

# NaturalLight Systems LTD



STRUCTURAL  
GLAZING

## Natural Light By Design



Tel: 01670 530 333 Fax: 01670 824 540





**"As one of the market leading manufacturers, NaturaLight have one of the largest product ranges in the rooflight industry. Our team can design, manufacture and install rooflights suitable for all applications."**

NaturaLight Systems Limited are the natural choice for rooflights, kerbs and structural glazing for the construction industry and here's why...

In this brochure you will find what we believe to be the most comprehensive range of quality products, competitively priced and manufactured at our 'state of the art' factories in Bedlington, Northumberland.

From its establishment in 2001 NaturaLight has gone from strength to strength. Due to increased customer demand, our head office and manufacturing plant has now expanded its premises from one factory to three giving NaturaLight approximately 80,000sq ft of manufacturing, production, storage and distribution capacity to cope with the demands of our client base.

We have a passion for what we do – we pride ourselves on our manufacturing of quality rooflight products, our services and our team. We are very competitive but at the same time realistic to the market place. We only use the finest materials and this is our guarantee of excellence.

We aim to offer a perfect solution for any project no matter how complex it may be and are always dedicated to working to agreed timescales, suiting individual needs. Whatever you may require, we can produce cost effectively, quickly and with an unsurpassed quality service.

Each product is designed and manufactured individually to make sure that your requests are fulfilled first time. Every product that leaves our factory is approved by quality control and ready to deliver on time, using our own fleet of transport for distribution throughout the UK.

From an enquiry stage through to delivery/installation, customer satisfaction is paramount to us, our wealth of experience in the construction industry ensures this, from the initial contact to completion you are in good hands.

We have a wide range of clientele including Main Contractors, MoD, MoJ, Local Authorities, Schools, Colleges, Universities along with Building & Roofing Contractors, and more.

Our company is headed by a board of Directors; who are assisted by our national technical sales personnel, design team, office staff, a skilled team of professional production workforce and our specialist installation teams (who are certified in Asbestos Awareness, IPAF, PASMA, CPCS, CSCS, Harness Awareness, SSSTS, SMSTS and First Aid). Our staff are dedicated professionals with years of experience and are on hand to answer any questions you may have regarding your individual needs. Simply call us on 01670 530 333 we are only too happy to help, or visit our website at [www.naturalight.co.uk](http://www.naturalight.co.uk) where you can find information on our extensive range of products.



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U-Value as low as



## Why choose natural daylight?

Natural daylight is a vital part of life. Yet, often overlooked when it comes to a design project.

Daylighting is the controlled admission of natural light. By providing a direct link to the dynamic and perpetually evolving patterns of outdoor illumination, daylighting helps create a visually stimulating and productive environment for building occupants.

The science of daylighting design is not just how to provide enough daylight to an occupied space, but how to do so without any undesirable side effects. Beyond adding windows or rooflights to a space, it involves carefully balancing heat gain and loss, glare control, and variations in daylight availability. For example, successful daylighting designs will carefully consider the use of shading devices to reduce glare and excess contrast in the workspace.

Legislation issued in 2002 recognises this need and now requires buildings to have adequate natural daylight as part of the design, a minimum of 20% of the wall area or a minimum of 10% of the roof area, being composed of light transmitting elements.



The general pattern of life for humans is to sleep at night and work and play during the daylight hours. Our brain functions and responds to the stimulus of daylight. Providing natural daylight into the working environment is of fundamental importance for the well-being, efficiency and safety for the people in that environment.

It has been demonstrated that in healthcare, access to daylight provides; a reduction in the average length of hospital stay, quicker post-operative recovery, reduced requirements for pain relief, quicker recovery from depressive illness and disinfectant qualities.

In educational buildings access to daylight has been shown to result in a dramatic (and demonstrable) improvement in student academic achievement, behaviour, calmness and focus.

In the workplace numerous studies identified a preference to work near windows and under conditions which fully utilise natural rather than artificial light. In retail establishments, research shows that a substantial improvement in sales can be achieved in shops subject to natural daylight.

Rooflights provide three times more light than the same area of vertical glazing. They can also provide a much more even distribution of light, particularly in larger structures.

NO-HOOD-N-ROOF-LIGHT





NaturalLight design, manufacture and install NaturalSpan structural glass rooflights in various shapes and sizes to meet the needs of each individual project. The NaturalSpan system is a thermally broken extruded aluminium glazing bar arrangement incorporating typical mullion and transom assembly with internal water management and condensation channels to the lower cill edges of the glazing frame. The system is capable of glazing infinite lengths and can be designed to span great distances unsupported.



The system benefits from the flexibility of being able to be manufactured to a variety of different rooflight styles to suit a variety of applications. Most commonly:

- Mono-pitch – Maximum span of 5m unsupported
- Ridgelight with vertical ends
- Pyramid
- Hexagonal or Octagonal
- Ridgelight with hipped ends
- Lanternlight gabled or hipped ends
- Vertical
- Bespoke





U-Value as low as



# STRUCTURAL GLASS

Glazing is secured using a pressure equalised system secured to the glazing bars and finished using an extruded capping. External perimeter flashings can also be introduced to encapsulate the unit and can be manufactured to suit specific project requirements.

Ventilation can be introduced into the system in a variety of applications:

- Glaze-in natural ventilators in both manual operation or 24V/240V electrical opening options
- Glaze-in smoke ventilators in 24V automatic opening option.
- Trickle ventilation
- Hit and Miss ventilation
- Vent Axia fan ventilation
- Vortice fan ventilation
- Permanent louvre ventilation
- Controllable louvre ventilation
- Dampened louvre ventilation

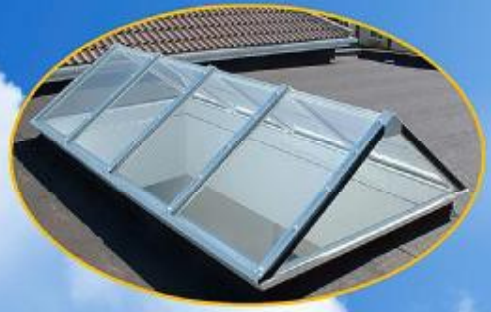
NaturalLight only use safety glass for overhead glazing requirements and can be found in a range of atria for private, commercial and retail environments. A full range of high performance glazing is available to suit specific project requirements including but not limited to:

- \* Clear glass
- \* Coloured glass
- \* Diffused glass
- \* Solar controlled glass
- \* Self Cleaning glass

ensuring that project demands can be met for thermal and solar performance requirements.







NaturalLight design, manufacture and install NaturalSpan structural polycarbonate rooflights in various shapes and sizes to meet the needs of each individual project. The NaturalSpan system is a thermally broken extruded aluminium glazing bar arrangement incorporating typical mullion and transom assembly with internal water management and condensation channels to the lower cill edges of the glazing frame. The system is capable of glazing infinite lengths and can be designed to span great distances unsupported.



The system benefits from the flexibility of being able to be manufactured to a variety of different rooflight styles to suit a variety of applications. Most commonly:

- Mono-pitch – Maximum span of 5m unsupported
- Ridgelight with vertical ends
- Barrel Vault assembly
- Hexagonal or Octagonal
- Bespoke
- Ridgelight with hipped ends
- Lantern light with gable or hipped ends
- Pyramid
- Vertical



# POLYCARBONATE



U-Value as low as



Glazing is secured using a pressure equalised system secured to the glazing bars and finished using an extruded capping. External perimeter flashings can also be introduced to encapsulate the unit and can be manufactured to suit the specific project requirements.

Ventilation can be introduced in the system in a variety of applications:

- Glaze-in natural ventilators in both manual and 24V/240V automatic opening options
- Glaze-in smoke ventilators in 24V automatic opening option
- Trickle ventilation
- Hit and Miss ventilation
- Vent Axia fan ventilation
- Vortice fan ventilation
- Permanent louver ventilation
- Controllable louver ventilation
- Dampened louver ventilation



Polycarbonate offers high impact resistance as well as 3 standard glazing tints of clear, opal or bronze. Bespoke options are available on request.

Polycarbonate options are:

- 16mm triple-wall structural polycarbonate
- 25mm multi-wall structural polycarbonate
- Factory assembled double or triple skin cassettes manufactured from UV protected solid polycarbonate sheet.
- All of the polycarbonate supplied from NaturaLight has a UV protected coating to guarantee the performance of the product for up to 10 years.

ensuring that project demands can be met for thermal and solar performance requirements.

The solar gain ('G' value) can be improved to a more manageable level by way of introducing varying tint interlayers to the polycarbonate rooflight construction thus reducing the heat build up occurring from transmittance through the rooflight glazed area. Products comply with current UK Building Regulations covered under BS 476 and European Standards covered under BS EN 13501.







NaturalLight FastLock is a unique interlocking system which offers a simple and economic glazing solution. It is manufactured with a high quality interlocking aluminium glazing bar system incorporating both standard 16mm and enhanced 25mm UV protected structured polycarbonate. This out performs virtually all other traditional roof glazing systems. Units can be supplied with fit for purpose perimeter edge flashings.



Each modular unit is designed to suit specific project requirements, therefore on site modification is significantly reduced. This system can be used as a replacement for old patent glazing and rooflight applications as well as offering an alternative to new canopies and walkways. FastLock has an integral support structure and its modern interlocking design de-skills the installation process. It can be manufactured to an infinite length with glazing centres generally 1015mm. In addition a class B non-fragile enhanced option is available in 25mm FastLock tested to ACR(M) 001.2005.





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FASTLOCK

All aluminium bars are polyester powder coated to any standard RAL colour (non-standard available on request). Applied to 80 - 100 microns conforming to BS 6496, which is then baked onto the aluminium to give a lasting and quality finish.

A choice of glazing tints, in clear, opal or bronze are available in 16mm triple-wall structure or 25mm structure polycarbonate, which comply with part L of the building regulations, offering excellent light transmission, good load bearing properties, good thermal insulation and excellent weather resistance. The sheet is lightweight, impact resistant and easy to install.

Ventilation can be introduced in the system in a variety of applications:

- Glaze-in natural ventilators in both manual and 24V/240V automatic opening options
- Vent Axia fan ventilation
- Vortice fan ventilation

Designed to achieve wind and snow loading of 0.7 KN/M<sup>2</sup> standard 16mm and 1.2KN/M<sup>2</sup> enhanced 25mm. All in accordance with BS 6399.

All of the polycarbonate supplied from NaturaLight has a UV protected coating to guarantee the performance of the product for up to 10 years.



The solar gain ('G' value) can be improved to a more manageable level by changing to a tinted polycarbonate construction thus reducing the heat build up occurring from transmittance through the rooflight glazed area.

Products comply with current UK Building Regulations covered under BS 476 and European Standards covered under BS EN 13501.







The NaturaLight SafeLock system is manufactured with high quality aluminium glazing bars and a unique interlocking system. Incorporating 25mm UV protected structured polycarbonate. With the integration of stainless steel rods, inserted through the glazing module, this has achieved a 'class B non – fragile' independently tested by the BRE. This out performs virtually all other traditional roof glazing systems. Units can be supplied with fit for purpose perimeter flashings.



Each modular unit is designed to suit specific project requirements. Therefore on-site modification is significantly reduced. This system can be used as a replacement for old patent glazing and rooflight applications as well as offering an alternative to new canopies and walkways. Its modern design de-skills the installation process and is also capable of being manufactured to an infinite length with glazing centres generally 1015mm.





U-Value as low as



A choice of glazing tints, in clear, opal or bronze available in 25mm structure polycarbonate, which comply with part L of the building regulations, offering excellent light transmission, good load bearing properties, good thermal insulation and excellent weather resistance. The sheet is lightweight, impact resistant and easy to install

Ventilation can be introduced in the system in a variety of applications:

- Glaze-in natural ventilators in both manual and 24V/240V automatic opening options
- Vent Axia fan ventilation
- Vortice fan ventilation

Designed to achieve wind and snow loading of 1.2 KN/m<sup>2</sup>. All in accordance with BS 6399.

All of the polycarbonate supplied from NaturalLight has a UV protected coating to guarantee the performance of the product for up to 10 years.

The solar gain ('G' value) can be improved to a more manageable level by changing to a tinted polycarbonate construction thus reducing the heat build up occurring from transmittance through the rooflight glazed area.



Products comply with current UK Building Regulations covered under BS 476 and European Standards covered under BS EN 13501.

SAFELOCK







### NaturalSpan Mono-Pitch Rooflight



Type	Mono-pitch rooflight to max 5 metre slope span unsupported to a min 5° fall and to an infinite length dependant on glazing material, snow and wind load calculation.  Designed in accordance with CP3 Chapter V Part 2: 1972 BS6399: Part 1 and Part 3 1984 max. 1.5 kPa wind and 0.75 kPa imposed.
Frame Material	Aluminium to BS 1474: 1987 Alloy 6063-T6
Fragility	CWCT TN66 / TN67 non fragile option available
Glazing Options	Glazed in either glass, structural UV protected polycarbonate or solid UV protected polycarbonate to a variety of specifications
Thermal	Part L: Below 2.0 W/m <sup>2</sup> K options available
Colour	Available in mill finish or any standard RAL colour (non-standard RAL colours available at an additional cost)
Flashings	Formed from sheet aluminium to suit specific project interface requirements

### NaturalSpan Dual-Pitch Rooflight



Type	Dual-Pitch rooflight up to 7 metres self-supporting to a min 10° and max 45° fall and to an infinite length dependant on glazing material, snow and wind load calculation  Designed in accordance with CP3 Chapter V Part 2: 1972 BS6399: Part 1 and Part 3 1984 max. 1.5 kPa wind and 0.75 kPa imposed
Frame Material	Aluminium to BS 1474: 1987 Alloy 6063-T6
Glazing Options	Glazed in either glass, structural UV protected polycarbonate or solid UV protected polycarbonate to a variety of specifications.
Thermal	Part L: Below 2.0 W/m <sup>2</sup> K options available.
Colour	Available in mill finish or any standard RAL colour (non-standard RAL colours available at an additional cost)
Flashings	Formed from sheet aluminium to suit specific project interface requirements





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TECHNICAL

### NaturalSpan Barrel Vault Rooflight



Type	Barrel Vault type rooflight to generally 30° cord height and to an infinite length dependant on glazing material, snow and wind load calculation  Designed in accordance with CP3 Chapter V Part 2: 1972 BS6399: Part 1 and Part 3 1984 max. 1.5 kPa wind and 0.75 kPa imposed
Frame Material	Aluminium to BS 1474: 1987 Alloy 6063-T6
Glazing Options	Glazed in either glass, structural UV protected polycarbonate or solid UV protected polycarbonate to a variety of specifications.
Thermal	Part L: Below 2.0 W/m <sup>2</sup> k options available.
Colour	Available in mill finish or any standard RAL colour (non-standard RAL colours available at an additional cost).
Flashings	Formed from sheet aluminium to suit specific project interface requirements

### NaturalSpan Ridgelight / Pyramid Rooflight



Type	Dual-Pitch gable, hip ended rooflight up to 7 metres self-supporting to a min 10° and max 45° fall and to an infinite length dependant on glazing material, snow and wind load calculation.  Designed in accordance with CP3 Chapter V Part 2: 1972 BS6399: Part 1 and Part 3 1984 max. 1.5 kPa wind and 0.75 kPa imposed
Frame Material	Aluminium to BS 1474: 1987 Alloy 6063-T6
Glazing Options	Glazed in either glass, structural UV protected polycarbonate or solid UV protected polycarbonate to a variety of specifications.
Thermal	Part L: Below 2.0 W/m <sup>2</sup> k options available.
Colour	Available in mill finish or any standard RAL colour (non-standard RAL colours available at an additional cost).
Flashings	Formed from sheet aluminium to suit specific project interface requirements





### Bolton Market

NaturalLight Systems were jointly involved with the roof refurbishment of the existing market and a new build extension to an outdoor market. NaturalLight's FastLock system was utilised to reglaze the existing Lantern-lights on the project. The units incorporated actuated ventilation within the vertical sections. NaturalLight designed, supplied and installed Dual-Pitch rooflights with gable ends to the roof areas over the outdoor market using the NaturalSpan system.



### Marnor School

A complex bespoke design consisting of a Mono-Pitch rooflight to connect an existing Georgian school refurbishment to a new build extension and a glazed roof to the main entrance connecting to the glass facade. NaturalLight Systems were able to design, supply and install a self-supporting low pitch system to bring a natural lighting solution to public areas below.



### Filton School

For this new built school NaturalLight were able to design, manufacture and install not only the NorthLight glazing but the whole NorthLight structure. We used our NauralSpan system with integrated thermally efficient insulation panels and incorporated natural ventilation into the rooflight.





# PAST PROJECTS



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## Northbrook School

NaturaLight Systems were able to design, supply and install bespoke tapering Ridgelights incorporating acoustic and actuated louvre sets to the vertical perimeter of the rooflights. The system was installed to a new build BSF school in the South East. Emphasis was on a solution that could provide both natural and smoke ventilation whilst maintaining high levels of light into the building and enhanced acoustic dampening to ensure a comfortable space to the main school hall below.



## Whiteleigh Campus

A BSF school in the South Coast required a variety of different shaped NaturalSpan Mono-pitch rooflights with high performance glass and integrated electrical operated vents to provide natural ventilation.



## Highbury Grove School

One of the largest school projects NaturaLight have been employed to deliver. NaturaLight designed, supplied and installed a variety of glass rooflight structures, such as octagonal multi-faceted rooflights to varying sizes the largest being 6.8 metre Diameter and a glass Northlight running the entire width of the school in excess of 47 metres.





NaturaLight  
Systems  
LTD



Accessory House, Barrington Ind Est,  
Bedlington, Northumberland, NE22 7DQ.

Tel: 01670 530333 Fax: 01670 824540

[info@naturalight.co.uk](mailto:info@naturalight.co.uk)  
[www.naturalight.co.uk](http://www.naturalight.co.uk)

