Designed to be thermally efficient and robust.

Standard
PATENT GLAZING
ESTABLISHED 1902

4Edge Pro Patent Glazing Systems

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e. www.patent-glazing.com

Designed to be thermally efficient and robust.

The ultimate in advanced glazing

As our most advanced and thermally efficient glazing solution, the 4Edge Pro Patent Glazing System secures infill materials on all four sides using unique dry-sealed transom mullions.

This cutting-edge design ensures superior weatherability, sleek sightlines, and hidden fixings, seamlessly blending the best aspects of roof-lighting solutions with the strength and span capabilities of curtain walling.

Unlike traditional sloping curtain walling systems, it eliminates the need for additional weathering tapes or silicone sealants, safeguarding against poor seals and environmental damage. Its innovative engineering significantly enhances durability, making it far more resilient than other sloping glazing solutions.

Designed for versatility, the system supports single, double, or triple glazing configurations, adapting to a wide range of project needs. It is fully compatible with our Skyline Box, Skyline, Rafterline, and Traditional glazing bars, making it the perfect choice for both modern and traditional architectural designs.

Setting new standards in structural roof glazing solutions, this next-generation system offers exceptional strength, long-term durability, and unmatched flexibility. It accommodates glazed infill thicknesses from 6mm to 54mm, making it particularly suited for double and triple-glazed rooflights that deliver superior insulation and energy efficiency.

Experience the future of glazing technology with Edge Pro Patent Glazing System—where performance, innovation, and aesthetics meet.

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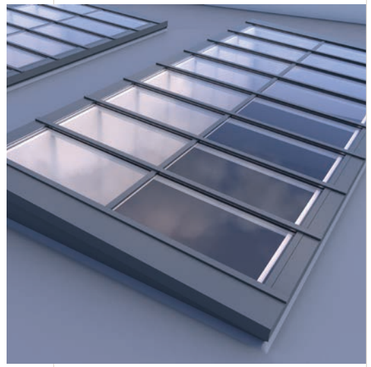
Exceptional versatility, with seamless integration

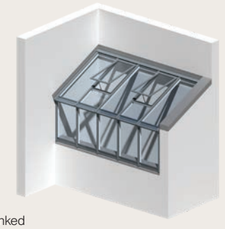


Our 4Edge Pro Patent Glazing System is designed with exceptional versatility, accommodating a wide range of configurations for single, double, and triple glazing applications. The system can be seamlessly installed into various roof structures, including mono-pitched, duo-pitched, valleys, hips, tiers, vertical, in-line, raised, northlight, and canopy designs.

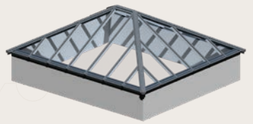
Whether for residential or commercial projects, the system's adaptability ensures it meets diverse architectural requirements. The possibilities are endless, making it the perfect solution for innovative and functional glazing designs.

Here are some of the configurations we offer:

Canopy

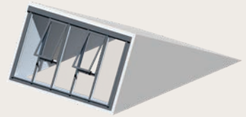


Cranked



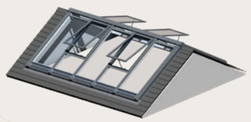
Hipped and ridge

Mono-pitched to wall

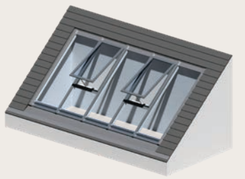


Northlight

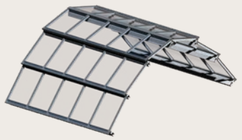
Raised above



Ridgelight



Slate roof in-line



Tiered

Valley

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Engineered for strength, efficiency, and compliance

The 4Edge Pro Patent Glazing System is designed for superior weather resistance, thermal efficiency, and durability, outperforming competitor glazing solutions. Its fully drained design eliminates the need for silicone or weathering tapes, preventing common failures caused by moisture and temperature changes. Concealed capping fixings ensure a sleek, modern appearance while maintaining long-term performance.

Engineered to surpass standard 2-edge glazing, the system reduces heat loss and enhances energy efficiency with its thermally broken construction. Fully compliant with Building Regulations Part L, it meets the highest standards for sustainability and insulation. Supporting glass thicknesses from 6mm to 50mm, it offers unmatched adaptability for both modern and traditional projects.

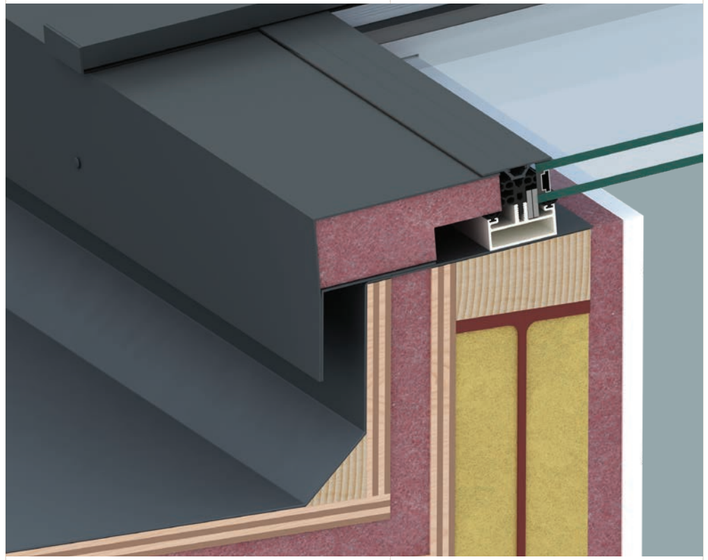
The system is fully tested to BS 5516 for sloped glazing and meets CWCT TN66 & TN67 for non-fragility, ensuring enhanced safety and structural integrity when incorporating an inner pane of 1-B-1 laminated glass in accordance with BS EN 12600.

It also complies with BS 6375-1 for weather performance, guaranteeing resistance to wind, rain, and environmental factors.

Designed for flexibility, the system accommodates pitches from 5° to vertical and integrates with Skyline Box, Skyline, Rafterline, and Traditional glazing bars. It supports single, double, and triple glazing configurations, along with optional opening vents for natural airflow.

For optimal performance, the supporting structure must be free from twist and accurately aligned. While suitable for new builds, it may not be compatible with some refurbishment projects where existing rebates are too shallow. Additionally, it is not compatible with proprietary skylight systems.

A next-generation solution, the 4Edge Pro Patent Glazing System combines innovation, strength, and energy efficiency, setting new standards in structural glazing.



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Span chart

Performance data for 4Edge Pro incorporating Skyline Box Patent Glazing Bars.

Bar section	Box depth (mm)	Ixx-mm^4	Zxx-mm^3 plastic podulus
SPG5	50	459,350	17,495
SPG7	75	1,043,625	28,284
SPG10	100	1,861,293	39,405

The glazing bar spans shown above are based on using 6mm thick glass for the double glazed, single glazed and canopy types, and the bars being spaced at 600mm centres.

We will select the appropriate glazing bar for each contract.

Spans are dependent upon the site location and exposure rating, site altitude, distance from the sea, height of glazing from ground level, shape of the roof, pitch of glazing, glazing bar centres, glass weight, wind speeds, snow load, dead load and maintenance loads.

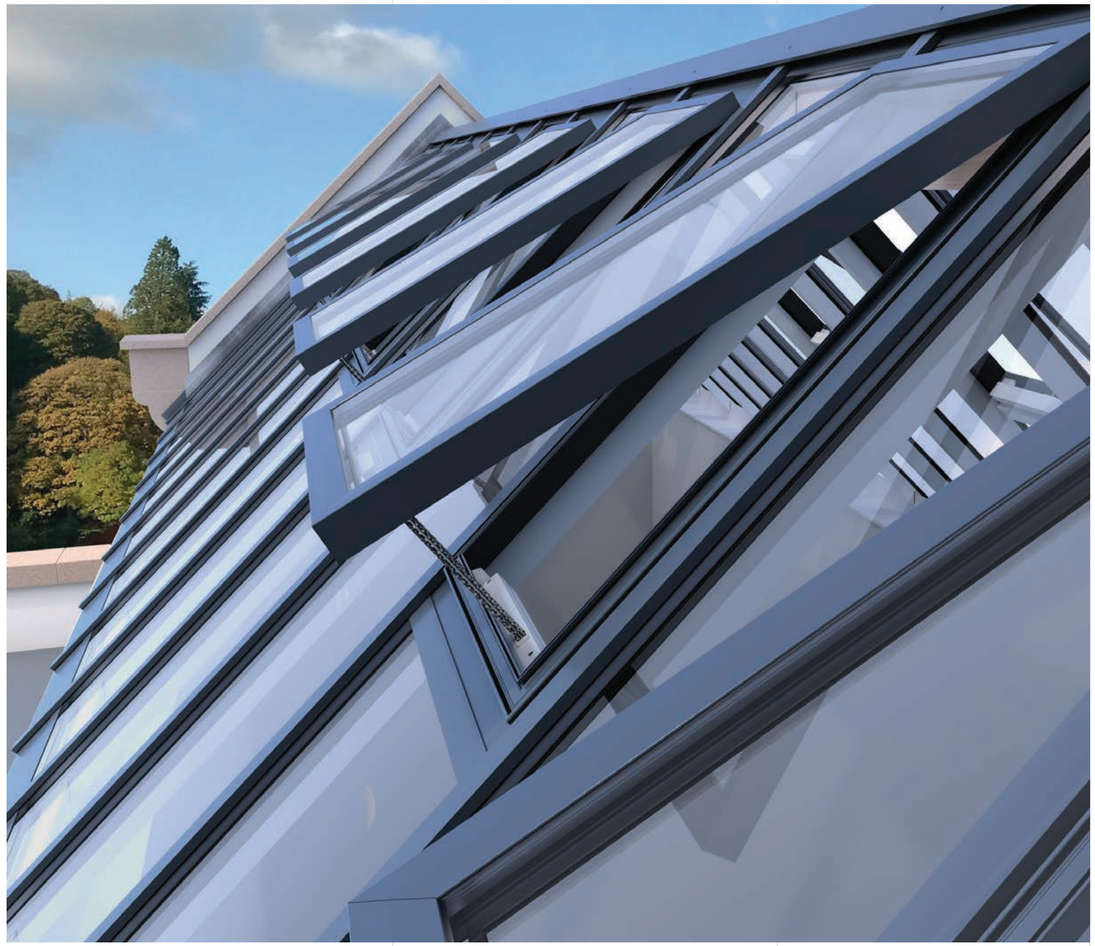
Roof span (mm)*		
Double glazing	Single glazing	Canopy glazing
1450-3440	2930-4880	2650-3830
2200-4230	3310-5000	3460-4700
2930-4880	3840-5750	4000-5430

*The above spans for each glazing bar have two values.

The lower span values are calculated using the most extreme environmental loadings possible in the UK whereas the higher span values are based on the least extreme.

Due to the wide range of these values it is therefore essential that we are supplied with the site postal code to enable us to calculate the correct glazing bar type for every project.

There are a large number of variables which are used to determine the maximum span of the glazing bars so please do not attempt to buy any glazing bar materials from us without first allowing us to carry out the necessary calculations for your project.



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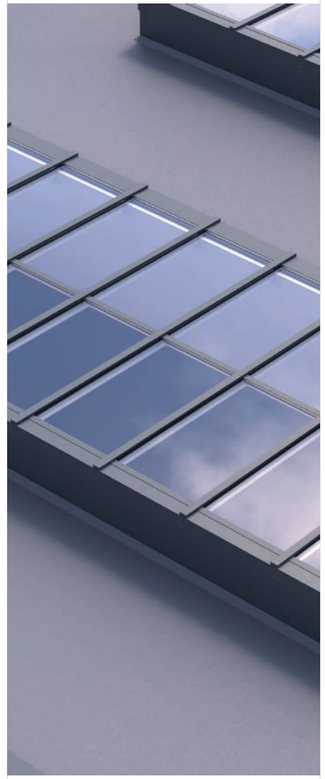
Advantages

- **Weather resistance:**
  Outperforming competitor designs.
- **Thermal performance:**
  Outperforms standard 2-edge solutions.
- **Durability:**
  A fully drained design avoids the issues associated with secondary sealing.
- **Versatility:**
  Compatible with various systems.
- **Flexible installation:**
  Suitable for pitches as low as 5° to vertical.
- **Strength and stability:**
  Designed to cover large spans.
- **Seamless aesthetics:**
  Concealed capping fixings.
- **Regulation compliant:**
  Meets the requirements of Building Regulation Document L.
- **Thermally broken:**
  Designed to minimise thermal bridging.
- **Suitable for accepting opening vents**
- **Glazing options:**
  Supports single, double or triple glazing.

Considerations

- May not be suitable for certain refurbishment contracts due to rebates in existing structure being too shallow for glazing bars.
- Not compatible with our proprietary skylight systems.
- The supporting structure must be free from twist and accurately aligned to accommodate the 4Edge Pro Patent Glazing System.



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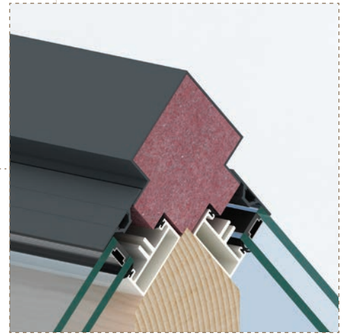
Technical drawing

This CGI render showcases a 3D technical drawing of our 4Edge Pro Patent Glazing System incorporating Skyline Box glazing bars in a duo-pitched configuration with double glazing.

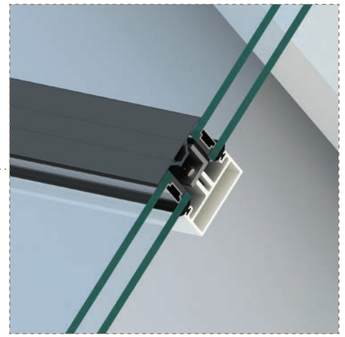
It highlights key interface details, including the eaves, intermediate joints (for spans over 3150mm), ridge, and verge connections.

This visualisation provides a clear representation of the system's structural integration and performance.

For additional 2D, 3D & NBS H10 Specification assets, visit our download centre.



Ridge



Intermediate

Eaves

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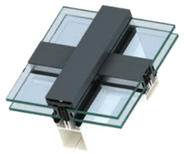
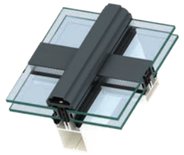
Glazing bar configurations

The 4Edge Pro ranges below can accommodate glazed infills from 6mm to 54mm.



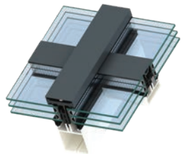
4DA-AAA-AA1



4DA-AAA-AA2

4Edge Pro incorporating Skyline box SPG 5 type polyester powder coated aluminium glazing bar with PC2 & PC3 cosmetic cappings.

Jointed using our drained dry sealed TRB1 transom incorporating TRC1 type screw-on extruded flat aluminium pressure plates with outer TRC0 extruded aluminium snap-in cosmetic cappings – Double Glazed



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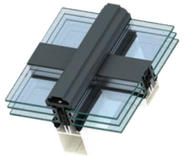
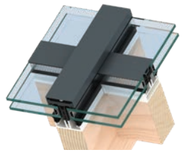


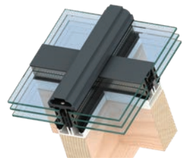
4TA-AAA-AA2

4Edge Pro incorporating Skyline box SPG 5 type polyester powder coated aluminium glazing bar with PC2 & PC3 cosmetic cappings.

Jointed using our drained dry sealed TRB1 transom incorporating TRC1 type screw-on extruded flat aluminium pressure plates with outer TRC0 extruded aluminium snap-in cosmetic cappings – Triple Glazed



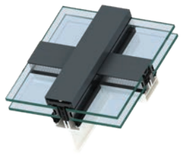
4DA-AAA-AA1 (SPG1-50)



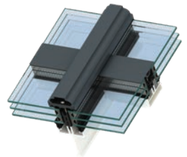
4TA-AAA-AA2 (SPG1-50)

4Edge Pro incorporating our non-structural Rafterline SPG 1-50 type polyester powder coated aluminium glazing bar with PC2 & PC3 cosmetic cappings.

Jointed using our drained dry sealed TRB1 transom incorporating TRC1 type screw-on extruded flat aluminium pressure plates with outer TRC0 extruded aluminium snap-in cosmetic cappings – Double and Triple Glazed



4DA-AAA-AA1 (SPG2)



4TA-AAA-AA2 (SPG2)

4Edge Pro incorporating Skyline SPG 2 type polyester powder coated aluminium glazing bar with PC2 & PC3 cosmetic cappings.

Jointed using our drained dry sealed TRB1 transom incorporating TRC1 type screw-on extruded flat aluminium pressure plates with outer TRC0 extruded aluminium snap-in cosmetic cappings – Double and Triple Glazed

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A guide to glass

Our glazing systems incorporate advanced glass technologies designed for safety, energy efficiency, and aesthetic appeal.

- **Safety and structural integrity**
  All systems use approved safety glass or polycarbonate infill. For double and triple glazed units, toughened outer panes paired with laminated inner panes prevent dangerous breakages.
- **Solar control**
  Solar control glasses effectively reduce heat gain through roof glazing, enhancing comfort and energy performance.
- **Translucent glass**
  This option maximises natural light while obscuring vision for privacy. Our Diffussa laminated glass—with a white, translucent PVB interlayer—also minimises glare.
- **Self-cleaning options**
  Invented by Pilkington, self-cleaning glass is ideal for hard-to-reach areas. Both hard coat and soft coat variants are available, ensuring low maintenance over time.
- **Patterned and textured glass**
  Textured glass features an embossed design that decorates while allowing light diffusion and controlled obscuration.
- **Wired glass alternatives**
  Ideal for conservation projects

  Georgian Wired glass, commonly known as Pyroshield glass, is available in a textured finish for added obscurity, however this glass no longer meets the safety classification requirements of BS EN 12600. For conservation projects, seeking a similar aesthetic with enhanced safety, there are several alternative glass types that replicate the appearance of Georgian Wired while providing a safety classification in accordance with BS EN 12600.

  This is achieved through advanced techniques such as digitally printing on heat-treated glass or incorporating printed PVB or SGP interlayers in laminated glass. This method not only replicates the classic wired design but also significantly improves safety, ensuring a non-fragile assembly in compliance with CWCT TN66 & 67 when used in our glazing systems.
- **Vacuum sealed units**
  Ideal for conservation projects

  Vacuum glazing (VG) delivers exceptional thermal insulation with ultra-thin, lightweight panels. Achieving centre pane U-values as low as 0.4W/m²K (and G values down to 0.32 with solar control), it's ideal for conservation projects and energy-efficient applications.

Safety standards compliance

Our patent glazing systems meet stringent non-fragility standards (ACR[M]001:2014 and CWCT TN67), underlining our commitment to public safety.

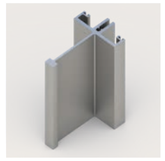
Stay informed

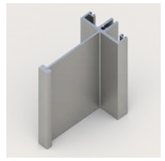
As glass technology continues to evolve, please scan the QR code for the most current product information.

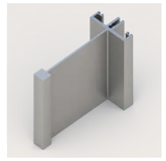
Component list

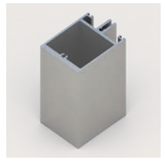
Glazing bars

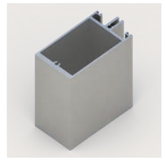

SPG1-50


SPG2

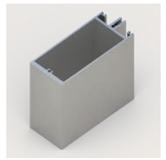

SPG3

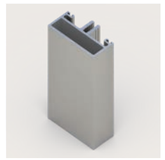

SPG4


SPG5

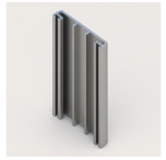

SPG7

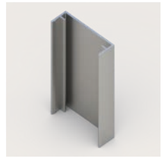
Transom bar

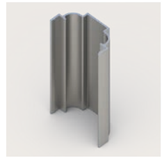

SPG10


TRB1

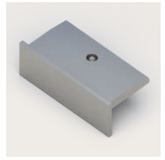
Cappings

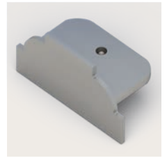

PC1


PC2

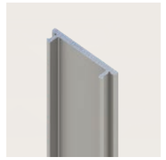

PC3

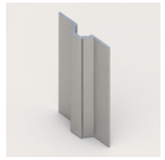

PC5


PC2 CAP


PC3 CAP

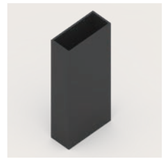
Transom cappings

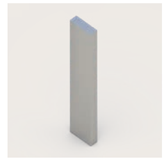

TRC0


TRC1

End bar packs


EP1


EP2


EPS3

Gaskets


AE065 B


AE039 B


SC300 A

Thermal breaks


AE065 B


TB23 v3 B


TB33 B

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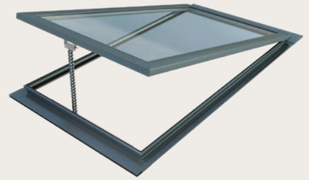
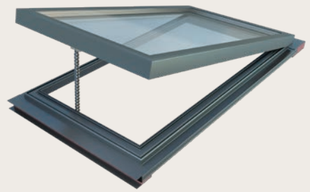
Opening ventilators



Single glazed opening vent

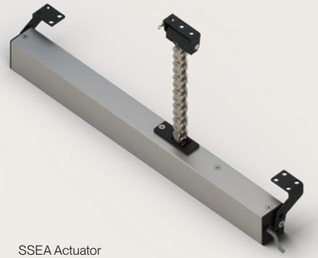


Double & triple glazed opening

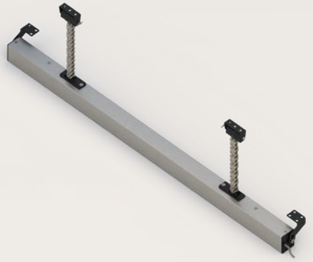
Gearing

Screwjack

SPG45



SSEA Actuator



SSEA Double Actuator

Protective finishes

The most popular way to protect our aluminium sections from oxidisation and create an appealing aesthetic look is to apply a polyester powder coated finish.

This is a high quality finish and will perform admirably for decades as long as a regular cleaning schedule is maintained.

All of our aluminium glazing systems are coated after full manufacture and our prices include your choice of one colour from the array of standard colours available in the table shown here.

If you require a different colour, we can source it at an additional cost, including special finishes such as metallic and pearlescent textures.

Dual colour projects

We are able to offer most of our glazing systems in a dual colour format. Domestic customers regularly desire a white or other light colour internally to blend in with the internal decoration of the room whereas a darker colour, usually one of the many grey shades or black is chosen for the external colour finish. Dual colour specifications carry an administration charge.

Other protective finishes

Anodising also a popular solution and is available upon request. Anodising enhances aluminium's natural properties, making it very durable, corrosion-resistant, and aesthetically appealing.

Glazing module sizes

Key

- Readily available
- Mechanical lifting equipment required
- Span Restrictions
- ▶ Over 3150 joint or break detail required

Our standard colours

9005	Jet black
9010	Pure white

Our popular colours

7015	Slate grey

1001	Beige
1013	Oyster white
1014	Ivory
1015	Light ivory
1018	Zinc yellow
1019	Grey beige

3003	Ruby red
3004	Purple red
3005	Wine red
3009	Oxide red
5000	Violet blue
5002	Ultramarine blue

5003	Sapphire blue
5004	Black blue
5008	Grey blue
5010	Gentian blue
5011	Steel blue
5012	Light blue

5013	Cobalt blue
5014	Pigeon blue
5015	Sky blue
5017	Traffic blue
6002	Leaf green
6005	Moss green

6006	Grey olive
6009	Fir green
6016	Turquoise green
6018	Yellow green
6019	Pastel green
6027	Light green

7001	Silver grey
7004	Signal grey
7005	Mouse grey
7011	Iron grey
7012	Basalt grey
7015	Slate grey

7016	Anthracite grey
7021	Black grey
7022	Umbra grey
7024	Graphite grey
7030	Stone grey
7031	Blue grey

7032	Pebble grey
7035	Light grey
7037	Dusty grey
7038	Agate grey
7040	Window grey
7042	Traffic grey A

7043	Traffic grey B
7044	Silk grey
8011	Nut brown
8014	Sepia brown
8015	Chestnut brown
8017	Chocolate brown

8019	Grey brown
9001	Cream
9002	Grey white
9005	Jet black
9010	Pure white
9016	Traffic white

mm	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1050	1200	1250
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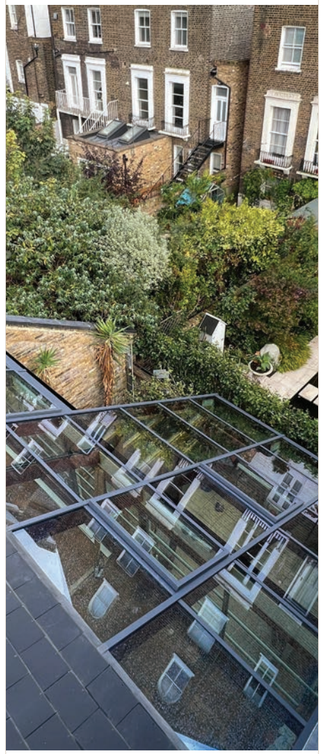


Exceptional performance for years to come

We take our responsibility to adhere to the highest regulatory and quality standards seriously. Our commitment to British Standards and industry regulations ensures that every project we undertake is safe, compliant, and built to last.

For over a century, we have been at the forefront of setting and maintaining these standards within the patent glazing industry, helping to shape the future of roofing and glazing practices across the UK.

Our systems, from design to installation, meet or exceed the requirements set forth in British Standard BS 5516, which governs the design and installation of sloping and vertical patent glazing.

This standard addresses key areas such as structural integrity, weatherproofing, safety, and thermal performance.

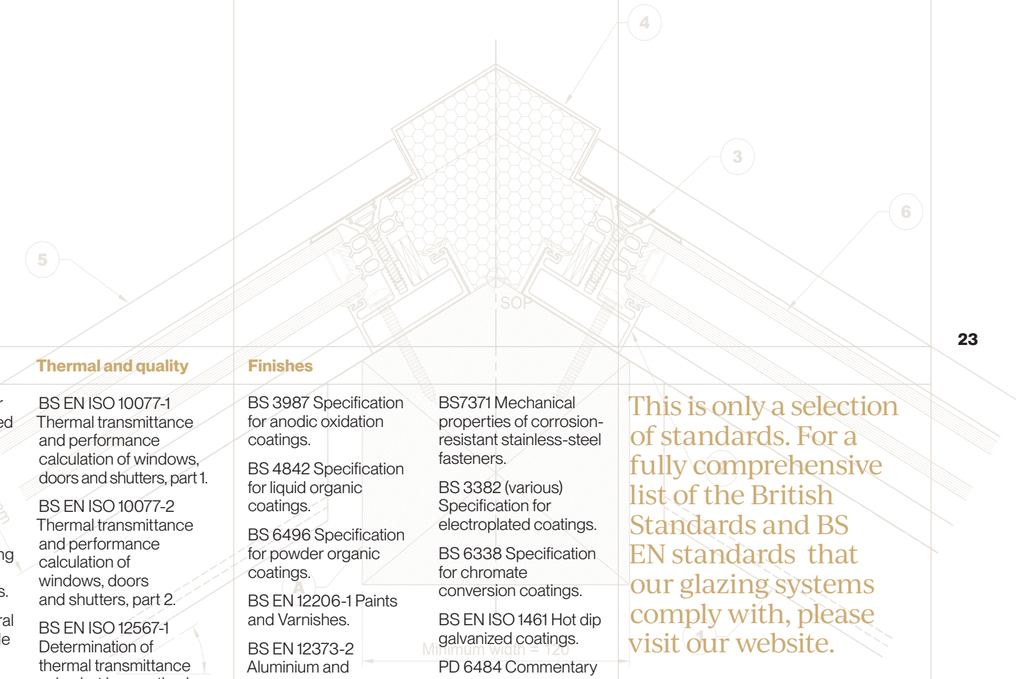
By adhering to these rigorous guidelines, we ensure that our glazing systems not only provide outstanding aesthetic and functional value but also offer long-term durability and compliance with all relevant building regulations.

BS 5516: Leading the way in patent glazing standards

The BS 5516 British Standard for patent glazing is an integral part of our design and manufacturing processes.

This code of practice outlines critical requirements for ensuring that sloping and vertical patent glazing systems can withstand the environmental and structural demands of modern buildings.

Our team of experts has been closely involved in the development and continuous improvement of these standards, demonstrating our commitment to quality, innovation, and safety.



Design and safety

BS 6262-4 Glazing for buildings. Safety related to human impact.

BS EN 1991-1 Loading for buildings. Code of practice for dead and imposed loads.

BS EN 1991-1-4 Loading for buildings. Code of practice for wind loads.

BS EN 1999-1 Structural use of aluminium. Code of practice for design.

BS EN 12056-3 Gravity drainage systems inside buildings, roof drainage, layout and calculation.

BS EN 14024 Metal profiles with Thermal Barriers. Mechanical Performance, proof, tests and requirements.

Thermal and quality

BS EN ISO 10077-1 Thermal transmittance and performance calculation of windows, doors and shutters, part 1.

BS EN ISO 10077-2 Thermal transmittance and performance calculation of windows, doors and shutters, part 2.

BS EN ISO 12567-1 Determination of thermal transmittance using hot box method, Part 1.

BS 8000-0 Workmanship on building sites. Code of practice for glazing.

BS EN ISO 9001 Quality management systems – Requirements.

Finishes

BS 3987 Specification for anodic oxidation coatings.

BS 4842 Specification for liquid organic coatings.

BS 6496 Specification for powder organic coatings.

BS EN 12206-1 Paints and Varnishes.

BS EN 12373-2 Aluminium and aluminium alloys

BS EN 1774 Zinc and zinc alloys.

BS EN 10268 Cold-rolled flat products.

BS EN 12844 Zinc and zinc alloys.

BS7371 Mechanical properties of corrosion-resistant stainless-steel fasteners.

BS 3382 (various) Specification for electroplated coatings.

BS 6338 Specification for chromate conversion coatings.

BS EN ISO 1461 Hot dip galvanized coatings.

PD 6484 Commentary on corrosion.

This is only a selection of standards. For a fully comprehensive list of the British Standards and BS EN standards that our glazing systems comply with, please visit our website.

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Maintaining exceptional quality

Committed to excellence

We continuously improve our processes and embrace the latest technologies to ensure our glazing solutions are innovative and dependable. By completing every task with precision and care, we deliver defect-free products that perform perfectly from the start.

Our client's satisfaction is our priority. Our dedicated team works closely with customers and specifiers to provide solutions tailored to your specific needs, ensuring that every project runs smoothly and successfully.

The trusted partner for daylighting solutions

We understand that our customers need glazing systems that meet high standards while delivering reliable, long-term performance. By strictly adhering to British Standards, we ensure our products and services comply with regulations and exceed expectations.

We provide a comprehensive, turnkey solution, delivered by our team of directly employed experts. From design to installation, every stage of your project is handled by skilled professionals, ensuring consistency, quality, and a experience.

Weather resistance

Our roof glazing systems are essentially capable of being glazed without a pitch at all. However we don't recommend installing roof glazing at very low pitches for a number of reasons.

Firstly the rainwater will not disperse effectively from the glass from the glass leaving unsightly tide marking.

If the rainwater is not able to shed naturally from the glass due to an insufficient slope within the design then it will dissipate through evaporation.

Dust in the air will be caught by the raindrops and the evaporation of the water will leave a series of 'water marks' on the glass which will build up over time. This again is not a problem if the roof glazing is subject to a regular cleaning schedule. Please do ensure that if you are designing roof glazing with a very shallow pitch that there is easy access to the roof glazing to allow for cleaning on a regular basis. If this isn't carried out then it won't be long before not just water marks are on the glass but a full garden beginning to take root!

Opening vents and low pitched roof glazing

Both our roof glazing systems and opening vents are capable of performing at pitches as low as 5°. However, we strongly recommend incorporating a minimum pitch of 15° into the design if regular cleaning and maintenance cannot be guaranteed.

At pitches below 15°, rainwater may not fully drain from the glazing surface or framework, leading to standing water. While this does not compromise the watertight integrity of the system, prolonged exposure to ponding especially during colder, wetter months can result in unsightly tide marks from drying water and environmental debris, and may cause premature deterioration of seals over time.

To preserve both the aesthetic quality and long-term performance of the system, a steeper pitch should be considered where ongoing maintenance is unlikely.

Maintenance

Periodic cleaning of the glazing to remove dirt and the build up of debris will be required to keep the glazing system in a good order and to avoid the loss of light transmission from the glass. Certain glass products can be subjected to thermal stresses if the panes are left unclean for prolonged periods of time.

Aluminium sections with powder coated or anodised finishes must also be cleaned regularly to conform to the terms of guarantee.

For more information on cleaning and maintenance please visit our website, where you can download and refer to our manual.

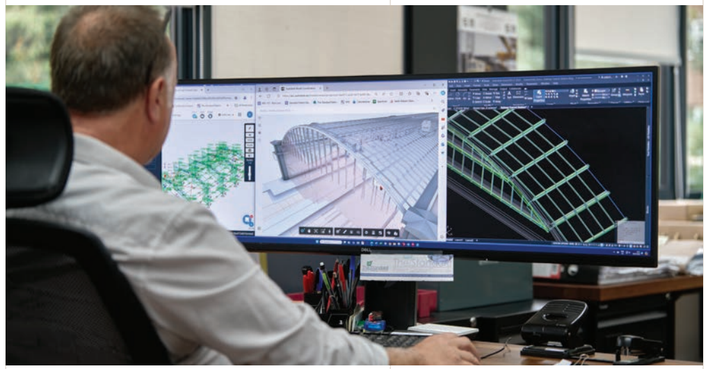
Health and safety

We are deeply committed to health and safety. All of our employees are fully aware of their responsibilities in this regard and our relevant staff hold the necessary qualifications for their roles. These include NEBOSH, IOSH, SSSTS, SMSTS, CSCS, PTS, PAL-IPAF, First Aid, and PASMA certifications.

Our commitment to health and safety standards extends to continuous professional development through our ongoing CPD programme. Employees regularly attend training courses aligned with their individual development plans, ensuring they remain current with industry standards and practices. Our in-house health and safety practitioners, along with our management and consultants, conduct regular Tool Box talks and implement our annual 'Safety Action Improvement Plan.' This approach maintains an unbroken cycle of dedication to health and safety, reinforcing our promise to uphold the highest standards in all our operations.

"The commitment to Health and Safety has been underpinned by the company's efforts on training across the workforce. This has included CITB, CSCS and First Aid. We are understandably very proud to have been the company awarded with the prestigious title 'Best Health and Safety Performance'."

Award for Best Safety Performance for Less than 50 employees



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A unique service

We offer full design, manufacturing and installation facilities which are all in-house.

We do not sub-contract any of our design work or installations to other companies thus ensuring that all our projects are dealt with by experts with a full knowledge of all of our complete range of glazing systems.

Condition survey

Our service offers an in-depth, on-site evaluation of your existing roof glazing. We produce a detailed report that identifies any issues, recommends targeted remedial strategies, and ensures all compliance requirements are outlined within our recommendations. Our report also details expert advice on scaffolding, hoisting, and interface requirements. Additionally, we provide a clear budget quotation for the proposed solutions.

Design and logistics survey

Once we have been appointed, we offer a comprehensive on-site design and logistics survey for the roof glazing package, culminating in a detailed report that not only captures precise design dimensions but also offers expert advice on scaffolding, hoisting, and interface requirements.

Additionally, for clients confident in obtaining accurate measurements independently, we offer a cost-effective desktop survey option, ensuring that every project receives the tailored attention it deserves.

Design

We have been designing Patent Glazing systems for over a hundred years and we would like to think that our systems are the best available anywhere.

The continued improvement of our glazing sections throughout the decades ensures that our products are built to last, fully watertight, robust and designed to meet all current regulations and best practice.

Our Technical Directors throughout our history have also been contributors to the British Standard for Patent Glazing, BS5516. We have the knowledge and expertise to be involved in any patent glazing project in the UK.

Manufacture

Since 1918, we have been manufacturing patent glazing systems at our factory located on Forge Lane, Dewsbury.

Since moving into this purpose built facility, it has undergone several expansions and now covers an area of 2600m².

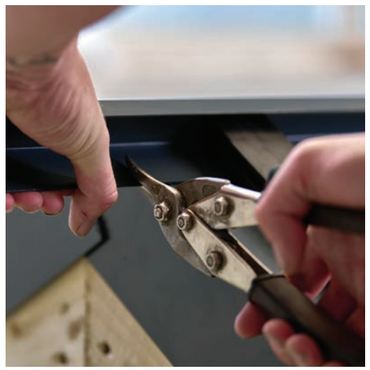
We utilise a combination of state-of-the-art machinery and original Victorian equipment to produce our distinctive Heritage lead-covered steel glazing bars, ensuring both innovation and tradition in our manufacturing process.

Installation

Our highly experienced and directly employed installation staff have installed millions of square metres of Patent Glazing throughout the decades and examples of our finished work can be seen on many of today's prestigious buildings, railway stations and shopping centres.

All of our current installation teams are long serving members of our organisation and fully qualified to carry out the most demanding of projects.

We have successfully carried out over 40,000m² of patent glazing to railway stations alone in recent times and our installers and contracts team hold all the relevant qualifications such as NEBOSH, IOSH, PTS, PAL-IPAF, First Aid, Erection of Mobile Tower Scaffolding and CSCS, of which we hold a Gold Standard certificate.

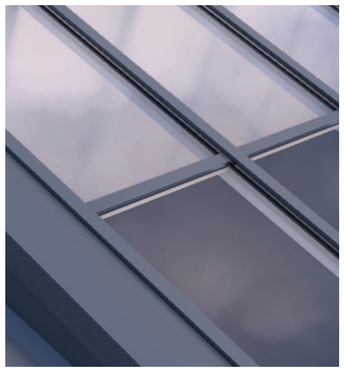


Guarantee

When our highly skilled employees install your project, it comes with a comprehensive five-year 'end-to-end' guarantee against defective workmanship. For added assurance, we can also provide extended guarantees for an additional fee.

With over a century of existence, we've supplied guarantees for tens of thousands of projects, ensuring client satisfaction and peace of mind.

Unlike many in the industry, we do not employ subcontract labour for any of our activities. This commitment to in-house expertise adds an extra layer of accountability and comfort, truly encompassing our 'end-to-end' guarantee.



This track record is evidence that when you specify 'Standard', you are choosing satisfaction and reassurance.

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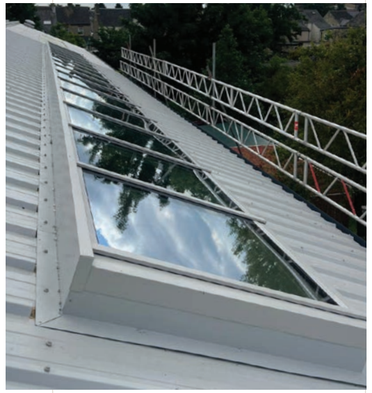
Vinery Road

New 4Edge Pro Patent Glazing System at Vinery Road, Cambridge



Project overview

The project at 25A Vinery Road aimed to transform an existing commercial warehouse into a high-quality, vibrant office space filled with natural daylight. This revitalisation was part of an effort to address the increasing demand for premium office facilities in Cambridge, specifically within the Mill Road area.

Client and objectives

The client, DB Industrial Roofing Ltd, sought an innovative daylighting solution to meet the architectural and performance requirements specified for the project. The primary objectives included enhancing the natural lighting within the space, ensuring superior thermal and acoustic performance, and maintaining high safety and durability standards.

Tender and proposal

Initially, the tender specified a well-known competitor's daylighting system. However, our team proposed an alternative solution featuring our new proprietary 4Edge Pro Patent Glazing System incorporating our Skyline Box SPG 5 glazing bars. This four-edge patent glazing system was presented as a cost-effective, high-performance alternative.

Main Contractor:

DB Industrial Roofing Ltd

Architect:

Owers Warwick Architects

Installation

The installation phase was meticulously planned and executed to ensure seamless integration with the newly installed roof structure. The 4Edge Pro Patent Glazing System facilitated a smooth installation process, resulting in a secure and efficient daylighting system.

Technical submission

To secure the tender, a comprehensive technical submission was necessary. This document detailed the performance benefits of the system, emphasising its advantages over the specified system. Key performance criteria included:

Aesthetic appearance:
The sleek design of the 4Edge Pro system provided an enhanced visual appeal.

Weatherability:
The system's robust construction ensured long-term durability against various weather conditions.

Non-fragility:
Achieved a class 2 non-fragility rating per CWCT TN66 & TN67 standards, incorporating self-cleaning triple-glazed units with inner panes of class 1B1 laminated safety glass.

Thermal performance:
Superior thermal efficiency.

Acoustic performance:
Effective noise reduction, enhancing the office environment.

Low maintenance:
Incorporating self-cleaning glass and low profile transom mullions to minimise maintenance and unsightly tide marks.

Approval and implementation

The project Architect thoroughly reviewed the technical submission and approved the 4Edge Pro Patent Glazing System. The approval was based on the system meeting or exceeding the specified performance criteria and offering significant cost savings.

Design and manufacture

Our design team worked closely with DB Industrial Roofing Ltd to tailor the 4Edge Pro Patent Glazing System to the specific requirements of the Vinery Road project.

Installation

The installation phase was meticulously planned and executed to ensure seamless integration with the newly installed roof structure. Use of the system facilitated a smooth installation process, resulting in a secure and efficient daylighting system.

"The Standard Patent Glazing Co Ltd delivered an outstanding solution with their 4Edge Pro Patent Glazing System. The quality and performance of the glazing have transformed the space, providing a bright, comfortable, and energy-efficient office environment. Their expertise and professionalism throughout the design, manufacture, and installation phases were exemplary. Additionally, the cost-effectiveness of the system provided significant savings without compromising on quality, making it a smart investment for this project."

Dan Beeton
Director at DB Industrial Roofing Ltd

Case study

Domestic Property

Replacement roof glazing Installation, London

Project overview

For this domestic property in London, we provided our non-structural 4Edge Pro Patent Glazing System incorporating our Rafterline Patent Glazing System. This solution offers a robust glazing system while maintaining the warm aesthetics of a timber rafter frame.

Design and material selection

The client patiently waited two years for our 4Edge Pro Patent Glazing System, as it was still in development. Despite having alternative curtain walling options available, the client ultimately chose our system due to its sleek design and superior durability.

Installation challenges and solutions

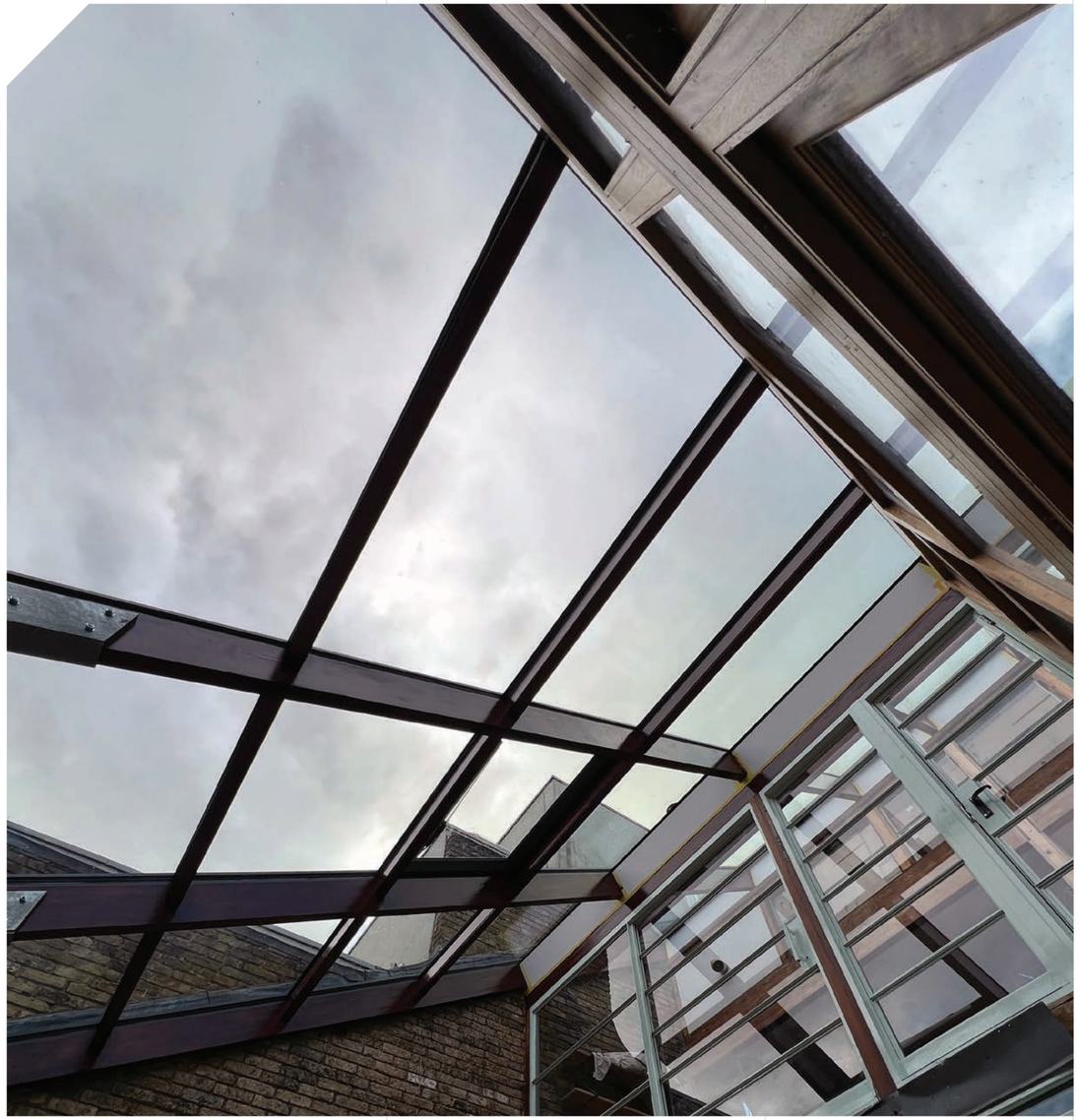
The project posed significant challenges due to the oversized double-glazed units and external access constraints caused by a shared party wall. Our Contracts Team collaborated closely with both the client and the scaffolding contractor to develop a workable solution that allowed for safe and efficient installation.

Main Contractor:

The Standard Patent Glazing Co Ltd

Architect:

N/A



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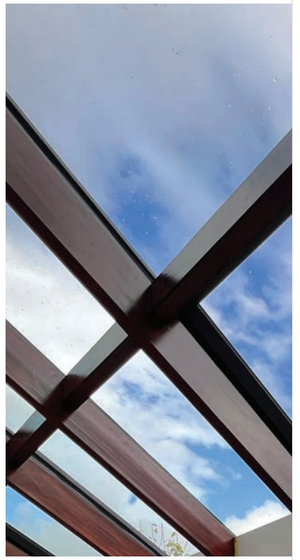

Performance and features

To enhance thermal and solar efficiency, we installed double-glazed units with solar control, achieving:

- Centre pane U-value: 1.0 W/m²K.
- Light optimal transmission: 70%.
- Solar G value: 0.37.

Additionally, we incorporated three opening ventilators, each equipped with double pushpoint actuators capable of an 800 newton thrust, ensuring seamless operation of the oversized opening ventilators.

Structural benefits

By using our 4Edge Pro Patent Glazing System, we successfully installed module sizes up to 1700mm wide—a feat that would not have been possible with a two-edge supported glazing system, due to span constraints.

"The wait for the 4Edge Pro Patent Glazing System was absolutely worth it. The sleek design and robust structure surpassed our expectations. The installation team handled the challenges efficiently, ensuring a seamless process despite the site constraints. The natural light and ventilation provided by the system have truly transformed our home. We couldn't be happier with the results and would highly recommend The Standard Patent Glazing Co Ltd to anyone considering a high-quality glazing solution."

Domestic Client,
London

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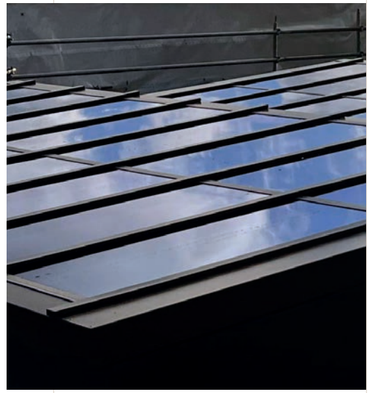
Lloyds Banking Group HQ

Roof glazing installation, Halifax



Project overview

We were commissioned by Wates Construction to design, manufacture, and install a daylighting solution for the refurbishment of Lloyds Banking HQ in Halifax. Working in collaboration with Wates Construction and their facade consultants, Thornton Tomasetti, we delivered a tailored solution using our innovative 4Edge Pro Patent Glazing System incorporating Skyline Box SPG 10 glazing bars.

Design development

Initially, the design proposed was duo-pitched; however, following client feedback, a mono-pitched configuration was developed, providing both a more aesthetically pleasing and cost-effective alternative. The revised design incorporated double glazing, using:

- **Outer panes:** 6mm SunGuard SN51/28 Heat Soaked Toughened glass for solar control.
- **Inner panes:** 9.5mm Clear Heat Strengthened Laminated glass for enhanced safety.

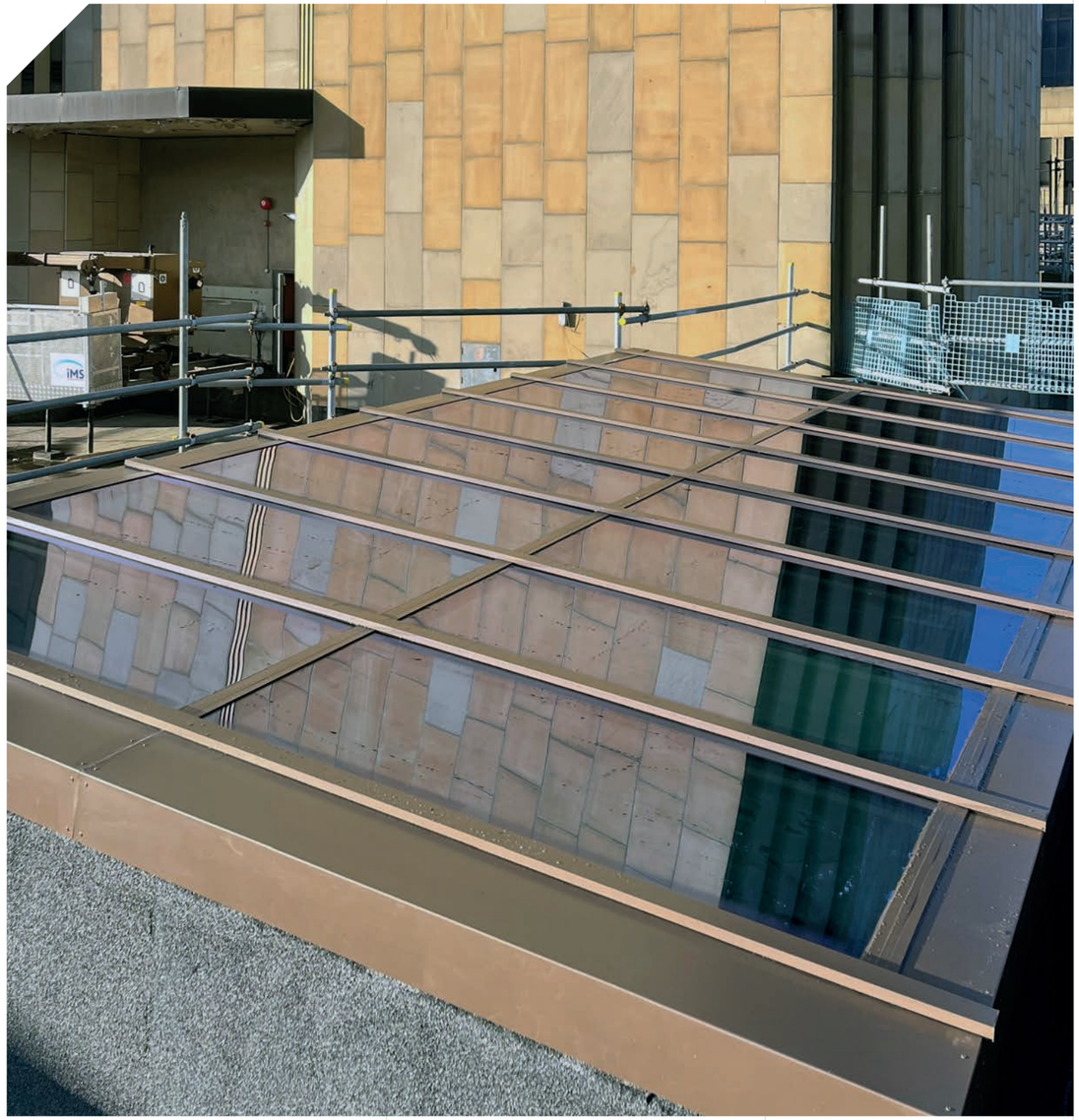
This design aligned with CWCT TN66 and TN67 guidelines, as well as the technical specifications set forth by Thornton Tomasetti.

Main Contractor:

Wates Construction

Façade Consultant :

Thornton Tomasetti



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Technical submission

To secure the tender, a comprehensive technical submission was prepared, detailing the advantages of the 4Edge Pro Patent Glazing System over well-known sloping curtain walling alternatives originally specified system. Key performance highlights included:

- **Aesthetic appearance:** Sleek and modern design enhancing the overall visual appeal.
- **Weatherability:** Built for long-term durability against environmental factors.
- **Non-fragility:** Achieved Class 2 non-fragility rating as per CWCT TN66 & TN67, incorporating class 1B1 laminated safety glass.
- **Thermal performance:** High energy efficiency to optimise building insulation.
- **Acoustic performance:** Effective noise reduction, improving the indoor environment.
- **Low maintenance:** Use of self-cleaning glass and low-profile transom mullions to minimise upkeep and prevent tide marks.

Design and manufacture

Our design team collaborated closely with Wates Construction to refine the 4Edge Pro Patent Glazing System, ensuring it met the specific requirements outlined by Thornton Tomasetti and addressed the needs of the client.

Installation

The installation was meticulously planned to integrate seamlessly with the newly installed roof structure. The design of the system facilitated an efficient and secure installation process, ensuring minimal disruption while achieving high performance.

Results

The final installation exceeded client expectations, offering exceptional performance across multiple criteria:

- Enhanced aesthetics with a contemporary and refined appearance.
- Improved durability through superior weather resistance.
- Increased safety via robust non-fragile glazing compositions.
- Better thermal insulation ensuring energy efficiency.
- Optimised acoustic control for a quieter indoor environment.

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“Wates Construction have worked with The Standard Patent Glazing Co Ltd on several projects over the years including the most recent Derby Market project, we had full confidence in their ability to deliver a high-quality daylighting solution for Lloyds Banking HQ.

Their expertise in design, manufacture, and installation was evident throughout the process. The 4Edge Pro Patent Glazing System proved to be an excellent choice, offering superior performance, durability, and aesthetics. The team’s attention to detail and commitment to quality ensured a seamless installation process, and the final result exceeded our expectations. We look forward to collaborating with them again on future projects.”

Aderbare Awogbemi
Design Manager at Wates Construction Ltd

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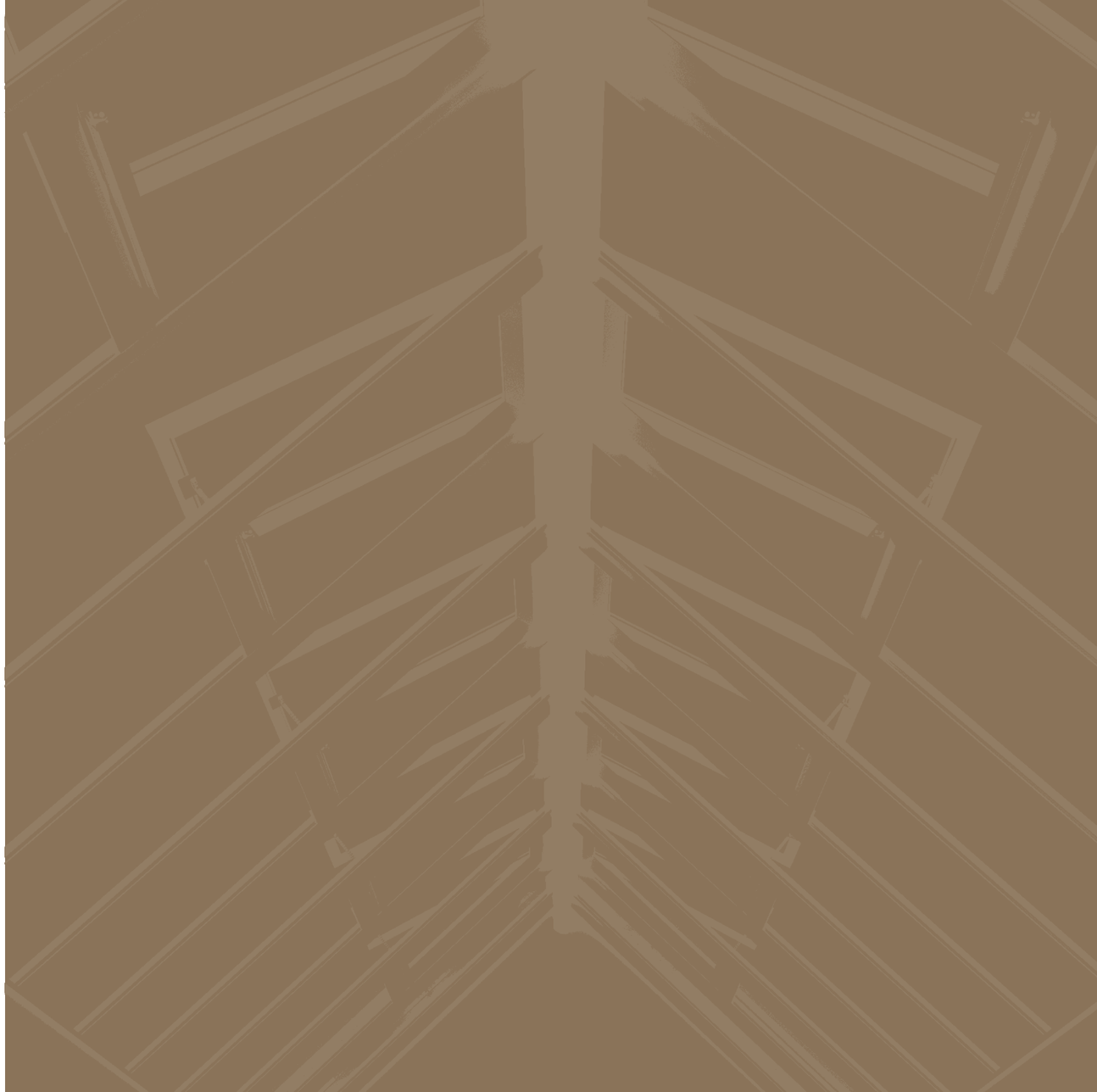
From design to aftercare, we handle every aspect of your project.



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Standard

PATENT GLAZING

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