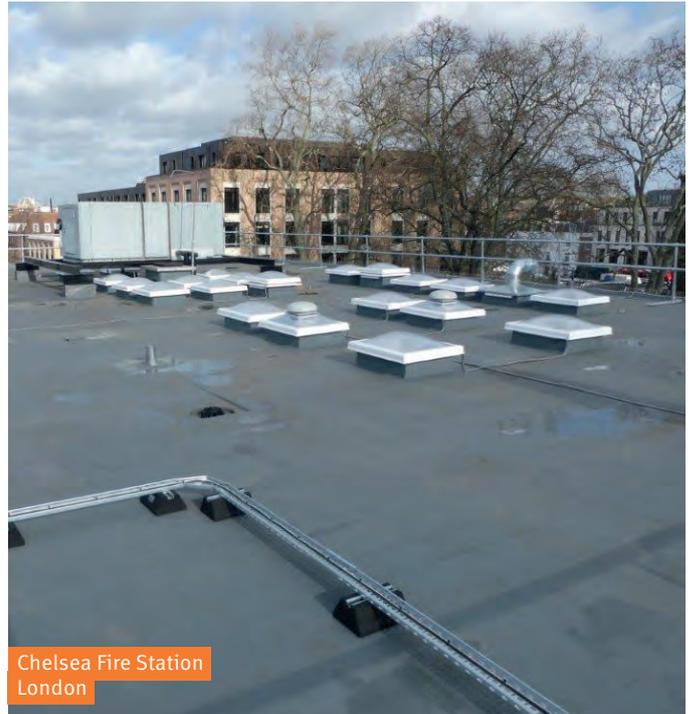
- Two types in the cold applied liquid portfolio.
- Range of insulations for warm roof construction.
- Online system and product evidence with up-to-date technical statistics, DoCs and DoPs, testing outcomes, certification, approvals, accreditations, and conformity assessment.
- Accessories, rooflights, and outlets complete the roof.
- Comprehensive range of guarantee packages to suit project requirements.

Rooftops with an environmental focus

- Green roof systems on Bauder LiquiTEC.
- BauderSOLAR G LIGHT array with a green roof.
- EPD certification.

Achieving technical objectives

- BBA verified properties for approved roof systems.
- Non-combustible insulation options when required.
- Acoustic solutions available.
- Tapered insulation to create falls on a flat roof.



Waterproofing the Roof

Cold applied liquid systems for new build construction and refurbishment projects

Two categories of cold applied liquid systems based on different core formulations. The first is a single-component polyurethane (PU). The second is based on two-component poly methyl methacrylate (PMMA) technology.

Bauder LiquiTOP Roof Systems

Single-component, moisture triggered PU that incorporates a glass fibre mat reinforcement applied as a two-coat system, or a three-coat option for increased durability. The systems can be used in refurbishment and new build projects.

Bauder LiquiTEC Roof System

This flat roof waterproofing is reinforced with a polyester fleece and intended for both new build and refurbishment projects. The system is FLL approved for green roof systems.

Enhance with:

- Green roofs
- Biosolar PV

Bauder LiquiTEC Balcony and Walkway Systems

Developed to provide the optimum combination of aesthetic and functional requirements for balconies and walkways; designed to be hard wearing and resist slipping, the systems can also be used for stairs and stairwells.



Delivering Rooftop Environmental Solutions

Use a flat roof to increase functional values

To accelerate towards Net Zero, 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

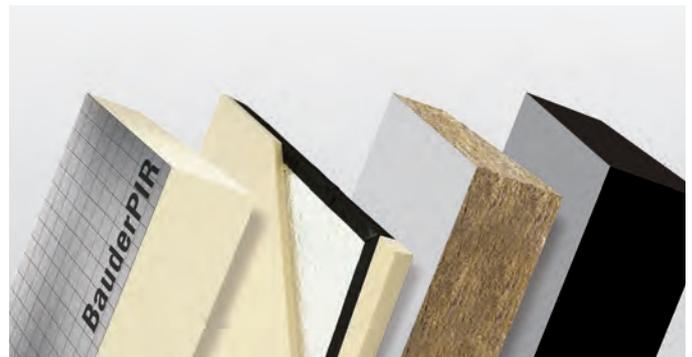
Reducing building energy usage through effective insulation. There are different options depending on project requirements for a warm or inverted roof, and the building usage. Further information on page 14.

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 LiquiTEC green roof combines the finished planting scheme and all its supportive components with a secure waterproofing system. Read more on page 12.

Using the roof to generate energy

A LiquiTEC flat roof is the ideal place for a biosolar photovoltaic array (PV) with integrated green roof installation as it provides a space to generate site-sourced electricity. Page 13 has more information.



Bauder LiquiTOP Roof System

Seamless cold liquid flat roof waterproofing

Bauder LiquiTOP PU is a moisture cured, single component, glass fibre mat reinforced polyurethane liquid, for the refurbishment of existing flat roofs and new build applications.

When to specify

Bauder LiquiTOP PU system is ideal for the refurbishment of existing roofs and particularly suited to those that have a high degree of complex detailing, around high concentrations of rooftop plant, and in constrained areas of access. It can also be used in roof terrace applications where the system is laid to falls and is protected by slabs or decking on pedestals.

The system can be installed as a two-coat or three-coat (LiquiTOP 3COAT System) solution and fully bonds to the substrate, such as a direct waterproofing overlay to an existing flat roof.

Characteristics of the system

- Totally cold applied liquid with glass fibre mat reinforcement.
- Wet-on-dry seamless application.
- Liquid formula allows complex detailing to be simplified.
- Three-coat option for additional service life.
- 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 20/5789:

- Fire classification B_{ROOF}(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 >20 years for LiquiTOP and >25 years for LiquiTOP 3COAT system.

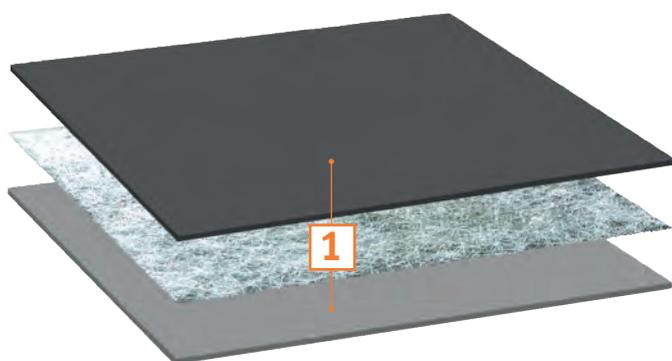
EPD Certification:

- LiquiTOP Products.
- Bitumen Membranes.
- Insulation.

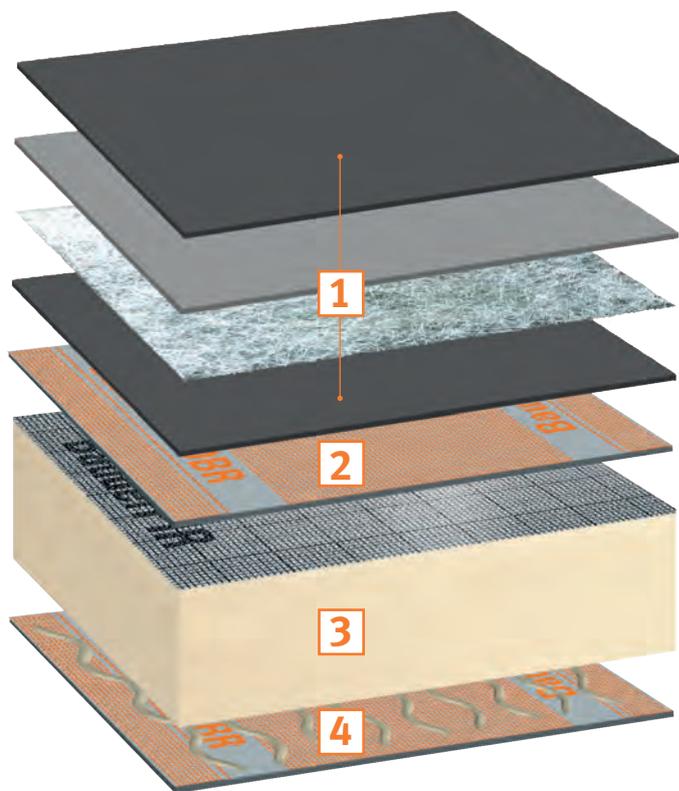


Bauder LiquiTOP Roof System

Configuration examples



LiquiTOP



LiquiTOP 3COAT warm roof system

SYSTEM DATA

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

1 Waterproofing layers

Bauder LiquiTOP

Layers applied to sandwich the reinforcement glass fibre.

LiquiTOP Glass Fibre Mat

Chopped strand glass fibre mat.

LiquiTOP PU is available in two colours, either of which can be used as the first/ embedment coat or top coat.

RAL
7040

Mist grey

RAL
7011

Dark grey

2 Carrier membrane

BauderTEC DBR 06

Self-adhesive 0.6mm elastomeric reinforced bitumen membrane.

4 Air and vapour control layer

3 Warm roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

BauderPIR-FA (flatboard and tapered).

BauderVIP TE (slimline silica vacuum core with protection facings).

BauderROCK (flatboard and tapered mineral wool).

BauderGLAS (flatboard and tapered cellular glass).

Bauder LiquiTEC Roof System

Flexible fast-curing flat roof waterproofing

The Bauder LiquiTEC roof system is a fast-curing poly methyl methacrylate (PMMA) resin system reinforced with polyester fleece.

When to specify

LiquiTEC is a fast-curing, two-coat, wet-on-wet system particularly suited to areas where there is a high degree of detailing, or when access to install waterproofing is restricted. The system is appropriate for both new build or refurbishment applications for cold, warm, and inverted roof constructions.

The system can be used as exposed roof waterproofing or as a roof terrace when protected by hard landscaping as well as extensive and intensive green roof systems. The system can be used in zero falls applications in protected roof situations.

Characteristics of the system

- ❑ Totally cold applied >2mm dry film thicknesses.
- ❑ Polyester reinforced wet-on-wet seamless application.
- ❑ FLL approved root resistance for green roofs.
- ❑ Suitable for roofs with a high degree of detailing.
- ❑ 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.

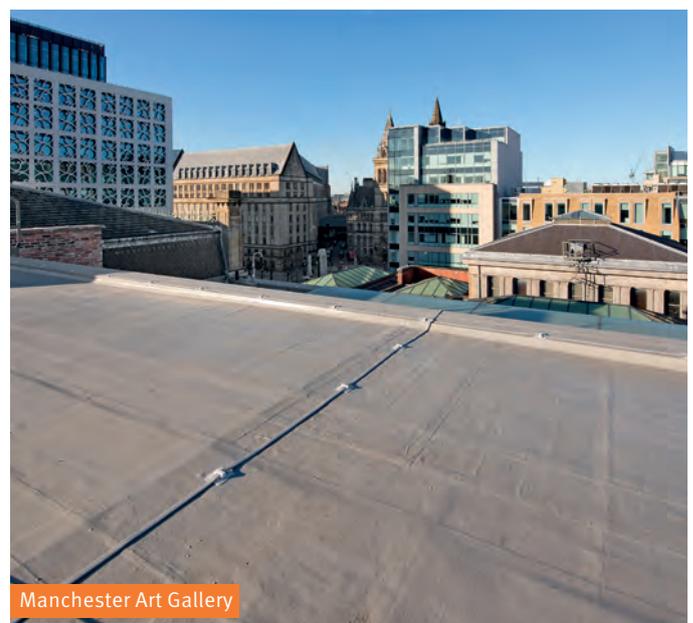
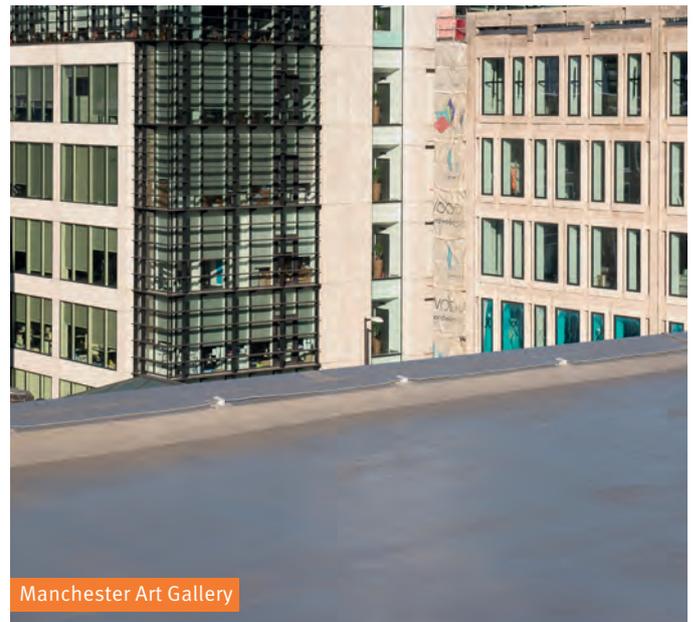
Verified properties

BBA Certificate 14/5152:

- ❑ Fire classification B_{ROOF}(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 > 25 years.

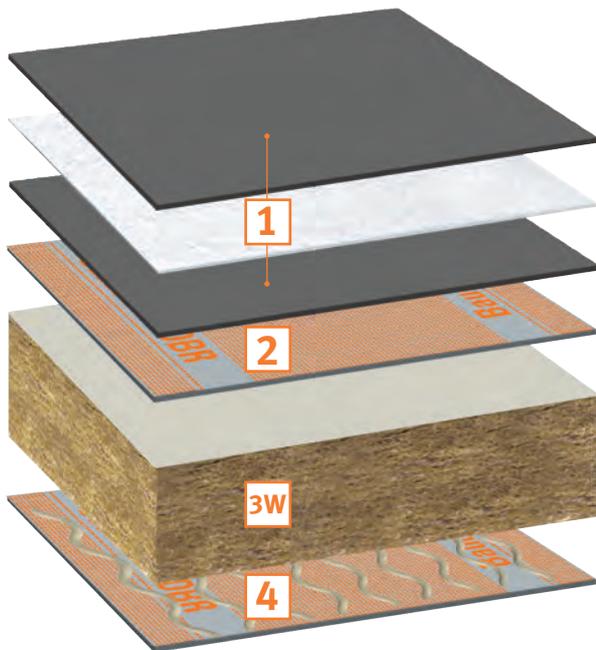
EPD Certification:

- ❑ LiquiTEC Products.
- ❑ Bitumen Membranes.
- ❑ Insulation.

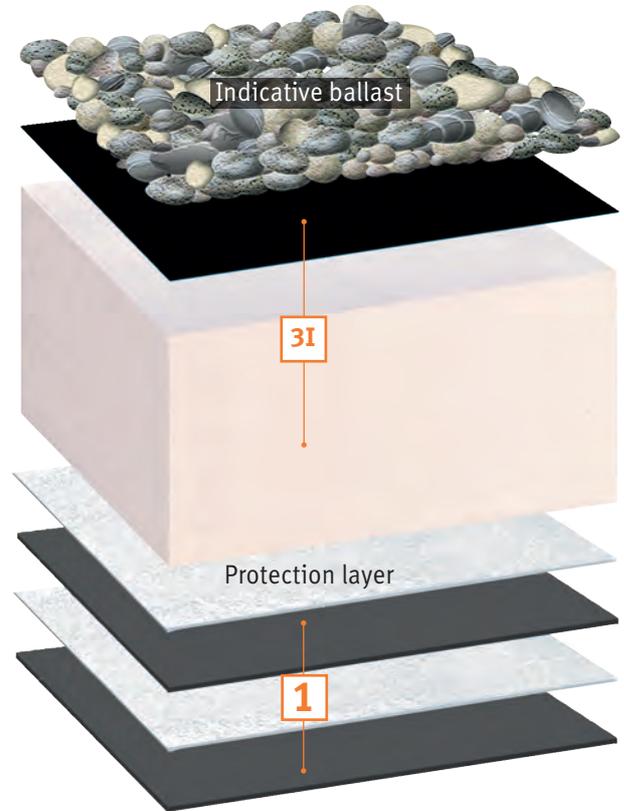


Bauder LiquiTEC Roof System

Configuration examples



Warm roof installation



Inverted roof installation

SYSTEM DATA

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

1 Waterproofing layers

Bauder LIQUIDEK

Layers applied to encapsulate the polyester reinforcement.

Bauder 110 Reinforcement Fleece

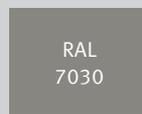
Polyester reinforcement.

Finish colours.

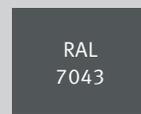
LiquiDEK blue grey is our standard colour, other colours of LiquiFINISH are available as an aesthetic colour coat.



LiquiDEK
Blue grey



LiquiFINISH
Stone grey



LiquiFINISH
Traffic grey

2 Carrier membrane

BauderTEC DBR 06

4 Air and vapour control layer

Self-adhesive 0.6mm elastomeric reinforced bitumen membrane.

3W Warm roof insulation options

Range of thicknesses to meet thermal efficiency requirement.

BauderPIR FA-TE (flatboard and tapered).

BauderVIP TE (slimline silica vacuum core with protection facings).

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) with **BauderJFRI WFRL**.

BauderXPS (extruded polystyrene) with **BauderXPS WFRL**.

Bauder LiquiTEC Balcony and Walkway Systems

Solutions for pedestrian trafficked areas

Hard-wearing and slip resistant systems to meet the demands of pedestrian access areas.

When to specify

The system is specified for balcony and walkway construction on projects with direct pedestrian traffic. Designed to be hard wearing and slip resistant and can be used for stairs and stairwells.

A distinct advantage is the fast cure times for installation on areas continuously in use by the building's occupants so that any inconvenience is kept to a minimum.

Characteristics of the system

- Thick layer system with a choice of surface finishes and colours.
- Full bonding to the substrate.
- Polyester reinforced system over occupied areas.
- 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.

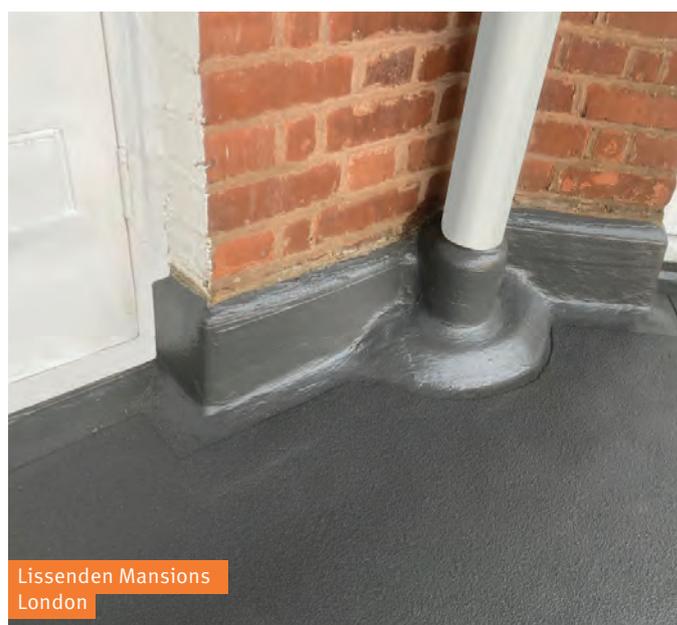
Verified properties

BBA Certificate 14/5152:

- Fire classification B_{ROOF}(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 > 15 years.

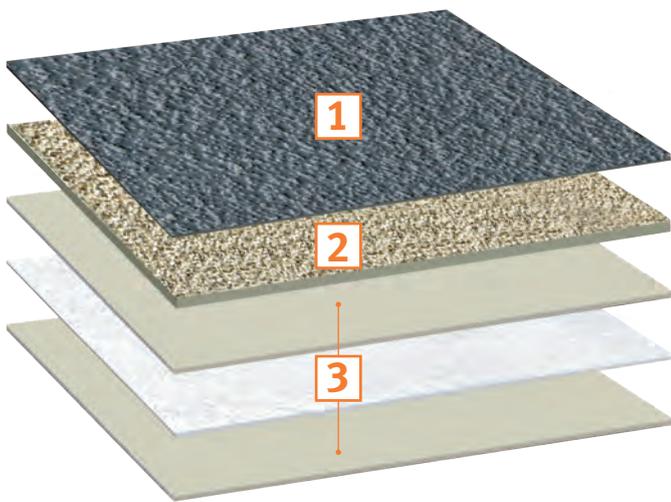
EPD Certification:

- LiquiTEC Products.

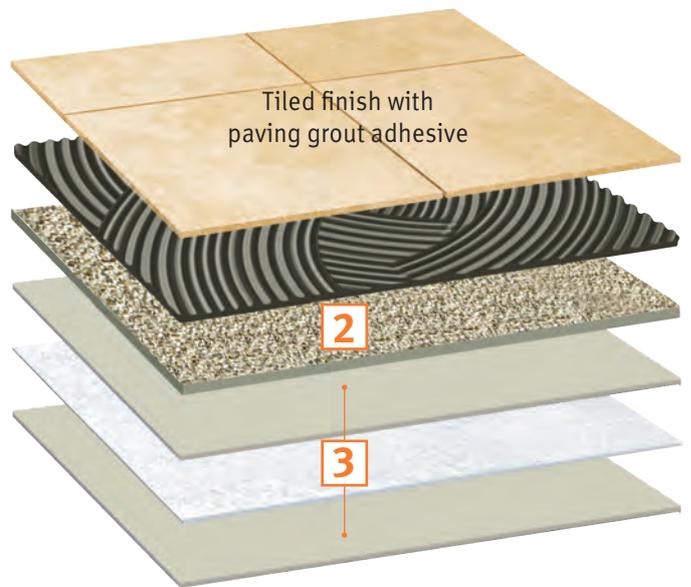


Bauder LiquiTEC Balcony and Walkway System

Configuration examples



Reinforced application



Tiled application

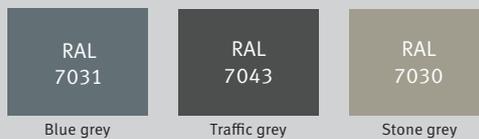
SYSTEM DATA

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

1 Finish coat

Finish colours over granular quartz finish.

Bauder LiquiFINISH



2 Wearing course layer

Bauder LiquiPAVE RF

Self-levelling surface layer incorporating quartz aggregate.

3 Waterproofing

Bauder LiquiBALKON

Layers applied to encapsulate the polyester reinforcement.

Bauder 110 Reinforcement Fleece

Polyester reinforcement.

Green Roofs

Living roofs on LiquiTEC Roof System

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 LiquiTEC roof 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.

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.

Full 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



Biosolar Roofs

Combining a solar PV array with a green roof on a LiquiTEC Roof System

Integrated solution for mounting photovoltaic renewable energy on a green 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 keeping the modules at optimal output.

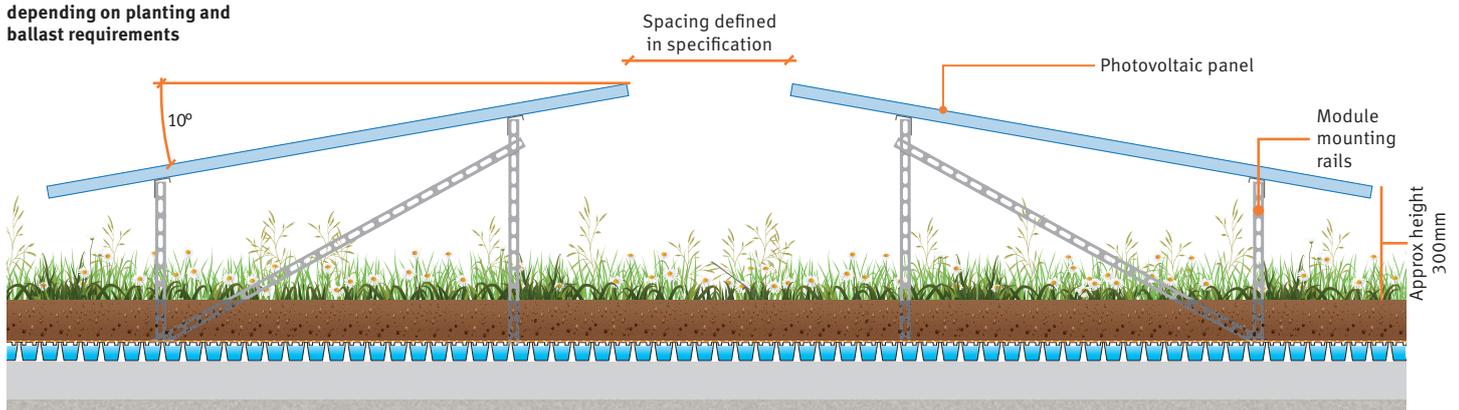
Plus points

- Specified on LiquiTEC roof system.
- 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 solar PV installation.
- Maximises the roof area as entire space can qualify as a green roof.
- Comprehensive range of guarantee packages to suit project and cover requirements.

Full information on specifying the right solution for your project is available in our solar PV brochure or via our website bauder.co.uk/biosolar



Substrate depth variable depending on planting and ballast requirements



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.

Full information on specifying the correct warm or inverted insulation for your project is available via our website bauder.co.uk/insulation

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 performance and the unfaced and inverted achieve 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**

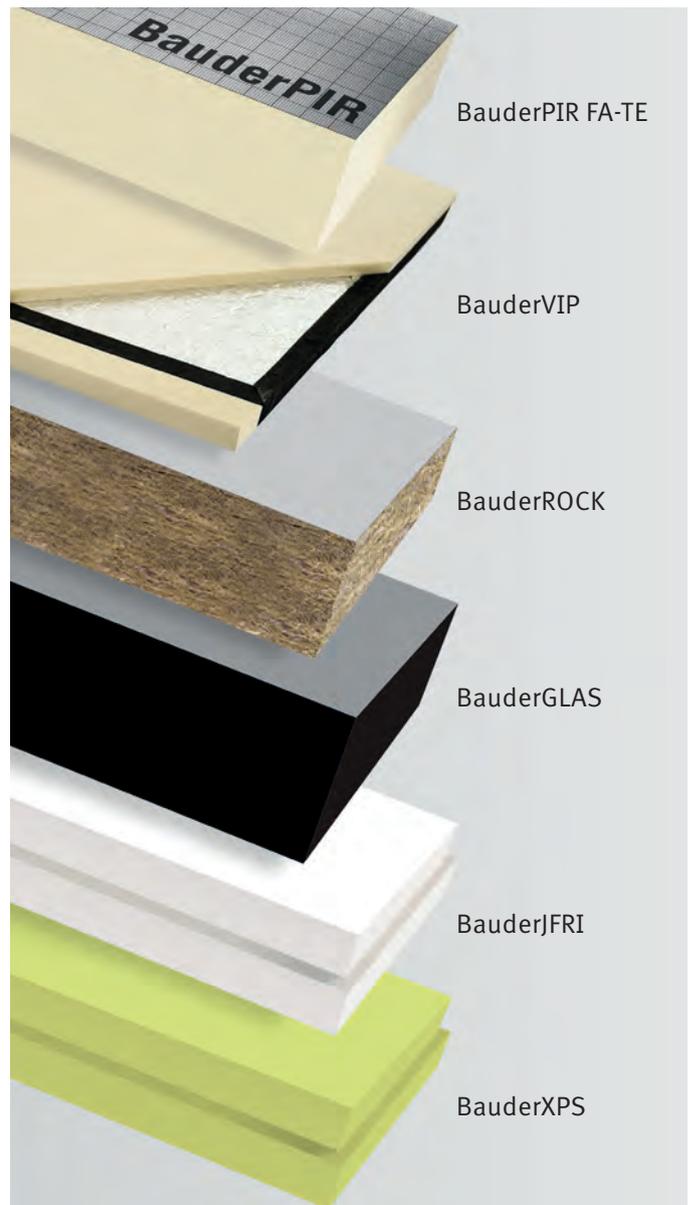
CO₂ blown extruded polystyrene insulation with high compressive strength and low water absorption.

Tapered insulation

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

Design service

Our technical department can design solutions to comply with BS 6229, 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.
- Fire performance BS476 Part 7 – Class 1.
- Ventilation options.
- Comprehensive guarantee.

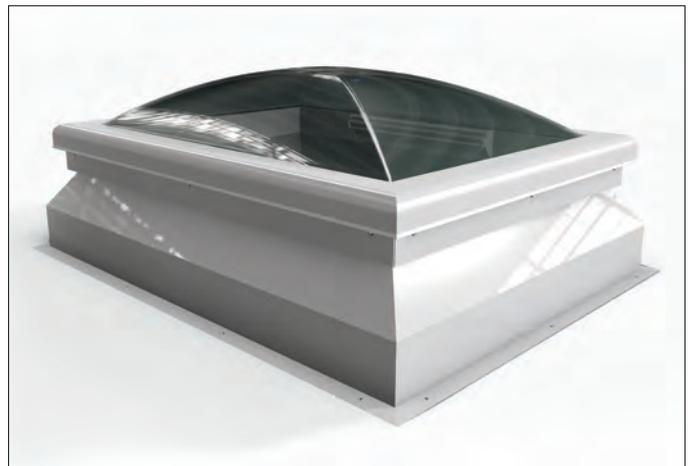
Bauder rigid rainwater outlets

Rigid PVC rainwater outlets that are UV stable throughout are used in cold applied liquid waterproofing systems. They are available for flat roofs and green roofs as vertical gravity flow, parapets with a through chute to an external hopper, and tell-tale overflow.

Accessories, ancillaries, and attachments

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

- Fall protection
- Liquid detailing kits
- Lightning conductor clips
- GRP trims
- Soil vent pipe covers
- Adhesives
- Primers
- Cleaners



Euroglaze rooflights can be made to fit any roof opening size



Bauder rigid PVC rainwater outlet



Our Service

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

Delivering modern flat roof solutions from a single source to ensure every Bauder roof is designed cohesively to meet the project needs and reduce risk.

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.

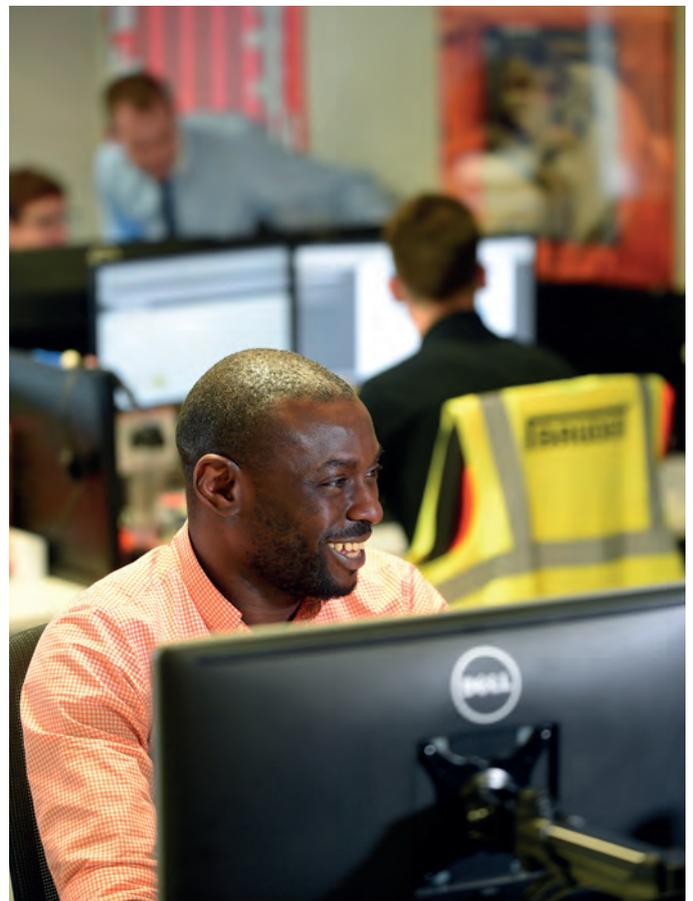
Our guarantee packages

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.



Technical Support for Flat Roof Projects

Supporting you to deliver compliant, appropriate, and on budget flat roof solutions

Our technical managers are based nationwide and play a vital role in the success of every project from conceptual stage through to hand-over and sign-off of the Bauder installation.

Working with you to understand

- Building type and usage.
- Drivers for construction and any planning constraints.
- Requirements for adding a green roof, or biosolar PV array.
- Building's design life.
- Useable roof space.
- Budget.
- Waterproofing system requirements.
- Funding opportunities available.
- Sustainability targets.
- Guarantee requirements.

Our service to you delivers

- Recommended waterproofing system.
- Full design service for green roof or solar PV with yield analysis.
- BIM objects, NBS Chorus, and Bauder detailed specification.
- Thermal analysis and condensation risk calculations.
- Falls and drainage design.
- Wind load and restraint calculations.
- Detail drawings on all roof penetrations, abutments, and edge finishes.
- Roof plans.
- Tapered insulation scheme and layout, where required.
- Inclusion of insulated outlets and soil vent pipes.
- Proposed rooflight structures and other rooftop accessories.
- Guarantee options to fulfill cover requirements for the project.
- Recommended approved contractors.



Project Studies

Canberra House, Swindon

Synopsis

Large areas of plant and machinery were situated just above the roof level making access to the areas below difficult with the plant in-situ and having to remain so throughout roofing works. To overcome drainage challenges, secondary upstands were created under the plant and fabricated channels placed underneath allowing water to flow through to the drainage points.

System summary

Waterproofing LiquiTOP Roof System

Highlights

- Drainage challenges overcome through design solution.
- High levels of rooftop plant creating a complex installation.
- Full support for design, specification, and on-site monitoring.



BUILDING BOARD	
Roof Size:	985m ²
Project Type:	Refurbishment overlay
Waterproofing:	LiquiTOP Roof System
Specifier:	Rapleys LLP
Approved Contractor:	Central Roofing & Building Services Ltd

Basildon and Thurrock University Hospital

Synopsis

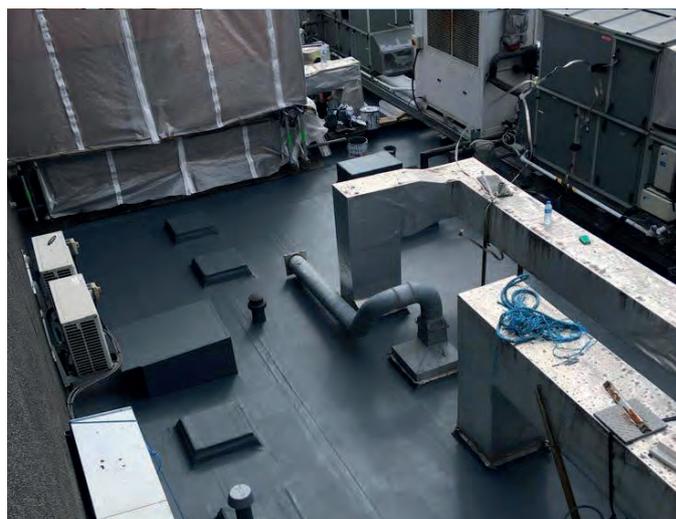
The existing roof was failing in multiple areas, had 80 rooflights, and plant on the rooftop could not be turned off or raised and many of the AC units and boilers had to be left running due to the nature of the rooms below. Cold applied liquid waterproofing ensured a watertight seal with quick application, allowing works to be completed for the remainder of the roof using reinforced bitumen membrane, and meet the tight project deadline of 12 weeks.

System summary

Waterproofing LiquiTEC Roof System
 Bauder Total Roof System

Highlights

- Full co-ordination and weekly programme of works to inform the client of roof areas and plant affected.
- Tight deadline of 12 weeks met.
- Full support for design, specification, and on-site monitoring.



BUILDING BOARD	
Roof Size:	900m ²
Project Type:	Refurbishment
Waterproofing:	LiquiTEC Roof System and Bauder Total Roof System
Specifier:	NHS
Approved Contractor:	Breyer Construction

Bauder Cold Applied Liquid Systems

Project gallery



St Paul's Constable Lee CE Primary School
Rossendale



Hill View Primary School
Bournemouth



Lower Falinge
Rochdale



Ormskirk CE Primary School
Ormskirk



Fox's Biscuits
West Yorkshire



Royal Marsden NHS Foundation Trust Hospital
London

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Respecting the planet

Reducing use of materials



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