

LEONARDSLEE LAKES & GARDENS
FORMER GENERATOR BLOCK ANCILLARY ROOF SPECIFICATIONS

ISSUE 01

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PURCELL

On behalf of Purcell ®
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ROOF
SPECIFICATIONS

1.1 ROOF PANELS

It is proposed to replace the existing roof covering with new insulated roof panels by Kingspan, with a dark grey metal finish to reference to the former industrial use and architecture of the building.

Kingspan

QuadCore KS1000RW

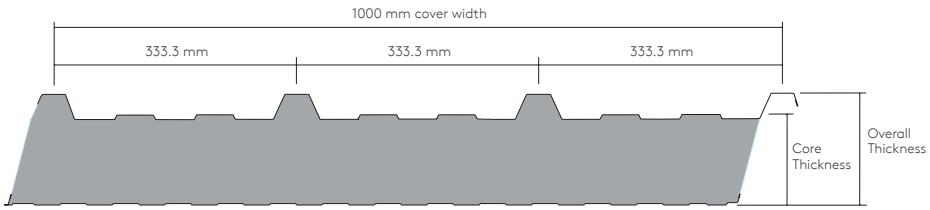
External Colour: Kingspan Spectrum Solid - Bassalt

Internal Colour: Kingspan standard

Panel details:

- Core Thickness: 115mm
- Overall Thickness: 146mm
- U-Value (W/m²k): 0.16





Dimensions, Weight & Thermal Performance

Core Thickness (mm)	40	53	60	73	80	91	100	115	120	137	150
Overall Thickness (mm)	71	84	91	104	111	122	131	146	151	168	181
U-Value (W/m²K)	0.47	0.35	0.31	0.25	0.23	0.20	0.18	0.16	0.15	0.13	0.12
Weight (kg/m²)	9.0	9.5	9.7	10.2	10.5	10.9	11.3	11.8	12.0	12.7	13.2

The QuadCore® insulation used in QuadCore® KS1000RW Roof Panels has a Thermal Conductivity (λ) of 0.018W/m.K

QuadCore® KS1000RW Roof Panels have a Thermal Transmittance (U-Value), calculated using the method required by the Building Regulations Part L2 (England & Wales), Building Standards Section 6 (Scotland), Part L (Republic of Ireland) and Part F2 (Northern Ireland).

1.2 GUTTER

The proposal includes the replacement of the existing gutters, with new coated steel ones, to match in finishes the new insulated panels.

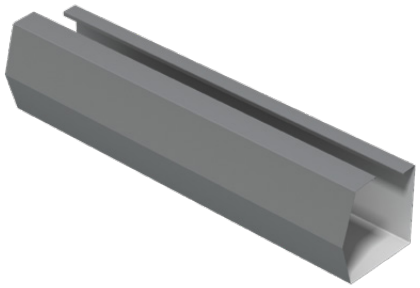
Kingspan

Industrial Highline Gutter

Dimensions to be calculated by Kingspan in relation to roof measurements and site location

Coated steel

Colour: Kingspan Spectrum Solid - Bassalt



1.3 RAINWATER PIPES

The proposal includes the replacement of the existing rainwater pipes, with new coated steel ones, to match in finishes the new gutter and insulated panels.

Kingspan

Rainwater Pipes

Section squared

Coated steel

Colour: Kingspan Spectrum Solid - Bassalt

1.4 ROOFLIGHTS

The proposal includes three new low profile conservation style rooflights, in order to retain good levels of natural light to the Cafe'. The proposed rooflights include two glazing bars to subdivide the glazed surface.

The Rooflight Co.

Conservation Plateau Rooflight - Bespoke with two glazing bars

No. 3

Dimensions:

- Clear viewable Length: 1442mm

- Clear viewable Width: 1942mm

Refer to drawing **242769-PUR-50-ZZ-DR-A-5003.**



1.5 INSULATED PANELS CONNECTING PROFILES

New pressed aluminium flashing connecting profile to be provided by Kingspan, to be installed where connection between new insulated panels and existing building structure.

New profiles to be installed following manufacturers recommendations.

1.6 LEAD FLASHINGS

- New Code 5 lead flashing to be installed to connection between the new roof panels and the existing brickwork parapet. Prior the installation of the new lead flashing, carefully remove the existing coping stone to be reinstated after the completion of the new roof installation.

  Refer to drawing **242769-PUR-50-ZZ-DR-A-5001**.

- New Code 4 lead flashing to be installed to connection between the new roof panels and the existing Doll's House Roof.

  Refer to drawing **242769-PUR-50-ZZ-DR-A-5001**.

1.7 EXISTING ROOF SLATES

Three lower layers of existing slates to be carefully removed and set aside for reuse, to be reinstated after the completion of the new roof installation.

Refer to drawing **242769-PUR-50-ZZ-DR-A-5001**.

1.8 TILTING FILLET

Install new discrete tilting fillet with eaves ventilator to reinstate airflow to Doll's House roof after new detail is installed.

Refer to drawing **242769-PUR-50-ZZ-DR-A-5001**.

INTERNAL STRUCTURE
SPECIFICATIONS

2.1 EXISTING STEEL STRUCTURE

Internal existing steel structure to be retained, repaired and redecorated.

Colour TBC.

2.2 EXISTING ANGLES

Existing metal angles to be retained, repaired and redecorated.

Colour TBC.

2.3 RENEWED BLOCKS

Renewed timber blocks to be installed on top of existing metal angle, to support the new insulated roof panels and allow roof angle.

Dimensions to be checked on site after a measured survey of the existing structure has been completed.



APPENDIX 3.1
KINGSPAN QUADCORE KS1000RW PANEL

Product Data

Applications

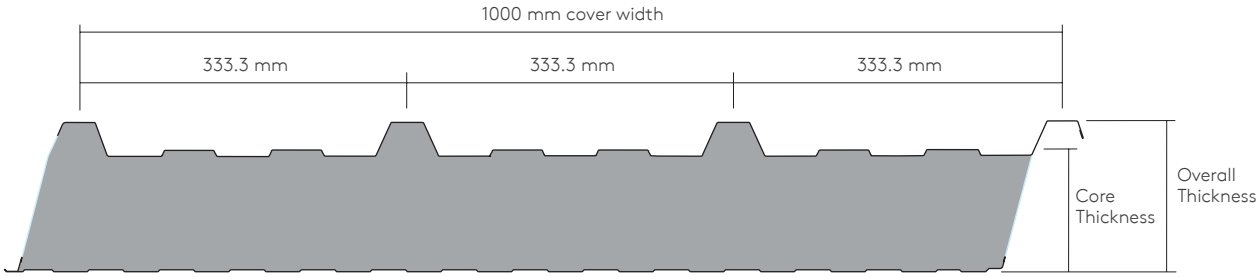
QuadCore® KS1000RW Roof Panels are through-fix, trapezoidal profiled, insulated roof panels which can be used for building applications with roof pitches of 4° or more after deflection.



Available Lengths

Standard Lengths (m)	1.8 - 14.5
Longer Lengths (non-standard) (m)	14.5 - 29.2
Shorter Lengths (non-standard) (m)	Below 1.8

Note: Additional costs and transport restrictions may apply for non-standard lengths. All lengths may change for export (outside of the UK and Ireland).



Dimensions, Weight & Thermal Performance

Core Thickness (mm)	40	53	60	73	80	91	100	115	120	137	150
Overall Thickness (mm)	71	84	91	104	111	122	131	146	151	168	181
U-Value (W/m^2K)	0.47	0.35	0.31	0.25	0.23	0.20	0.18	0.16	0.15	0.13	0.12
Weight (kg/m^2)	9.0	9.5	9.7	10.2	10.5	10.9	11.3	11.8	12.0	12.7	13.2

The QuadCore® insulation used in QuadCore® KS1000RW Roof Panels has a Thermal Conductivity (λ) of 0.018W/m.K

QuadCore® KS1000RW Roof Panels have a Thermal Transmittance (U-Value), calculated using the method required by the Building Regulations Part L2 (England & Wales), Building Standards Section 6 (Scotland), Part L (Republic of Ireland) and Part F2 (Northern Ireland).

APPENDIX 3.2
THE CONSERVATION PLATEAU ROOFLIGHT



AN INTRODUCTION

CONSERVATION PLATEAU ROOFLIGHT

Conservation Plateau Rooflight is the only historic skylight for flat roofs, combining the highest modern performance standards with an authentic traditional appearance. Favoured by English Heritage, the National Trust and Planning / Conservation Officers, it is available in a wide range of sizes, along with a Bespoke Design Service.

The Conservation Plateau Rooflight enables our customers to transform properties with natural lighting from above that not only serves their practical needs but enhances the design and beauty of the building.

PlanetMark

Certified B Corporation

EOA

Employee owned and a certified B-Corp organisation, we are committed to improving the standards of our products for our people and the local community and to reducing our impact on the environment.

We are Rooflight Co. The premium rooflight manufacturer for properties of architectural significance.

THE ROOFLIGHT CO. COTSWOLDS

Bourton-on-the-Water, Gloucestershire, GL54 2HQ
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A TRULY AUTHENTIC FLAT ROOFLIGHT:

Our design for the Conservation Plateau Rooflight for flat roofs stems from our detailed understanding of delivering sympathetically designed rooflights for pitched roofs. We have taken this knowledge and created the only rooflight specifically designed for historic flat roofs. We use design cues from our original Conservation Rooflight such as **being top hung** with **exposed hinges**, having **glazing bars** for larger expanses of glass and a **low profile frame height**. In addition we include more intricate details that make a truly authentic rooflight for historic flat roofs. These include the following three vital elements.

o **Stepped edge glazing** – by using our Conservation Rooflight casement in a flat roof context we are able to introduce the elegant crisp detailing of a stepped glazing edge. Further to the practical reason of shedding surface water, the stepped glazing edge provides a contextual hint of the historic Victorian rooflights.

o **Perimeter framing** – the perimeter frame to the Conservation Plateau Rooflight is designed to accommodate the various thicknesses associated with historic flat roofing materials, such as a traditional lead roof. Our design statement emphasies a low profile height through a distinctive set-back position of the casement - creating a perimeter framing that is unique to the Conservation Plateau Rooflight.

o **Low profile height** – thermally efficient rooflights require a thermally de-coupled frame structure to minimise heat loss. Our Design Engineers have developed the perfect balance, achieving the much-desired authentic fine lines and low profile height, whilst simultaneously and consistently delivering Building Regulation compliant thermal performance.

We are passionate about Rooflights. For us, it's the small and often overlooked details that make the Conservation Plateau Rooflight the authentic choice for properties of architectural significance.





THE CONSERVATION PLATEAU ROOFLIGHT

The Conservation Plateau Rooflight is the only flat rooflight designed specifically for heritage buildings. It is available in a wide range of sizes, along with a Bespoke Design Service.

Performance characteristic:	Test Method:	Classification:
Air permeability	EN 1026	Class 4
Watertightness	EN 1027	Class E1050
*1 Thermal transmittance of window (Uw)	EN ISO 10077-2	1.8 W/m²K
*1 Thermal transmittance of glass (Ug)	EN 673	1.7 W/m²K
Solar energy transmittance	EN 410	0.49 (49%)
Light transmittance	EN 410	0.70 (70%)
Resistance to wind load	EN 12211	Class 5
*2 Resistance to snow load	Infill details	4HT (16 ARGON 90) 33.1
Acoustic Value of Glazing (Rw)	EN 12758	34 (-1; -5) dB
Insulated glazing units	EN 1279-2, EN 1279-3	BSI Kitemarked (KM 93754)
Structurally bonded glazing bars	90 degree peel, 300 mm/min	50.2 N/cm
Corrosion protection	EN ISO 12944	C5-M Long

Manufactured under a quality management system independently certified by LPCB to ISO 9001 (certificate no. 929). For a full NBS specification please scan the QR code at the top of this page or view on our website.

*1 Thermal transmittance values calculated in the horizontal plane.

*2 4mm Low e Toughened Outer (16mm Argon Cavity) 6.4mm Clear Laminated Inner

LPCB LOSS PREVENTION CERTIFICATION BOARD
UKAS MANAGEMENT SYSTEMS 0007
Assessed to ISO 9001:2015 Cert/LPCB ref. 929

Certified B Corporation

THE ROOFLIGHT CO. COTSWOLDS

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DC/24/0279

Refer to drawings:

- 242769-PUR-50-ZZ-DR-A-5001

- 242769-PUR-50-ZZ-DR-A-5002

- 242769-PUR-50-ZZ-DR-A-5003