



bespoke

roof glazing solutions

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high-performance products to meet exacting specifications

Rooflights have evolved far beyond being a utilitarian source of light, becoming integral elements to deliver outstanding aesthetics and creativity to buildings. The design possibilities have become endless.

For more than a quarter of a century, Whitesales has been leading innovation in rooflights and daylighting solutions. Our design approach means creating an outstanding, bespoke project is simple.

Whatever your building, whatever the sector, we can custom-design and manufacture a bespoke rooflight solution, designed to accommodate any shape and size requirements.

Our extensive experience and expertise is why our clients, where possible, involve us at the outset of the construction or refurbishment lifecycle – right at the design stage.

Delivering our insights into daylight design, our bespoke glazing solutions help to create buildings that deliver superior aesthetics and turn aspirations into reality.





em.glaze hip-ended ridgetlight

Bustling environment upgraded through high-performing rooflights.

Client	Roofing contractor
Scope	New ridgetlights as part of an upgrade to fish market roof
Products	em.glaze hip-ended ridgetlights with solar control glazing

Meeting the explicit specification for non-fragile rooflights, a high light-transmission combined with a controlled solar gain and minimised solar reflection was not a problem for our design team. The complex specification was required due to the proximity of surrounding buildings. The final design features Solar SKN174 glazing to minimise the glare and prevent high levels of solar transmission, resulting in a total U-value of 1.4W/m²k and an impact resistance of CWCT Class 2.

em.glaze lantern lights

New rooflights to provide a centrepiece for relaxed environment.

Client	Wedge-Wood Construction & Joinery Ltd
Scope	Two new lantern lights into the existing flat roof to match existing design
Products	em.glaze lantern lights with colour matching powder coating

This complete refurbishment involved the replacement of two lantern rooflights to provide a stunning centrepiece to The Orangery eating area. We provided extensive design consultation to ensure the new installation matched the existing rooflights and complemented the overall aesthetics. Bespoke colour powder coating and careful attention to detail produced an outstanding result.





em.glaze bespoke pyramid rooflights

Replica rooflights for Brutalist style Grade II listed building.

Client	Roofing Contractor
Scope	Replica rooflights for an iconic Grade II listed building
Products	em.glaze bespoke pyramid rooflights

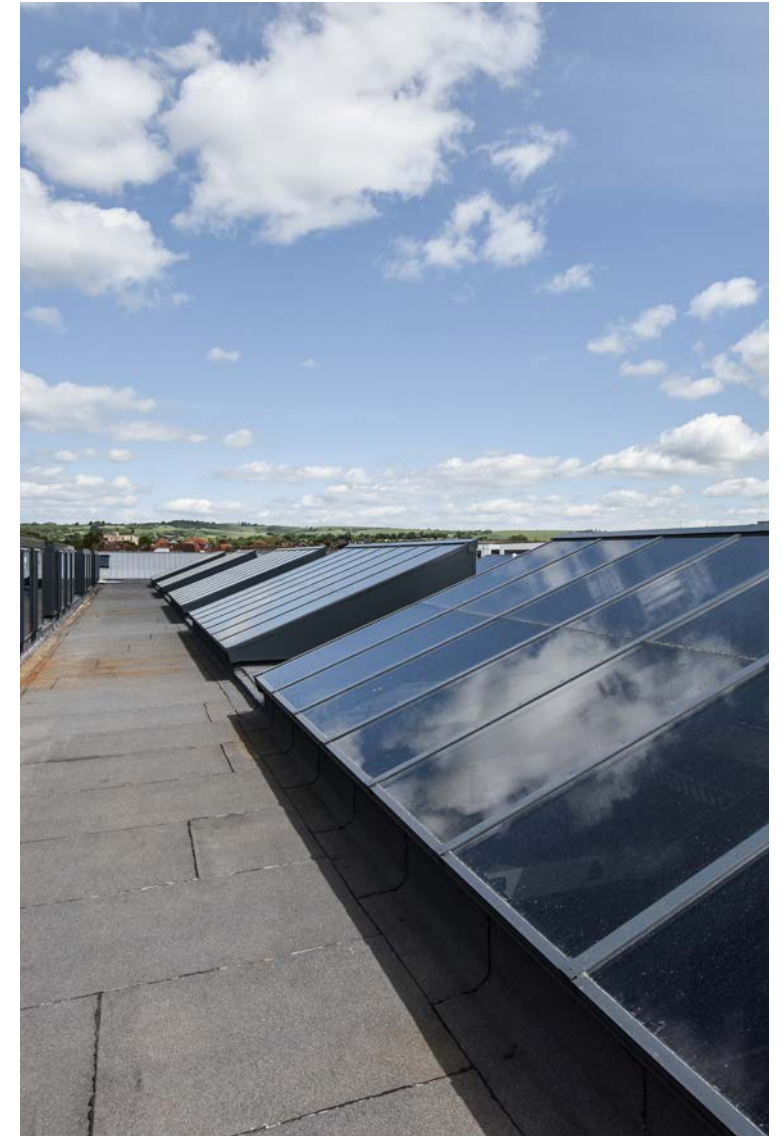
This project presented challenges in both design and installation. The bespoke design incorporates several features including: diffused solar control glazing, custom glazing bar centres and stringent testing for water ingress. Working closely with the contractor, and partial assembly off-site, meant the on-site installation was highly efficient and met the very tight deadline for completion before a scheduled high-profile art exhibition.

em.glaze shedlights

Bespoke rooflight design creates a more effective learning environment.

Client	Acclaim Contracts Ltd
Scope	Refurbish the college's engineering block
Products	em.glaze shedlights and em.glaze modular circular glass rooflights

Both phases of this bespoke project involved ongoing design meetings with extensive input to ensure all key needs were met whilst maintaining an in-budget solution. Bespoke shedlights incorporated considerable free ventilation area. Several glass specifications were reviewed before finding one that provided optimum light levels together with solar rejection and U-values required.





em.glaze monopitch rooflights

Expertly designed rooflights provide dual purpose of daylight and smoke ventilation.

Client

Kier Construction Ltd

Scope

Monopitch rooflights including smoke ventilation and solar control glazing

Products

em.glaze monopitch rooflights with dual colour powder coating and smoke ventilation



Stringent design ensured that this bespoke installation met the explicit requirements. Each monopitch aligns internally with wall finishes, whilst keeping wiring concealed. The design was carefully calculated so that each rooflight incorporated minimum 6m² free area. Skillful planning and design resulted in a project that met the client's desires and resulted in a beautiful working environment.





em.line and em.glaze rooflights

School flooded with daylight through stunning rooflight designs.

Client	K Pendlebury & Sons Ltd
Scope	New rooflights to all roof areas of differing designs including Em.line monopitch, Em.line ridgelight and Em.glaze lantern light
Products	Em.line monopitch, Em.line ridgelight and Em.glaze lantern light

Bringing optimum daylight into Sale Grammar School was the driving factor in this extensive refurbishment project. Structured multiwall polycarbonate was used to ensure minimum impact on the building structure whilst maintaining good light transmission and thermal efficiency. The efficient design also facilitated a reduction in running costs for heating, lighting and power. In key areas a glass solution was chosen to enhance the learning environment within the school.

em.line™

em.glaze™

em.vault barrel vault

Well-designed daylight solution used to excellent effect on high-use station platform.

Client	Railway Station
Scope	New barrel vault rooflights designed into the platform canopy as part of a station refurbishment
Products	em.vault barrel vaults with solid clear polycarbonate

Working in a live station environment, minimising disruption for staff and commuters was critical on this highly technical project. Our manufacturing flexibility allowed us to prefabricate replacement rooflights before the existing skylights had been stripped away, and installation was carried out using a strictly timed schedule.



em.vault™



em.line vertical oversleeve glazing

Bespoke glazing provided the perfect solution to a challenging refurbishment undertaken in a continuously operating location.

Client	United Biscuits
Scope	Oversleeving large runs of glazing above factory lines that ran continuously and had to meet high hygiene criteria
Products	em.line vertical oversleeve glazing with opal diffused panels

This project presented the challenge of creating a non-fragile glazing system directly above food production lines. The factory needed to continue production whilst installation was carried out in a safe and hygienic way. Using our em.line vertical oversleeve glazing system ensured that the factory didn't need to stop production as existing glazing did not need to be removed.





em.glaze monopitch rooflights

Precisely designed monopitch rooflights provide amazing features in a state-of-the-art swimming pool.

Client	Brymor Construction Ltd
Scope	em.glaze monopitch rooflights over pool areas to provide large amounts of natural daylight
Products	em.glaze monopitch rooflights

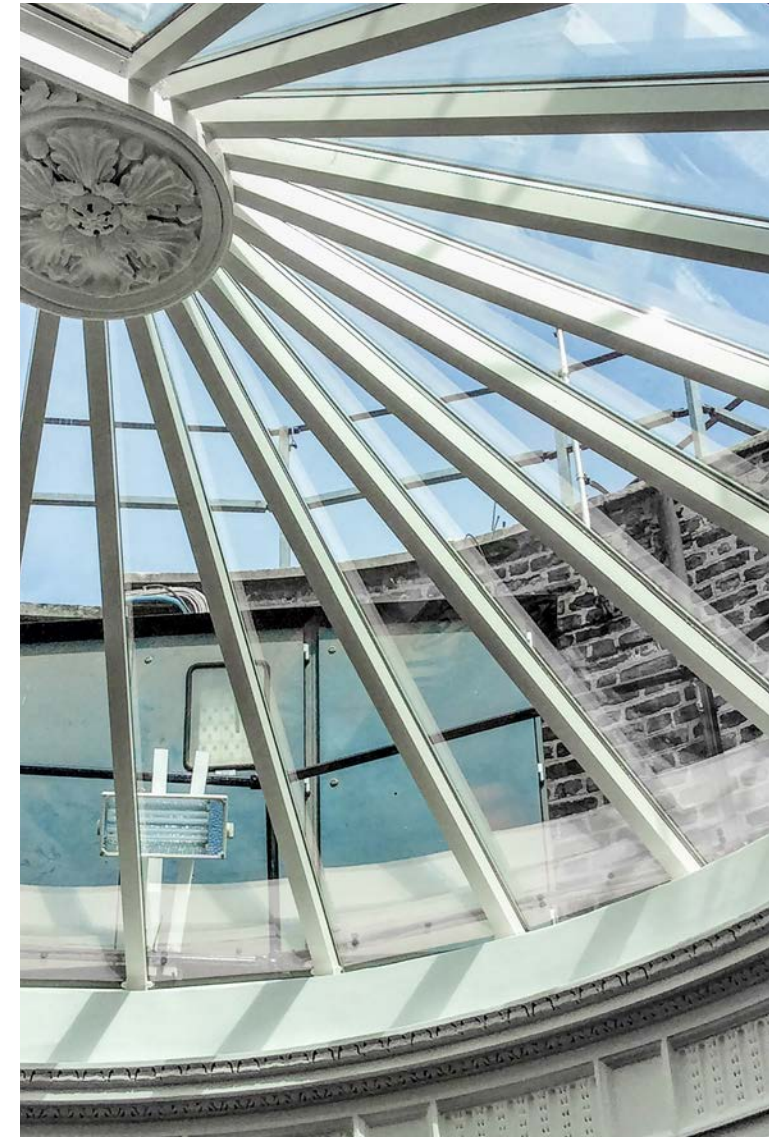
After a structural glass analysis was completed, potential flaws in the roof design were identified. This meant that the specification either needed to be changed from 10 to 15 panes or the roof pitch would need to be increased. On our guidance, a 15-pane solution was adopted. The profiled splash pool roof glazing was designed to be installed over structural steel with overlapping transom bars providing water channels and providing a small-pane aesthetic in accordance with the architects' concept. In the main roof section, each pane measured 2m x 4m and weighed over half a tonne. Glazing was silicone-sealed with a 10mm specialist solar control toughened outer and 21.5mm laminated inner pane, heat-strengthened to eliminate risk of thermal fracture.

em.glaze bespoke rooflights

Sympathetically designed replica rooflights for a Grade I listed building.

Client	Paye Stonework & Restoration Ltd
Scope	Replica rooflights for an iconic Grade I listed building
Products	Em.glaze bespoke rooflights

This bespoke design had to not only replicate the rooflights already in place, but be brought up to current legislation requirements and incorporate smoke ventilation. The final design features glazing bars that mirror the original design and clear glazing to soften the interior whilst maintaining high light-levels. The distinctive moulded ceiling rose within the rooflight system maintains the historic appearance.







ridgelight

Gable, hip and open-ended ridgelights are custom-made continuous rooflights which are available in spans of under 1m up to 7m unsupported, and larger with a supporting framework. A 30° slope is designed as standard, although bespoke pitches can be achieved.

Size	Span from under 1m to 7m unsupported
Pitch	30° is supplied as standard, bespoke pitches also available
Glazing	Single, double or triple-glazed glass, solid and multi-wall polycarbonate
Ventilation	Hinged opening sections operated manually or electric actuator for comfort

Ridgelights are manufactured from proprietary aluminium extrusions in a range of sizes to suit slope lengths or design. Available with hermetically sealed glass units, the rooflights are installed on-site, either to a site-formed upstand or to a proprietary em.curb upstand. Each rooflight run is terminated with glazed gable ends, hipped ends, wall abutments or open ends. Bays are designed at equal centres as standard, which will be sized in accordance with the required dimensions and glass specifications. Units can incorporate angles and other specialist detailing. Units can also incorporate opening vents for comfort, smoke ventilation or access to the roof, operated manually or by 24 or 230v electric actuators. Framework can be powder coated or left mill finish. With aluminium extrusions, bespoke flashings and an extensive technical backup, the possibilities are endless.

Benefits:

- Visual and physical inspection
- Bespoke flashings to suit all upstand applications
- Purpose-made with extensive flexibility
- Building Regulation AD L compliant options

Glazing:

Glazing is available in polycarbonate, multi-wall or solid sheet and single, double or triple-glazed glass. Clear, opal-diffused and heat-reflect polycarbonate are suitable for a broad range of projects. Glass is available in an extensive range of options to meet the more demanding criteria. The thickness and type is determined by the size and configuration of the rooflight unit and can be custom designed.



lantern light

Gable and hip-ended lantern lights are custom-made continuous rooflights. Differing from the ridgeline, they incorporate a vertical-glazed base section which is available in custom heights.

Size	Span from under 1m to 7m unsupported
Pitch	30° is supplied as standard, bespoke pitches also available
Glazing	Single, double or triple-glazed glass, solid and multi-wall polycarbonate
Ventilation	Hinged opening sections operated manually or electric actuator for comfort

Lantern lights are available in spans of under 1m up to 7m unsupported, and larger with a supporting framework. A 30° slope is designed as standard, although bespoke pitches can be achieved. Lantern lights are manufactured from proprietary aluminium extrusions in a range of sizes to suit slope lengths or design. Available with hermetically sealed glass units, the rooflights are installed on-site, either to a site-formed upstand or to a proprietary em.curb upstand. Each rooflight run is terminated with glazed gable ends, hipped ends, wall abutments or open ends. Bays are designed at equal centres as standard, which will be sized in accordance with the required dimensions and glass specifications. Units can incorporate angles and other specialist detailing. Units can also incorporate opening vents for comfort, smoke ventilation or access to the roof, operated manually or by 24 or 230v electric actuators.

Opening sections can be installed into the vertical base or the sloped roof section. Framework can be powder coated or left mill finish. With aluminium extrusions, bespoke flashings and an extensive technical backup, the possibilities are endless.

Benefits:

- Well-suited for conservation projects
- Building Regulation AD L compliant options
- Bespoke angles and shapes available

Glazing:

Glazing is available in polycarbonate, multiwall or solid sheet and single-, double- or triple-glazed glass. Clear, opal-diffused and heat-reflect polycarbonate are suitable for a broad range of projects. Glass is available in an extensive range of options to meet more demanding performance criteria. The thickness and type is determined by the size and configuration of the rooflight unit and can be custom designed.



pyramid

Pyramid rooflights are custom-made continuous rooflights which are available in spans from under 1m, up to 7m unsupported and larger with a supporting framework.

Size	Span from under 1m to 7m unsupported
Pitch	30° is supplied as standard, bespoke pitches also available
Glazing	Single, double or triple-glazed glass, solid and multi-wall polycarbonate
Ventilation	Hinged opening sections operated manually or electric actuator for comfort

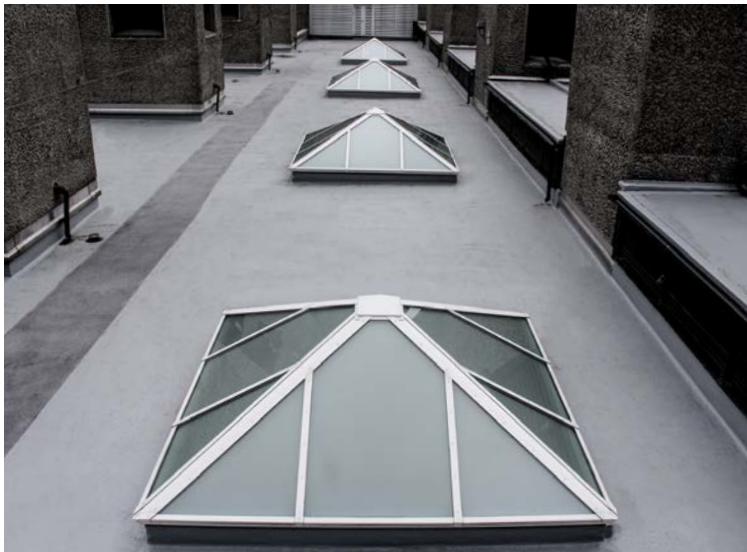
A 30° slope is designed as standard, although bespoke pitches can be achieved. Pyramids are manufactured from proprietary aluminium extrusions in a range of sizes to suit slope lengths or design. Available with hermetically sealed glass units, the rooflights are installed on-site, either to a site-formed upstand or to a proprietary Em-Curb upstand. Each rooflight run is terminated with glazed gable ends, hipped ends, wall abutments or open ends. Bays are designed at equal centres as standard, which will be sized in accordance with the required dimensions and glass specifications. Units can incorporate angles and other specialist detailing. Units can also incorporate opening vents for comfort, smoke ventilation or access to the roof, operated manually or by 24 or 230v electric actuators. Framework can be powder coated or left mill finish. With aluminium extrusions, bespoke flashings and an extensive technical backup, the possibilities are endless.

Benefits:

- Self-supporting in large spans
- Opening sections for comfort or smoke ventilation
- Building Regulation AD L compliant options

Glazing:

Glazing is available in polycarbonate, multiwall or solid sheet and single-, double- or triple-glazed glass. Clear, opal-diffused and heat-reflect polycarbonate are suitable for a broad range of projects. Glass is available in an extensive range of options to meet more demanding performance criteria. The thickness and type is determined by the size and configuration of the rooflight unit and can be custom designed.



north light

North light rooflights are custom-made continuous rooflights which are available in large spans, bespoke to site requirements. A north light structure incorporates a glazed slope to one elevation, solid insulated triangular sides and a vertical rear elevation.

Size	Span from under 1m to 4m unsupported
Pitch	15° is supplied as standard for top elevation, bespoke pitches also available
Glazing	Single, double or triple-glazed glass, solid and multi-wall polycarbonate
Ventilation	Hinged opening sections operated manually or electric actuator for comfort

The glazed roof is designed at a 15° slope as standard, although bespoke pitches can be achieved. North lights are manufactured from proprietary aluminium extrusions in a range of sizes to suit slope lengths or design. Available with hermetically sealed glass units, the rooflights are installed on-site to a structural formed upstand. Bays are designed at equal centres as standard, which will be sized in accordance with the required dimensions and glass specifications. Units can incorporate angles and other specialist detailing. Units can also incorporate hinged opening or louvre vent, for comfort, smoke ventilation or access to the roof. These are typically in the rear vertical elevation, operated manually or by 24 or 230v electric actuators. Framework can be powder coated or left mill finish. With aluminium extrusions, bespoke flashings and an extensive technical backup, the possibilities are endless.

Benefits:

- Well-suited to protect interiors from solar glare
- Capable of combining many features within one structure
- Purpose-made with extensive flexibility

Glazing:

Glazing is available in polycarbonate, multiwall or solid sheet and single-, double- or triple-glazed glass. Clear, opal-diffused and heat-reflect polycarbonate are suitable for a broad range of projects. Glass is available in an extensive range of options to meet more demanding performance criteria. The thickness and type is determined by the size and configuration of the rooflight unit and can be custom designed.





multipane

em.glaze multipane rooflights are designed to maximise the amount of natural daylight in a building and at the same time provide a clean, minimalistic finish both inside and outside.

They are manufactured with flat, sealed glass units and incorporate a fully welded aluminium frame and cill detail. Panes are joined internally with aluminium T bars and white PVC cover fins and externally with black structural silicon joints. All visible external aluminium is polyester powder-coated to a standard RAL colour. The flush design ensures efficient drainage of rainwater and the glazing holds unrivalled performance and insulation value over the full lifetime without deterioration. Multipane rooflights can be installed to a 0° pitch although 5° is recommended for water runoff. Maximum slope lengths are 3.2m, for longer slope lengths the Em.glaze monopitch can be used. Pane sizes can be varied to suit size and design. Units can incorporate opening vents, operated manually or by 24v electric actuators, for comfort ventilation.

Benefits:

- Ideal for high-end residential developments
- Large panes with minimal glazing bars for maximum daylight
- Opening sections for comfort ventilation

Glazing:

Glazing is available in single-, double- or triple-glazed glass. An extensive range of options are available to meet more demanding performance criteria. The thickness and type is determined by the size and configuration of the rooflight unit and can be custom designed.





monopitch

Monopitch rooflights are custom-made continuous rooflights which are available in large spans configurable to site requirements.

Size	Span from under 1m to 6m unsupported
Pitch	15° is supplied as standard, bespoke pitches also available
Glazing	Single, double or triple-glazed glass, solid and multi-wall polycarbonate
Ventilation	Hinged opening sections operated manually or electric actuator for comfort

Monopitch rooflights are designed at a 15° slope as standard, although bespoke pitches can be achieved as low as 5°. Monopitch rooflights are manufactured from proprietary aluminium extrusions in a range of sizes to suit slope lengths or design. Available with hermetically sealed glass units, the rooflights are installed on-site to a structural upstand, formed to the required slope pitch. Each monopitch run is terminated with a bespoke flashing or wall abutment detail. Bays are designed at equal centres as standard, which will be sized in accordance with the required dimensions and glass specifications. Units can also incorporate opening vents for comfort, smoke ventilation or access to the roof, operated manually or by 24 or 230v electric actuators. Framework can be powder coated or left mill finish. With aluminium extrusions, bespoke flashings and an extensive technical backup, the possibilities are endless.

Benefits:

- Well-suited to atrium spaces where smoke ventilation is required
- Building Regulation AD L compliant options
- Cost-effective method of introducing daylight

Glazing:

Glazing is available in polycarbonate, multiwall or solid sheet and single-, double- or triple-glazed glass. Clear, opal-diffused and heat-reflect polycarbonate are suitable for a broad range of projects. Glass is available in an extensive range of options to meet the more demanding criteria. The thickness and type is determined by the size and configuration of the rooflight unit and can be custom designed.



barrel vaults

em.vaults are high quality bespoke continuous rooflights used to span openings of up to 6m wide unsupported, and of unlimited length.

Size	Spans up to 6m unsupported
Pitch	1 low rise (1/6) is supplied as standard, bespoke profiles also available subject to size
Glazing	Solid and multiwall polycarbonate
Ventilation	Hinged opening sections operated manually or electric actuator for comfort

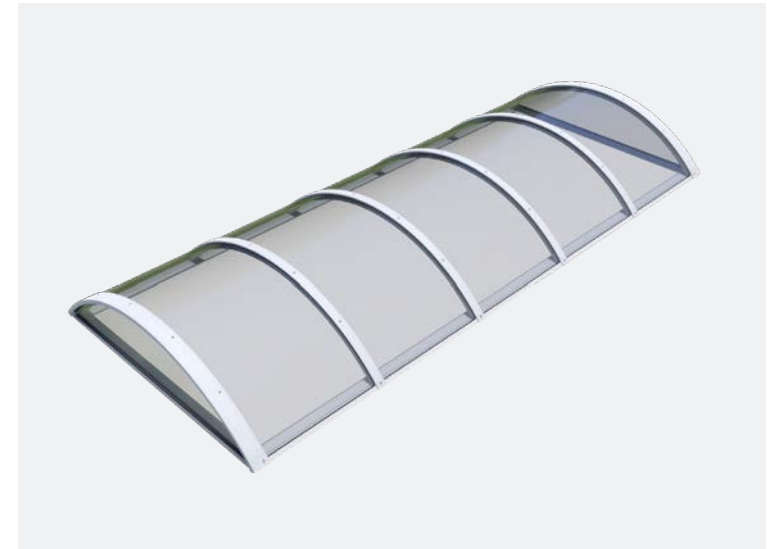
Units consist of polycarbonate glazing and extruded aluminium cill sections, pre-formed curved glazing bars and capping profiles. End panels are fully glazed, and for wider installations incorporate vertical glazing bars. Em-Vaults use polycarbonate glazing and may be independently tested and certified according to EN14963: 2006: 1200 Joules, and ACR (M): 001: 2005 Class B and be deemed Non-Fragile in accordance with (HSE) Health and Safety in Roof work. Em-Vaults are tested to the highest standards and are proven suitable for use on most flat roofs, including single ply, felt, hotmelt, asphalt, liquid, GRP and lead. Em-Vaults are normally specified to fit to a site-formed builder's curb, although subject to loading calculations, can be fitted to Whitesales PVC Em-Curb. Glazing framework can be powder coated to any standard RAL colour or left mill finish. Units can incorporate opening vents for comfort, smoke ventilation or access to the roof, operated manually or by 24 or 230v electric actuators. With aluminium extrusions, bespoke flashings and an extensive technical backup, the possibilities are endless.

Benefits:

- High light-efficiency giving excellent light distribution
- Non-fragile version available tested up to 1200 Joules
- Well-suited for introducing daylight to commercial buildings

Glazing:

Glazing is available in polycarbonate in multiwall or solid sheet. Clear, opal-diffused and heat-reflect polycarbonate meets most performance criteria. The thickness and type is determined by the size and configuration of the rooflight unit and can be custom designed. Solid sheet polycarbonate as standard is 3mm thick. Multiwall sheet is available from 8mm to 32mm depending on the width and span.



em.vault™



vertical oversleeve glazing

em.line vertical is particularly well-suited to situations where existing glazing can't be removed or when costs would be prohibitive – usually buildings with clerestory and vertical glazing, tank rooms and facades with cladding materials such as asbestos.

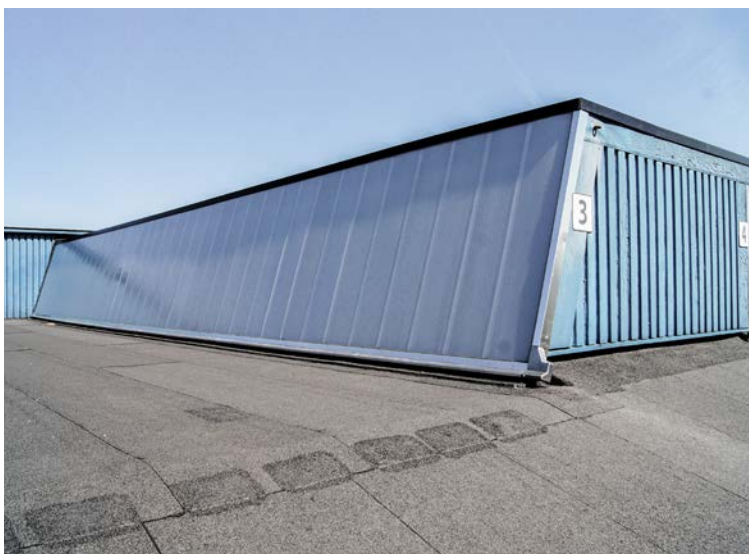
em.line vertical and its associated products have been rigorously tested for durability, safety, thermal performance and compatibility with industry-standard roofing materials. The multiwall construction of the em.line vertical provides a consistent thermal barrier with excellent U-Values of 0.99W/m²K. The em.line vertical system includes a choice of upstands dependent on window detail and insulation requirements. For ventilation within the upstand, there are both trickle vent and controllable rotating vent options. The maximum length of sheet is 7m. Units are designed for varying sizes of vertical applications.

Benefits:

- Eliminates the need to remove existing glazing
- Cost-effective – especially against the cost of replacement glazing
- Minimises time on-site, disruption, health and safety risks and waste disposal costs

Glazing:

The em.line vertical is available in translucent-clear or translucent-opal finish. The aluminium framework is available in mill finish, polyester powder-coated white or to any RAL colour by special order. Bespoke corner flashings and wall abutment details are available in aluminium pressings to suit.



technical

Specialist rooflights can be designed to accommodate an extensive range of sizes and shapes. Polygon, elliptical and domed are just some of the more common designs we have worked with. Our unique ten-step process ensures delivery of your project will exceed expectations.

1. Concept:

You brief us on your ideas and expectations. We advise on current legislation requirements and design possibilities.

2. Specification:

We produce detailed specifications, section drawings, roof plans and design criteria following our discussions with you.

3. Site/design meeting:

We can visit your offices or site to discuss initial ideas and designs.

4. Pre-tender support:

We visit your offices or site to finalise the details with you. This stage can include a site survey for refurbishment projects to obtain specific details and dimensions.

5. Tender:

We support the nominated contractors through the tender process.

6. Order process:

We finalise the details with you and the successful contractor to make sure you get perfect products delivered exactly when you need them.

7. Drawing production:

We produce full-detail production drawings for you to sign off.

8. Site setup:

We work with the successful contractor to agree site procedures and specific attendances.

9. Installation:

We deliver your new products to site, provide approved installers if you need them, and oversee the project to successful completion.

10. Aftercare:

Our service doesn't stop once your rooflights are in place. Our technical aftersales team will be always on hand to make sure you're completely happy. You are also covered by the Whitesales guarantee.





heritage

Replacing rooflights in historic or listed buildings requires painstaking attention. Over the course of more than 25 years, we've provided bespoke replica rooflights for countless historical buildings, many of them high-profile and listed.

All Em.glaze skylights are supported by low-profile aluminium frames, and with exact detailing, very large units can be built to precise bespoke designs. This means we can replicate the aesthetics of original rooflight architecture, with the benefit of high-performance glazing and a fully tested glazing system.

To ensure replacement rooflights are faithful to the originals, or complete the architect's vision, all frames can be powder-coated to any RAL colour.

Working closely with architects, we developed a unique heritage glazing bar to provide perfectly sympathetic replica rooflights.

solutions that are better by design

Innovative rooflights and outstanding daylight solutions. At Whitesales we are renowned for our proven product range, industry-leading levels of service and unsurpassed expertise.

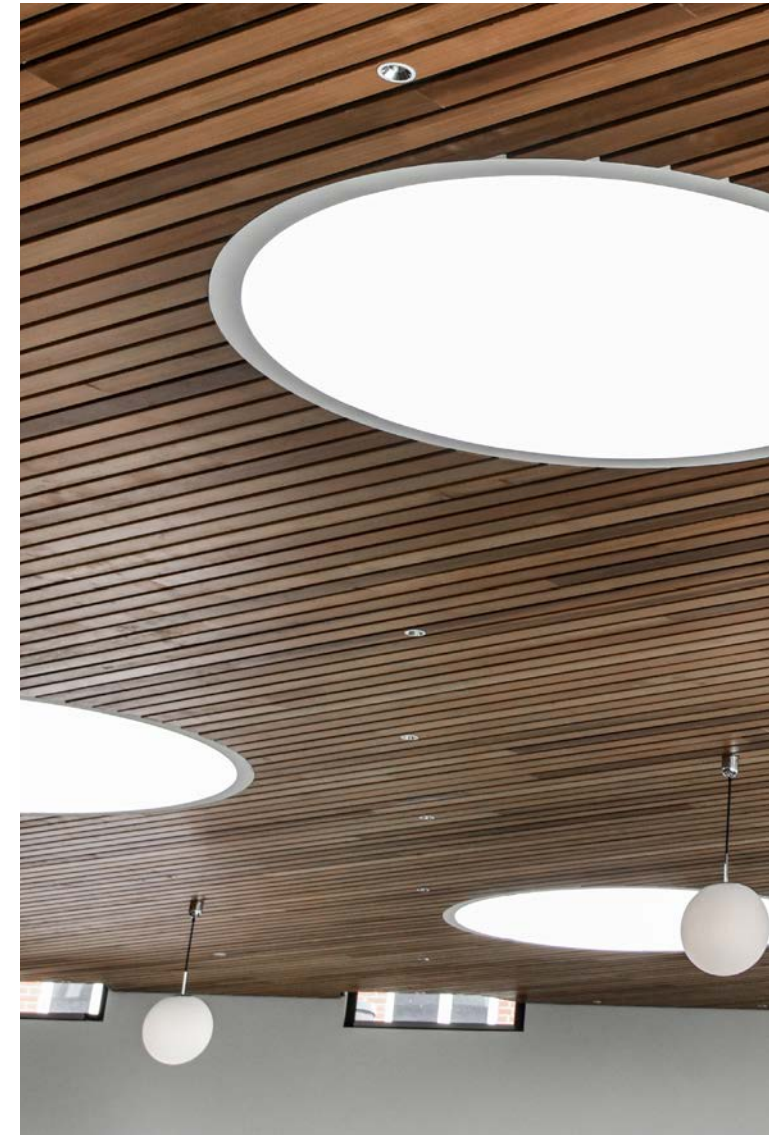
With over 25 years' experience in the manufacture of specialty rooflights, Whitesales is recognised as a leader in the daylight solutions industry. We have the dedication and resource to meet the most demanding of requirements.

Our experienced and expert personnel have in-depth knowledge in designing and developing innovative solutions to meet exacting specifications. We bring not only our design expertise, but extensive technical capabilities including CAD drawings and parametric BIM objects. Our expert team can assist throughout a project lifecycle from site surveys, condition reports, budget costings, technical guidance, specification writing and fully detailed quotations through to installation services and project and site management.

Our products are rigorously tested to the highest standards, exceed building regulations and perform in the most demanding environments. We always ensure that our solutions deliver high quality and exceptional performance.

We can create the perfect solution for any building, resulting in better living and working environments – environments that are better for business, and better for people.

experience.brighter







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