ultraframe

Transforming light and space

380 ultraRoof

engineered by ultraframe

System Overview, Design & Pricing Guide

JUNE 2016 | V1

UltraRoof380 is a cost effective, simple to fit pre- packaged solid roof kit that is perfect for the replacement of tired conservatory roofs.

UltraRoof380 substantially overcomes – for the consumer – the twin issues of the conservatory being too hot in summer and too cold in winter. Moreover, it creates a beautiful vaulted plastered ceiling inside and with a stepped detail at the eaves the perfect place for cables and spotlights.

For those consumers who still want an element of light through their new solid roof, the clever configurable technology allows the fitment of multiple glass panels – this can be a major consideration to protect light into the adjacent room.

Please read this document carefully to ensure you are familiar with UltraRoof380 specification. For assistance with UltraRoof380 design/specification please contact

Technical Support Team on 0843 208 6953 or email techsupport@ultraframe.co.uk

Using this System Overview & Design Guide

Reading this guide early in the sales/design/quotation process may save time later. Careful pre-sales survey/checks can ease the process – undertaking a pilot hole dig alongside the base for example and inviting the Local Authority building inspector (or other Approved Building Control Inspectors like Ultraframe's partner jhai). You may be able to charge the consumer a 'deposit' for this inspection, redeemed if the project goes ahead.

This is what you receive with UltraRoof380

- Solid roof including slate effect tile sheet
- Fascia board & soffit
- Marley, Classic gutter.

(Not supplied - resin anchors, internal battens and plasterboard)

IMPORTANT - NOTE 1

The installer is responsible for ensuring that where UltraRoof380 is supported by means such as timber frame walls, the structure provides enough lateral support and resistance to wind uplift. Further guidance can be obtained through this guide's technical documentation. Ultraframe cannot be responsible for the structural adequacy of any existing building work used as part of an overall conversion. While assistance is provided, ultimate responsibility to secure Building Regulations lies with the retail installer.

IF IN DOUBT ABOUT STRUCTURAL COMPLIANCE, PLEASE CONSULT LABC, JHAI OR A STRUCTURAL ENGINEER

IMPORTANT - NOTE 2

This guide is intended to provide indicative information and to help you understand the design principles and applicable loadings. U-Design (see across) is the final arbiter on price and specification decisions.

IMPORTANT - NOTE 3

The UltraRoof380 components have been designed and manufactured to meet the specification of each individual job. Any significant on site modifications particularly relating to the repositioning of any structural members will invalidate the product's warranty and compromise the structure's integrity. If adjustments are required due to site conditions please consult Ultraframe.

CONTENTS

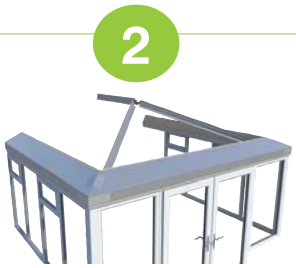
OVERVIEW

Product definition

UltraRoof380 is a solid roof, perfect for the speedy replacement of tired conservatory roofs. It is a packaged solution, off site manufactured for rapid assembly and compliance with relevant Building Regulations. UltraRoof380 is classed as a 'warm roof' and gives a vaulted/loft type ceiling. There are three major elements to UltraRoof380;

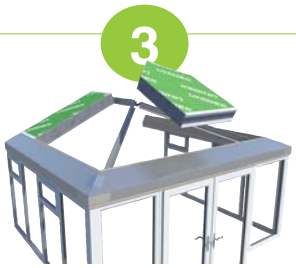
Insulated beams

1. A patented box eaves beam, filled with EPS beads as used in cavity insulation - that forms the soffit structure - approx 380mm front to back depth.



Aluminium framework

2. A hidden structural aluminium framework for hips, ridge and starter bars.

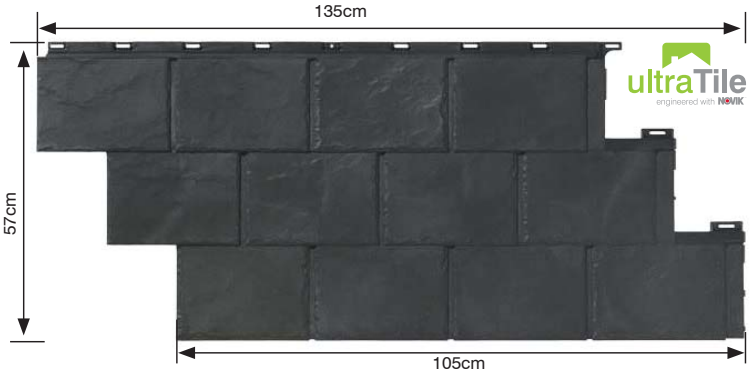


Structural roof panels

3. Mechanically fixed Kingspan Unidek Aero Structural Insulated Roof Panels are attached to the box eaves and structural framework.

The roof comes with the counter battens already fixed. Tongue and grooved 12mm OSB is then fixed before a self adhesive, high performance water proofing layer is laid. UltraTile engineered copolymer interlocking tiles sheet (12 slates per sheet) is then laid across the roof slope.

Overall dimensions: 135.3 cm x 57.15 cm x 1.9 cm
8 panels per box : approximately 4,65 m² / 0,58 m² per panel



Key performance criteria/simplified rules

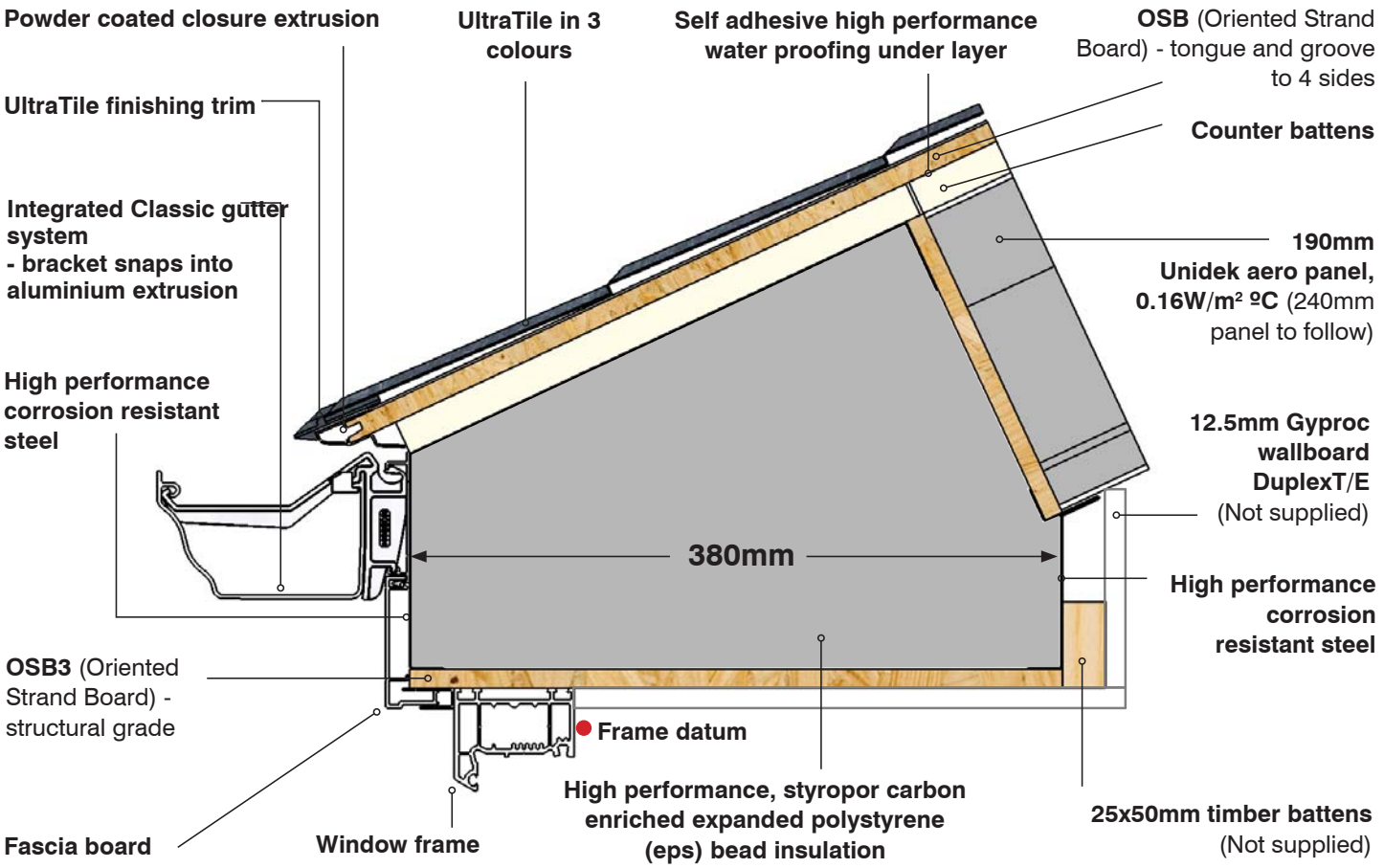
- The product can be designed with window frames to all elevations - no support posts.
- If bi-folding doors are to be used they MUST be bottom supported NOT top hung.
- The standard soffit projects approx 40mm beyond the external face of the window frame - box eaves beam is approx 380mm front to back depth.
- Pitch range - minimum is 12.5° on lean to and 15° on duo pitch - maximum pitch is - 40°.
- Pitch must be equal to all sides - on 3/5 bay Victorians facet sizes must be equal size / angle.
- System 'U' values - with the 190mm Unidek Aero panels is 0.16W/m2°C.
- Rectangular glass panels can be integrated to maintain light into any adjacent room. Alternatively, add one of 4 Velux roof windows/sizes.
- Everything is pre-fabricated in our highly efficient factory to ensure rapid one day fit on site.
- On a 4m x 4m Georgian, the system weight is 38kg/M² including plasterboard (12kg/m2 polycarbonate roof and 30kgM² for a glass roof).

U-Design

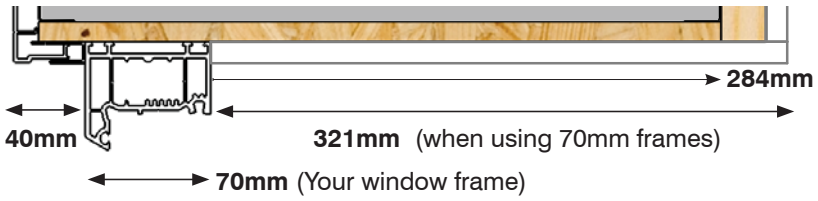
U-Design is a piece of design and configuration software that exclusively specifies UltraRoof380. As well as visualising and pricing, upon entry of the customer's postcode it checks the wind and snow loads at the exact location to ensure UltraRoof380 complies with Building Regulations.

It is strongly recommended that the UltraRoof380 Installation guide is read at the same time as this System Overview, Design and Pricing Guide

PRODUCT OVERVIEW/ASSEMBLIES

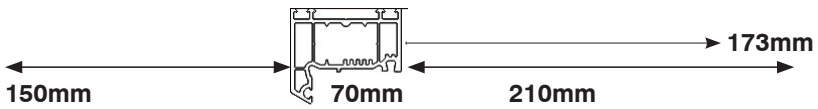


Standard Soffit 1



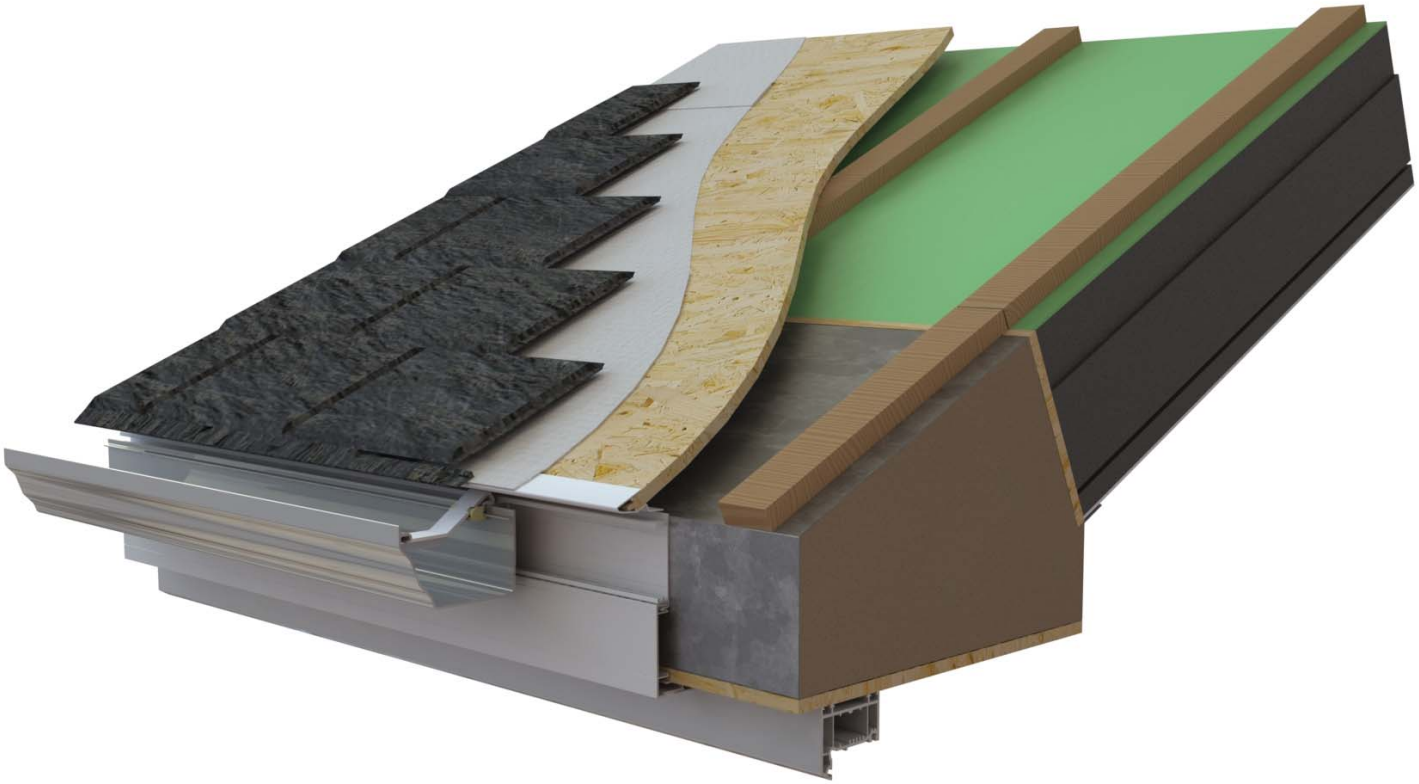
Extended Soffit 2

Alternative (only option if sat on Loggia columns) - further details soon.

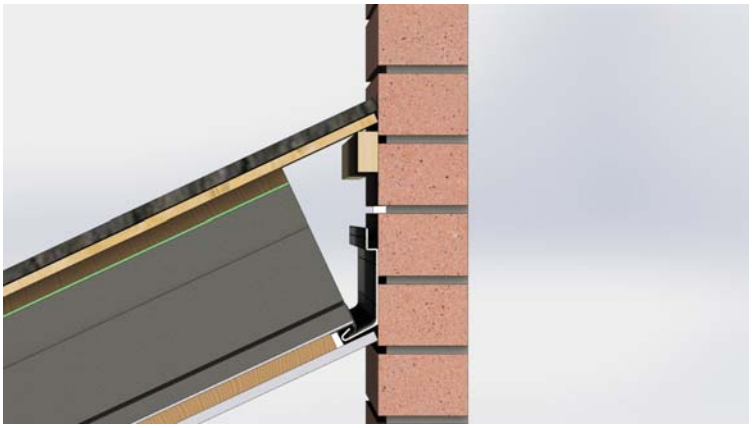


PRODUCT OVERVIEW/ASSEMBLIES

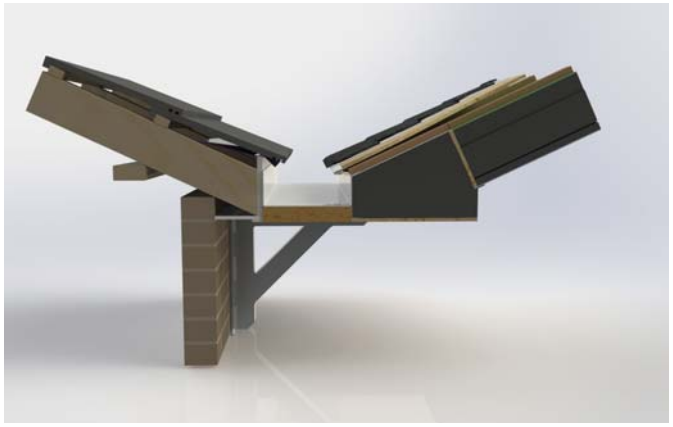
General cross section



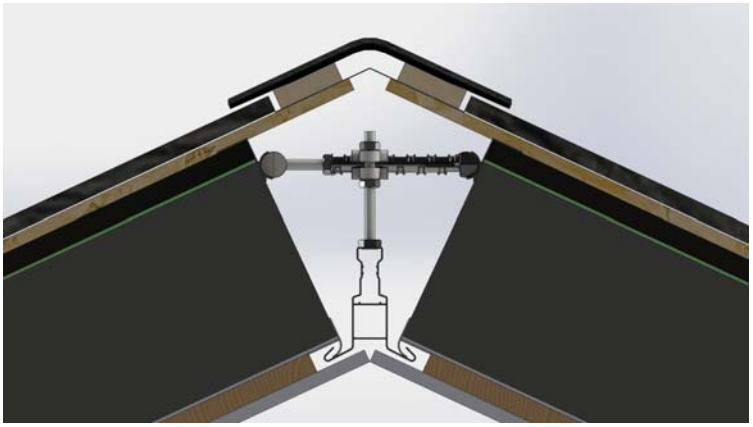
Lean-to detailing



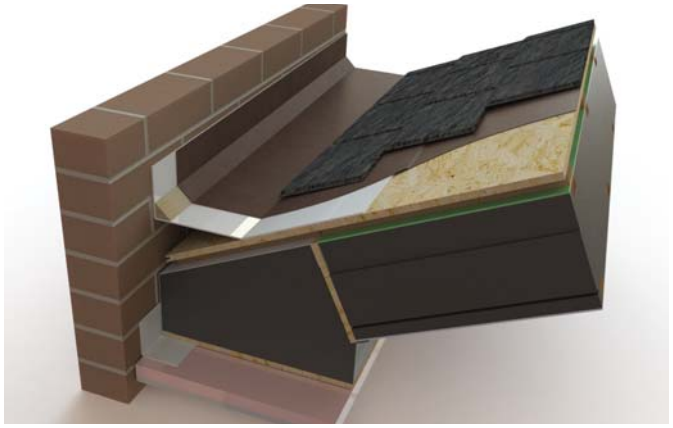
Conservatory style box gutter



Duo pitch ridge



'Built up' box gutter



TOP TEN
MAJOR FEATURES & BENEFITS

01

The UltraRoof380 roof has a 0.16 U Value which is 15 times more thermally efficient than a 16mm polycarbonate or older glass roof without solar control.

The room will be cooler in the summer and warmer in the winter.

Heating costs will be reduced.

The room can be used 365 days of the year.

It's worth offering the homeowner the options of new frames, since modern glazing specifications will complement the thermal performance of the roof making the room more comfortable & cheaper to heat.

02

Ultraframe has partnered with jhai to provide Building Regulations completion certificates (England & Wales)

Building Regulation compliance is required for solid roof conversions and new build extensions. The Ultraframe jhai partnership provides peace of mind regarding the performance of the roof and to ensure that there are no problems with compliance when the homeowner decides to sell their home

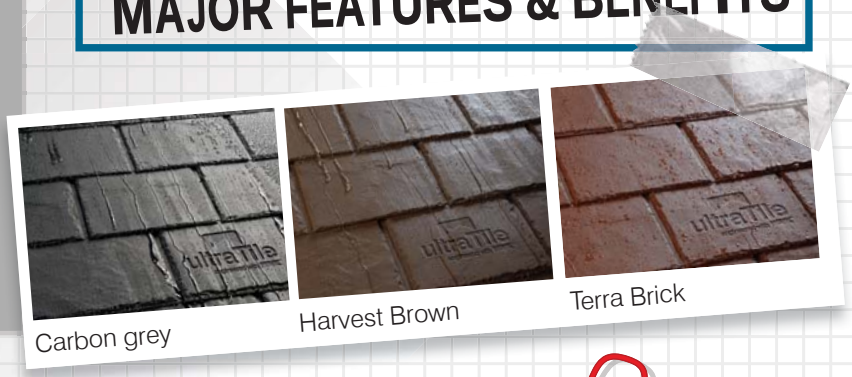
jhai provides a low cost consistent way of complying with Building Regulations across England and Wales in a practical, pragmatic approach.

03

10 YEAR GUARANTEE

UltraRoof380 carries a 10 year guarantee

The roof has a proven pedigree and will provide comfort and peace of mind for the homeowner for many years to come. The complete roof is pre manufactured to ensure consistent quality on site and speedy installation with no waste or disposal costs.



04

UltraRoof380 has a system weight of 38kg/m2 (including plasterboard) – much lighter than other replacement roofs.

Whilst around the same weight as a glass roof this often enables the original window frames to be used providing a saving to the homeowner if required.

The difference in loading on the foundations is negligible. Provided there is no sign of settlement in the base there is no need to excavate a pilot hole to reveal the foundations. Please consult jhai if you are in any doubt.

05

UltraRoof380 is offered with black Marley Classic gutter as standard with the option to have other colours

The PVC gutter option enables homeowners with a tight budget to take advantage of the benefits of UltraRoof380

Fascia and soffit are PVC to match with the existing home.

06

Rectangular glass panels can be integrated into the design of the UltraRoof380.

This adds visual appeal to the design of the extension. The homeowner has an individual design that is their own.

Take advantage of the sweep of the sun over the extension by choosing which panels to glaze and which to leave solid. Which brings light into rooms in the house that would otherwise be darker with a solid roof.

Watch TV in the UltraRoof extension without suffering problems with glare whilst having the benefit of natural light.

Unlike other solid roofs, brings more light into the room adjacent, crucial if replacing an old glazed roof.

Rectangular glass panels can be integrated - a substantial saving over opening roof windows.

07

A pelmet is part of the design, with a horizontal soffit inside the extension. The standard projection of the pelmet LivinRoom is 321mm when plastered.

You can put downlights of your choice in LivinRoom around the perimeter of the extension, providing attractive mood lighting.

You could fit speakers to LivinRoom with hidden cables led through to your amplifier, this should be considered for first-fix cabling.

08

UltraRoof380 has a vaulted ceiling and a plastered finish

The vaulted ceiling provides a light spacious feel to the extension.

The plasterboard finish makes the extension feel as though it is part of the house.

It can be integrated with super insulated Loggia columns to improve thermal performance, provide visual appeal and reduce build times.

See separate Extensions*Plus* brochure.

09

UltraRoof380 is supplied with an authentic slate finish that comes in three colours grey, brown and red as standard (See image middle left).

The three chosen colours have been designed to either match or contrast with the vast majority of the UK housing stock.

10

Why not create a simple plastered 'flat top' at the apex to suspend lights?

This allows the homeowner to specify downlights or pendant lights of their choice to be fixed under the ridge for main or mood lighting.

Adds further visual identity to the vaulted roof internally.

PRINCIPLES OF REPLACING CONSERVATORY ROOFS

Ultraframe is a responsible manufacturer and takes its market position seriously. There is some confusion out in the market amongst those who already have or are about to tackle their first glazed to solid conversion.

Ultraframe has consulted with LABC and the leading Approved Building Control Inspectors jhai and our advice and notes are based on their positions – both organisations believe that Building Regulations DO apply when glazed roof to solid roof conversion work is executed.

As a responsible member of the Glass and Glazing Federation , Ultraframe's position is that ALL responsible retailers MUST follow these guidelines.

Changing the roof on a previously exempt conservatory from glazing to solid panels means that you have changed the status of the structure. The new roof is seen as an improvement and MUST comply with parts of the Building Regulations (this assumes the doors separating the house and conservatory are retained). There is a caveat – the replacement roof should not make the condition of the existing structure worse – this relates to the ability of the existing side frames and foundations to carry the additional loads imposed by the solid roof.

Adequate support from the existing structure is required in three main areas by:
1. Window frames
2. Mullions/corner posts
3. Foundations

Pages 12-17 give detailed guidance on how to assess these areas and ensure compliance.

Registered Details **FACT SHEET**

registered LABC

RD Certificate Number: EW465

Ultraframe (UK) Ltd – Real Roof Existing

Description

This is an assessment of the 'Real Roof' manufactured by Ultraframe. The system transfers the roof loading onto independent foundations by way of steel posts and new foundations situated outside the existing conservatory footprint. The eaves beam is designed as a structural box beam made from OSB board. The roof is then supported by bolting the box beam to the existing structure. This registration applies to the roof only for use as a replacement roof for an existing conservatory.
This Registered Detail Certificate is designed to fast-track, not remove, the requirement to obtain Building Regulation Approval through LABC. This can only be demonstrated through a Completion Certificate issued following satisfactory inspections made as part of a valid Building Regulation application by Local Authority Building Control teams.

Scope of Registration

Due to space limitations, the Registered Detail certificate should be consulted for the full scope of this registration.

Validity

This system has been checked for compliance in accordance with English and Welsh Building Regulations.
Registration was first issued on 24/04/14 and is valid until 24/04/16 providing there are no amendments to applicable regulations.
Issue dated 01/05/2015

Further Information

For more detailed information including access to the full certificate and supporting documents please use this link
http://www.labc.co.uk/our-services/registered-details/ew465-real-roof-existing

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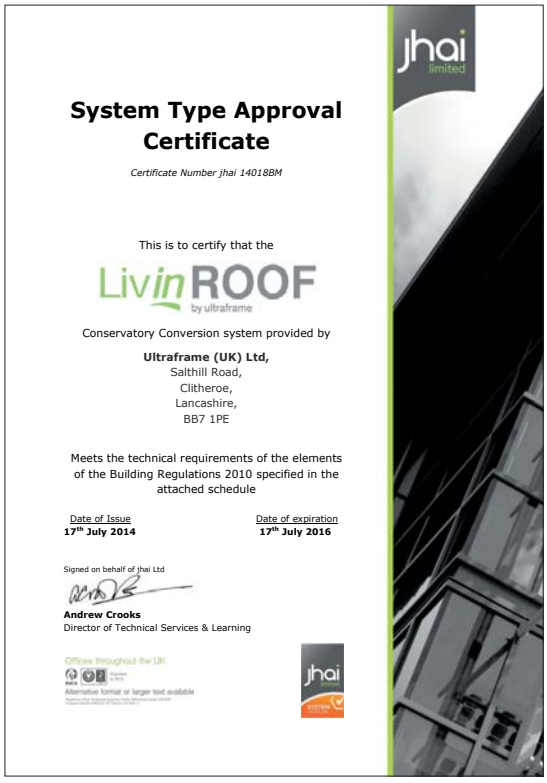
BB7 1PE
Tel: 01200 443311
Email: mark.hanson@ultraframe.co.uk
Web: www.ultraframe-conservatories.co.uk

realROOF by ultraframe

LABC | 66 South Lambeth Rd | London | SW8 1RL | T: 0207 0910060 | www.labc.co.uk/registereddetails



jhai limited

System Type Approval Certificate

Certificate Number jhai 14018BM

This is to certify that the

LivinROOF by ultraframe

Conservatory Conversion system provided by

Ultraframe (UK) Ltd,
Salthill Road,
Clitheroe,
Lancashire,
BB7 1PE

Meets the technical requirements of the elements of the Building Regulations 2010 specified in the attached schedule

Date of Issue
17th July 2014

Date of expiration
17th July 2016

Signed on behalf of jhai Ltd

Andrew Crooks
Director of Technical Services & Learning

Offices throughout the UK

Alternative format or larger text available

jhai

STRUCTURAL PERFORMANCE (SIZES)

All sizes relate to the internal window frame consistent with conservatory 'norms' set out. The maximum unsupported beam span is 4m - any bi folding doors used MUST be bottom supported and not top hung.

MAX BEAM LENGTH FOR ALL OF THE DESIGNS IS 7000MM

Victorian/Gable/Georgian

	Pitch 15° - 21°		Pitch 22° - 29°		Pitch 30° - 40°	
	Width (mm)	Projection (mm)	Width (mm)	Projection (mm)	Width (mm)	Projection (mm)
Max Size	6500	5000	6700	5000	6500	5000
At Loadings	Wind 1.35kN	Snow 0.7kN	Wind 1.5kN	Snow 0.89kN	Wind 1.65kN	Snow 0.8kN

Min ridge length = 300mm

Lean-to 190mm

	Pitch 12.5° - 29°		Pitch 30° - 40°	
	Width (mm)	Projection (mm)	Width (mm)	Projection (mm)
Max Size	7000	4000	7000	3700
At Loadings	Wind 1.4kN	Snow 0.75kN	Wind 1.15kN	Snow 0.75kN

Min ridge length = 300mm

Hipped Lean-to

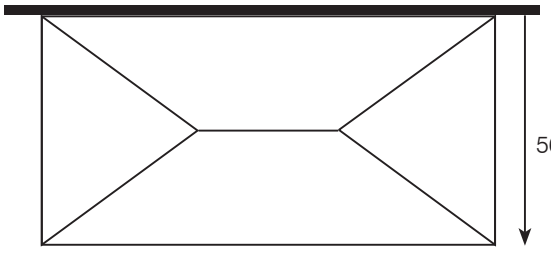
	Pitch 15° - 29°		Pitch 29° - 40°	
	Width (mm)	Projection (mm)	Width (mm)	Projection (mm)
Max Size	7000	3500	7000	3200
At Loadings	Wind 1.4kN	Snow 1.1kN	Wind 1.3kN	Snow 0.6kN

Min ridge length = 300mm.
Min wall plate length on a single hip = 300mm

Double Hipped Georgian

	Pitch 15° - 29°		Pitch 30° - 40°	
	Hip Width (mm)	Projection Length (mm)	Width (mm)	Projection (mm)
Max Size	5600	7000	No limits	4300
At Loadings	Wind 1.35kN	Snow 0.7kN	Wind 1.5kN	Snow 0.89kN

Min ridge length on a double hip = 600mm

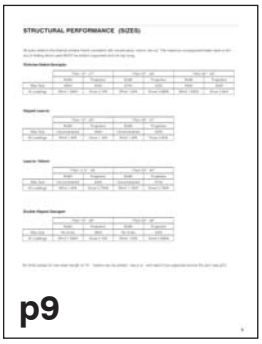


USING THIS GUIDE TO DECIDE ON STRUCTURAL LOADS - WORKED EXAMPLE

The only accurate way to specify UltraRoof380 is using U-Design software.
Either use a licensed copy of the software or send a sketch to Ultraframe or one of its approved trade intermediaries / distributers, where the information will be input on your behalf.

Worked Example

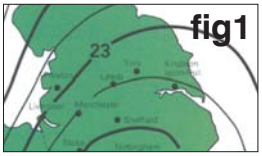
A 4m x 4m* Georgian conservatory at 25 degree is being re-roofed at the rear of a semi detached property in the small market town of Clitheroe. The homeowner wants to know if they can have Velux roof windows and what size and how many.



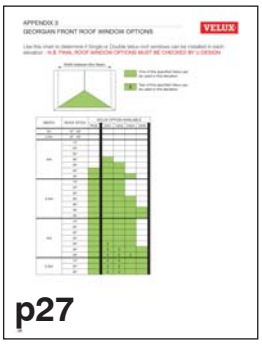
Turn to page 9, the correct page for the style of extension (in this case Georgian) and use the chart that shows the pitch range (defined as 25° for this project) .As the project is defined as 4m x 4m, look up the loading for this size which shows UltraRoof380 can accept a load of 1.5kN/m2 from wind and 0.89kN/m2 from snow

Now check how high above sea level the location is (Google search or try www.maps-streetview.com) – in this case it's 76m elevation above the sea level. As outlined in the worked example in red above, the location is in a small town (not the country).

Use figure 1 to check the wind speed at the location (in this case its 23 m/s which translates on table 1 to 0.68 kN/m²). From figure 2 check the snow load at the location (which is 0.6kN/m²).

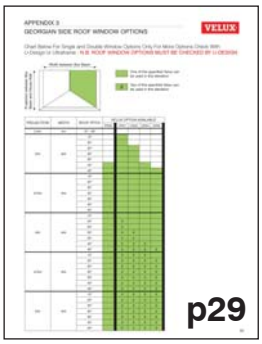


	Loads at postcode (kN/m²)	Max System Load (kN/m²)	System load MUST EQUAL or EXCEED post code load
SNOW	0.60	0.89	✔
WIND	0.68	1.15	✔



Both figures at the actual site are within the design parameters of the UltraRoof380 system, so it is OK to proceed with the project with no amendments.

And finally, to determine the number and size of Velux roof windows that can fit into this extension, turn to page 27 (for front elevation) and 29 (side elevation) to look up the vent opening sizes that can be configured into each elevation.



If you are unable to achieve the desired size for your UltraRoof380 project please contact Ultraframe's Technical Support Team for advice. (See p2 for contact details).

STRUCTURAL SPECIFICATION GUIDELINES

The size limitation for UltraRoof380 is limited by the projects geographic location.
The location of each project will determine the imposed loads on the finished structure (both wind and snow loadings will have an impact). The size of these loads can be obtained from U-design software as the roof is being specified. U-design uses historic weather datafiles which from a postcode can provide both wind and snow loadings. If you do not have access to U-design the maps will help ***guide*** you to the approximate loadings. This will not give you exact values but ones likely to be the worst case for your location.

If you are unable to achieve the desired size for your UltraRoof380 project please contact Ultraframe's Technical Support Team for advice. (See p2 for contact details).

The Map in figure 1 (overleaf) shows the fundamental basic wind velocity map in vb m/s. Find your approximate location and determine wind speed.
Now you need the height above sea level in metres - this information could be obtained via Ordnance Survey or Google Maps. Decide if your site is town or country.

Now use Table 1 Below to establish the load in kN/m2 and finally, check with figure 2 to see the snow load.

Table 1 Max wind Load EC1-4-NA - q(p) kN/m2

	Altitude	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	26.5	27	27.5	28	28.5	29	29.5
TOWN	50	0.55	0.57	0.60	0.62	0.65	0.68	0.71	0.74	0.77	0.80	0.83	0.86	0.89	0.92	0.96	0.99	1.03
	100	0.60	0.63	0.66	0.68	0.72	0.75	0.78	0.81	0.84	0.88	0.91	0.94	0.98	1.02	1.05	1.09	1.13
	150	0.65	0.68	0.72	0.75	0.78	0.82	0.85	0.88	0.92	0.96	0.99	1.03	1.07	1.11	1.15	1.19	1.23
	200	0.71	0.75	0.78	0.82	0.85	0.89	0.92	0.96	1.00	1.04	1.08	1.12	1.17	1.21	1.25	1.30	1.34
	250	0.77	0.81	0.85	0.88	0.92	0.96	1.00	1.04	1.09	1.13	1.17	1.22	1.26	1.31	1.36	1.41	1.46
	300	0.84	0.88	0.92	0.96	1.00	1.04	1.09	1.13	1.18	1.22	1.27	1.32	1.37	1.42	1.47	1.52	1.57
COUNTRY	50	0.63	0.66	0.69	0.72	0.75	0.78	0.81	0.85	0.88	0.92	0.95	0.99	1.03	1.06	1.10	1.14	1.18
	100	0.69	0.72	0.75	0.79	0.82	0.86	0.89	0.93	0.97	1.01	1.05	1.08	1.13	1.17	1.21	1.25	1.30
	150	0.75	0.79	0.82	0.86	0.90	0.94	0.98	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.32	1.37	1.42
	200	0.82	0.86	0.90	0.94	0.98	1.02	1.06	1.11	1.15	1.20	1.24	1.29	1.34	1.39	1.44	1.49	1.54
	250	0.89	0.93	0.97	1.02	1.06	1.11	1.15	1.20	1.25	1.30	1.35	1.40	1.45	1.51	1.56	1.62	1.67
	300	0.96	1.01	1.05	1.10	1.15	1.20	1.25	1.30	1.35	1.41	1.46	1.52	1.57	1.63	1.69	1.75	1.81

* SOURCE: Euro Codes

Figure 1
Fundamental basic wind velocity, vb,map in m/s

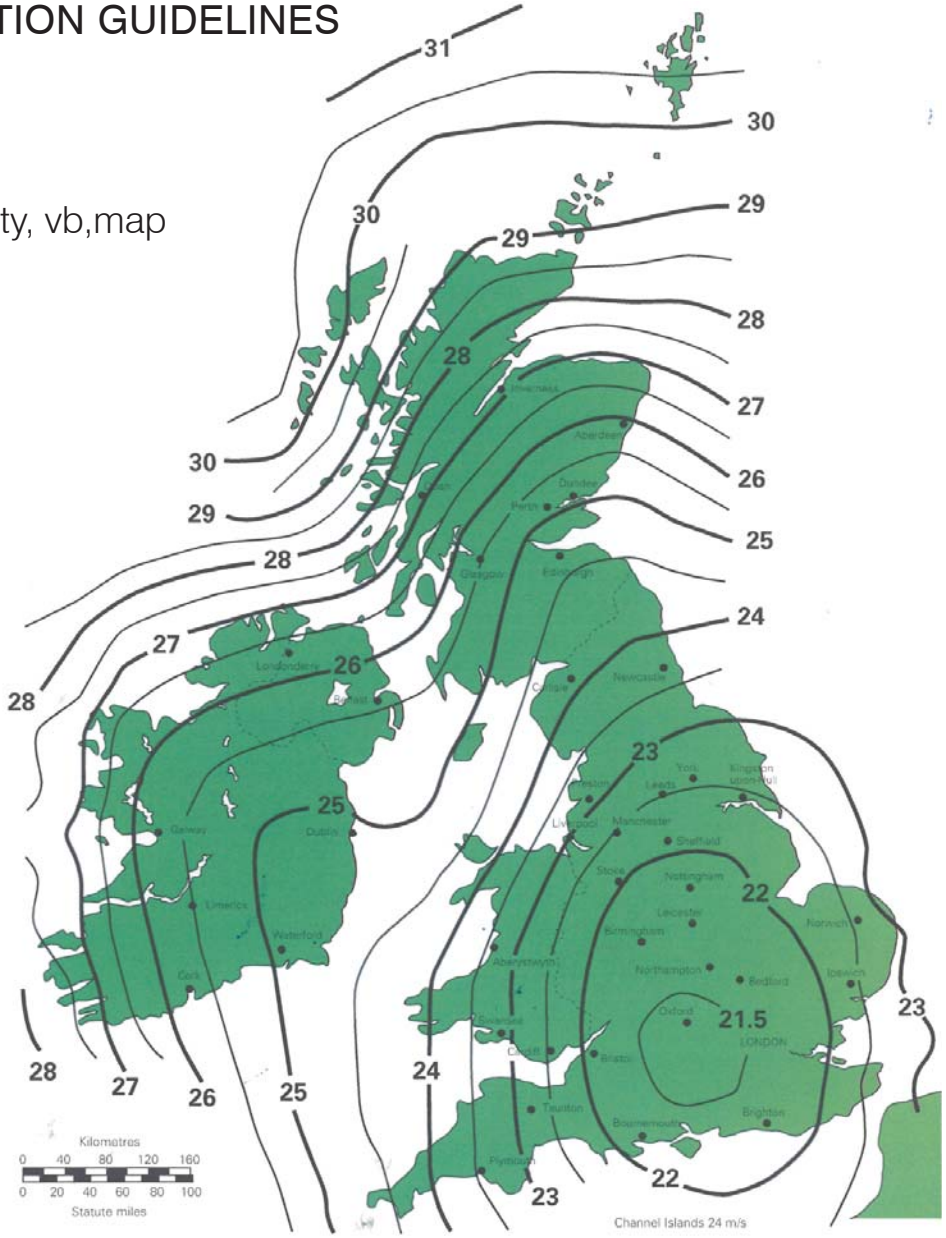
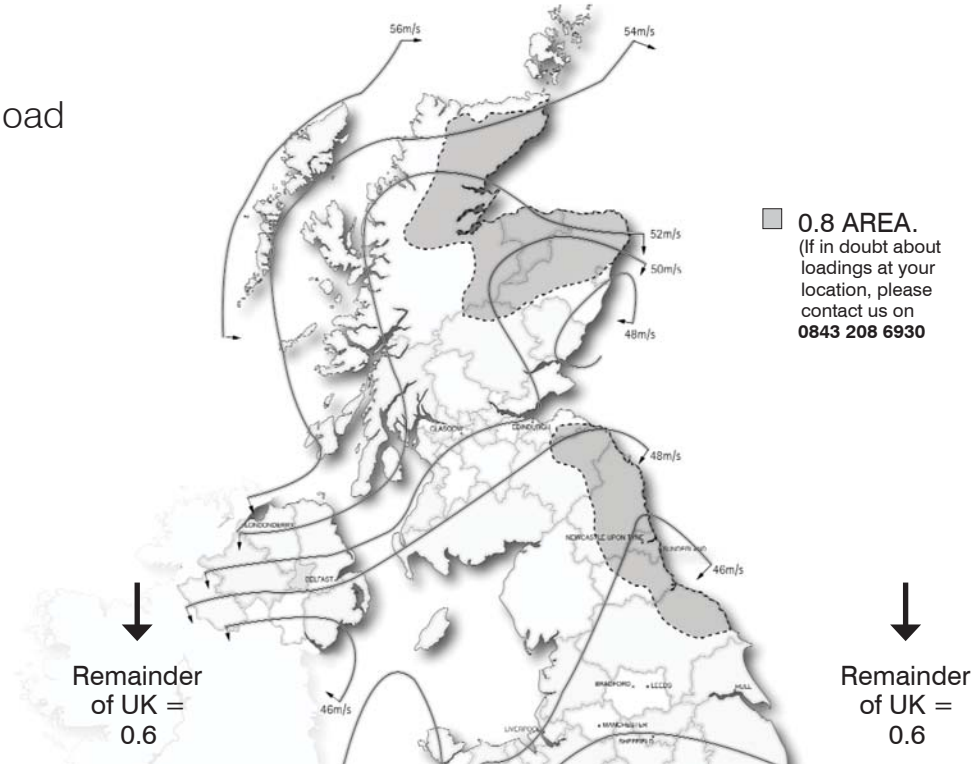


Figure 2
Characteristic ground snow load



ASSESSING THE EXISTING CONSERVATORY

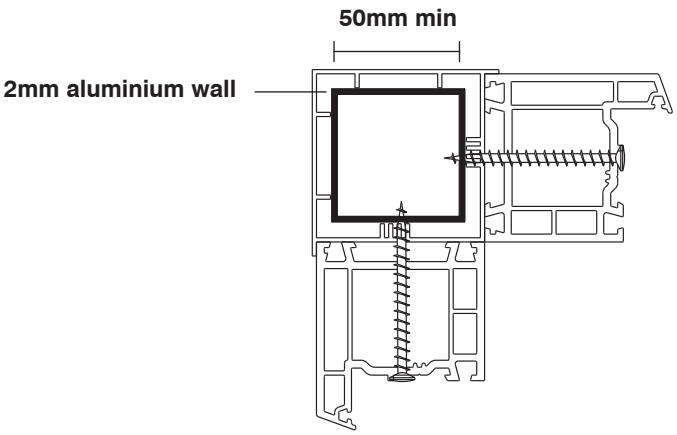
To upgrade an existing conservatory roof from polycarbonate or poorly performing glass to UltraRoof380, it is necessary to undertake some structural checks that MAY lead to additional site works.

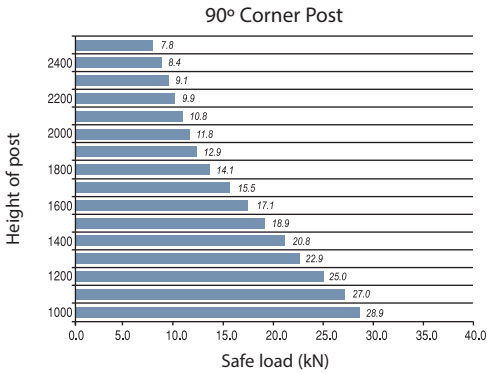
1. PVC Window Frames

The primary fixing method of the roof is at the house wall and through the head of the window frames and into the beam. At the corners fixing is made through the existing frames into the OSB corner brace (which is supplied) and into the beam. When fitting UltraRoof380 onto the existing frames, then the side frames may need de-glazing to allow fixing of box eaves beam. Use bay pole fixings at 450 centres and no more than 200mm from each eaves end / corner

2a. Corner Posts

Unreinforced PVC Frames. If at survey stage there is no reinforcement within the PVC frames it may be necessary to replace the corner posts. The dead load of UltraRoof380 is 38Kg/m^2 plus the snow load which as a minimum is typically 60kg/m^2. On a 5m x 5m Georgian roof for example, the load is 2803Kg which translates to a maximum loading at each corner of 7kN. Using the table below it can be seen that an aluminium corner post of 50mm square hollow section with a 2mm wall will be adequate - generally corner posts will be larger than this. At survey stage it may be difficult to confirm the presence of the aluminium inside the PVC sleeve until the roof is removed. Assuming new frames are not being installed, it may be advisable to send with the fitters some spare corner posts to swop with the existing.

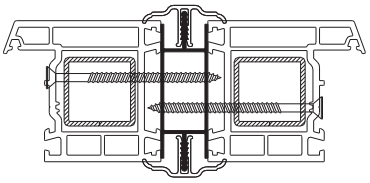




2b. Mullions

An aluminium mullion performs a number of functions, namely;

- acting as a wind post to prevent deflection of the frames by wind pressure
- to support the roof's eaves beam
- to assist with the connection of the side frames.



Mullion as a wind post:- the size of the mullion depends on the height of the frame. With full height frames (2100mm) the mullion needs to be the full front to back depth of the window frame and at least 20mm wide.

Adding mullions to existing frames is not really viable – this option should be considered if the consumer has requested new frames/ doors. Should the PVC frames be replaced, the insertion of suitable mullions can obviate the need for reinforcement in the frames (as far as structural reasons are concerned) – when using mullions, always place a 20mm washer behind the head of the screw to spread fixing loads.

3. Foundations

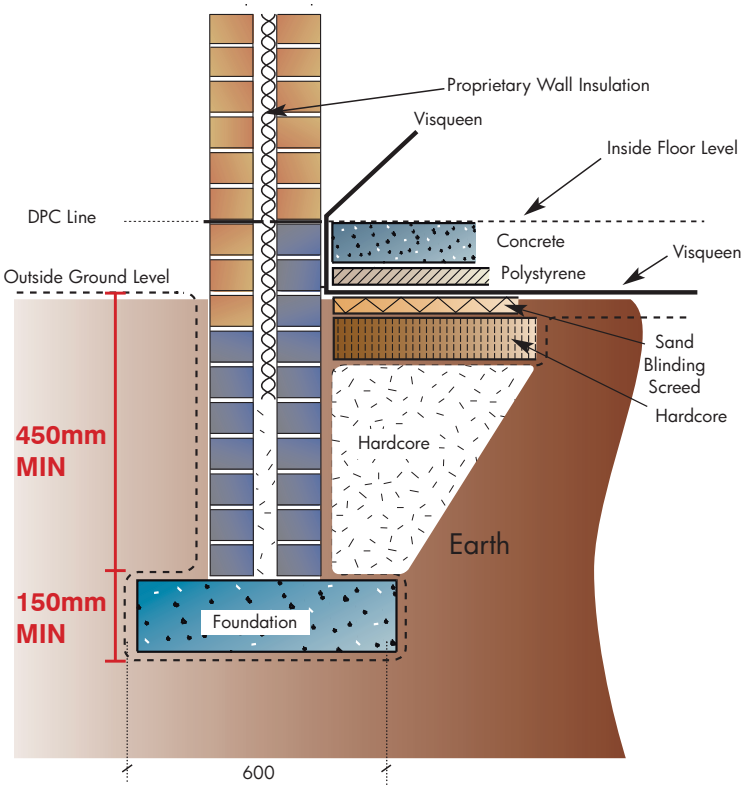
As everyone knows and appreciates, foundation design greatly depends on local ground conditions and advice should be sought from local LABC or an Approved Inspector like Ultraframe's partner jhai. However there are some rules which are absolute and therefore if the proposed conservatory falls outside this it will be necessary to underpin the existing or rip up the base and start again. Take up the old foundations if;

- There is an inadequate depth of foundation. The strip foundation MUST be a minimum of 450mm and the concrete strip a minimum of 150mm thick.

- There is visible movement between the house wall and the conservatory dwarf wall or cracks in the dwarf wall - this is a clear indication the foundations are not adequate and also require remedial work.

- Remediation work (mini piling etc.) can be undertaken cost effectively – Ultraframe recommends QUICKBASE 0845 644 0000 if you wish to persue this option.

IF IN DOUBT ABOUT STRUCTURAL COMPLIANCE, PLEASE CONSULT LABC, jhai OR A STRUCTURAL ENGINEER



ASSESSING THE EXISTING CONSERVATORY - GUIDELINES

Thermal Requirements (replacement roof)
The roof it's self is compliant with the Building Regulation's requirements and therefore if the thermally separating doors are being kept in place there will be no further considerations that need to be taken into account (England & Wales).

If it is a new extension or doors into the house are being removed, please contact Ultraframe (see p2).

Further set out information
When UltraRoof380 is compared to the Ultraframe Classic roof it sits higher and wider:

	TYPICAL DUO PITCH ROOF	
	On Slope	Overall Width
Standard Soffit	+ 53mm higher	+ 180mm wider (90mm each side)
Extended Soffit	+ 100mm higher	+402mm wider (201mm each side)

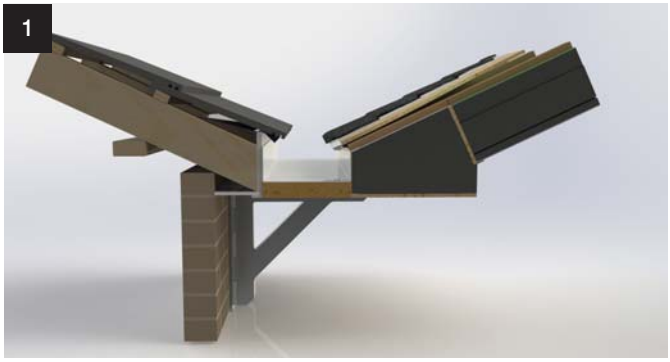
Minimising Spread of flame.
In situations where the side wall is within 1m of the boundary there should be a firewall with a maximum opening for a window of 1m2. If this is not possible alternative measures will be required such as a solid brick built wall along the boundary or a solid timber lap fence would be adequate.

Box gutters
A key part of assessing the existing conservatory's suitability for upgrading is to assess any box gutter requirements, but in particular how they are adequately supported.

The are two main types of box gutter:-
1. Conservatory style aluminium box gutter which goes between the structure and the roof box beam.
2. Built Up box gutter where the roof panel intersects directly with the supporting structure.

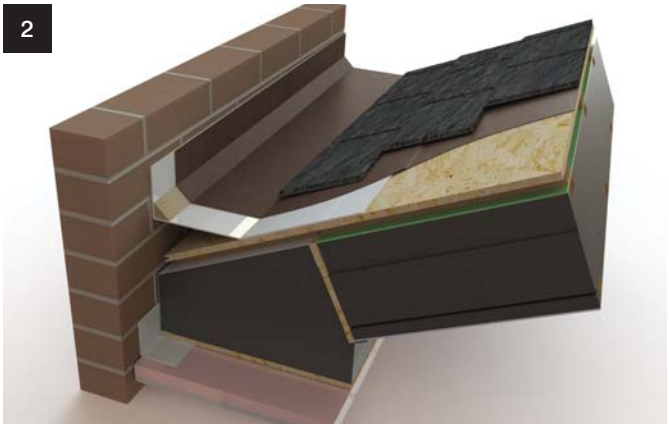
Conservatory Style Box gutter (See 1 across)
The use of this gutter will be mainly where the replacement roof meets the adjacent house roof at soffit level such as with a bungalow. The gutter is not providing structural support to the roof. The roof beam needs support at either end in spans up to 4m and an intermediate support for spans greater than this. The intermediate support can be a stud wall/ brick pier, support post or a portal aluminium solution.

1



Built up Box Gutter (See 2 across and over page)
Where the roof abuts a wall the recommended solution is the built up box gutter. The roof panel is supported by a channel fixed to the wall, the wall must therefore be strong enough to support the roof The gutter base is made from folded aluminium tapered to allow drainage. This solution is used for chimney breasts too.

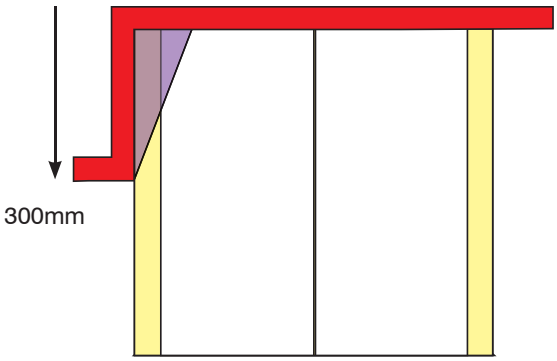
2



BOX GUTTER

Tapered box gutters are factory prepared from structural guide folded aluminium sheet

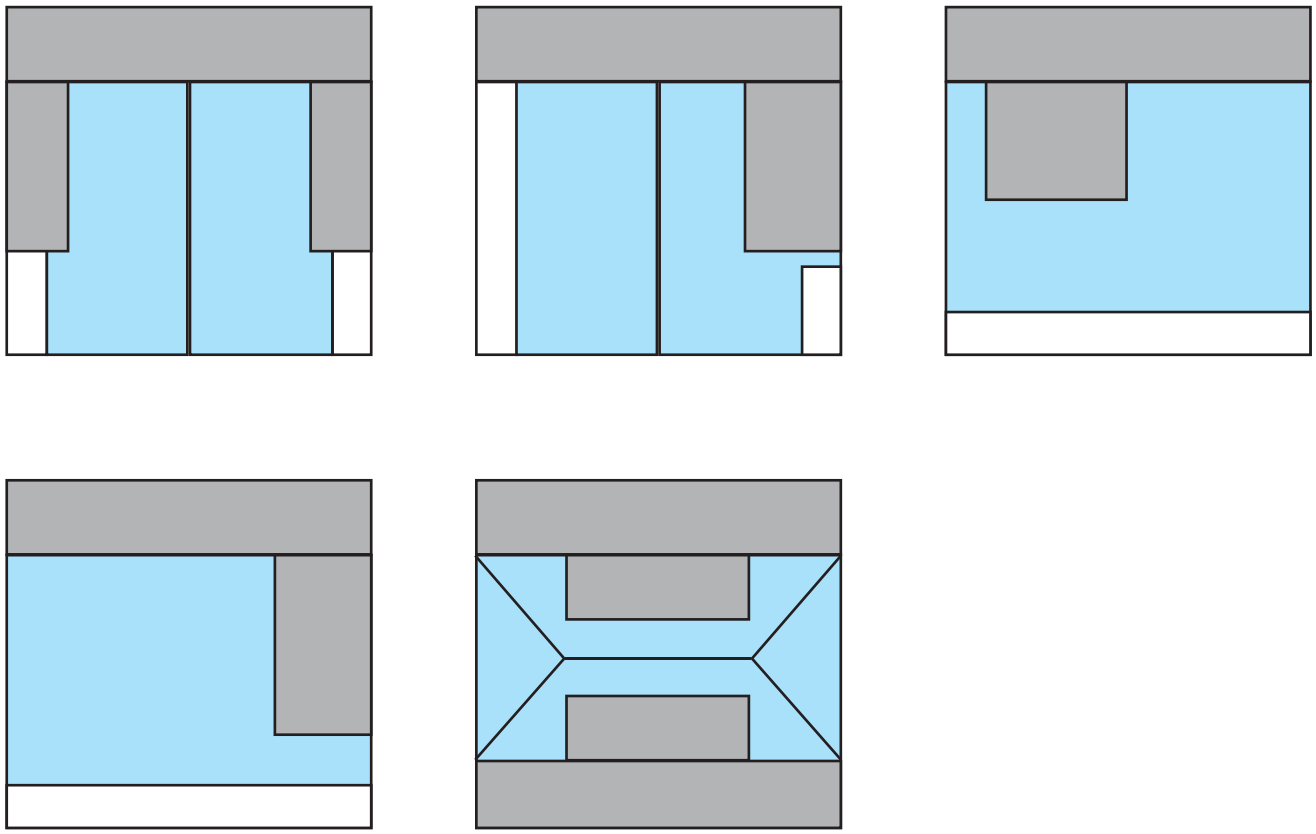
Tapered box gutter - basic guidelines



INTRUSIONS CUT OUTS

Only these ‘cut outs’ can be factory prepared - a site based ‘cut out’ for soil pipes etc is inside the installation guide.

HOST WALL / STRUCTURE



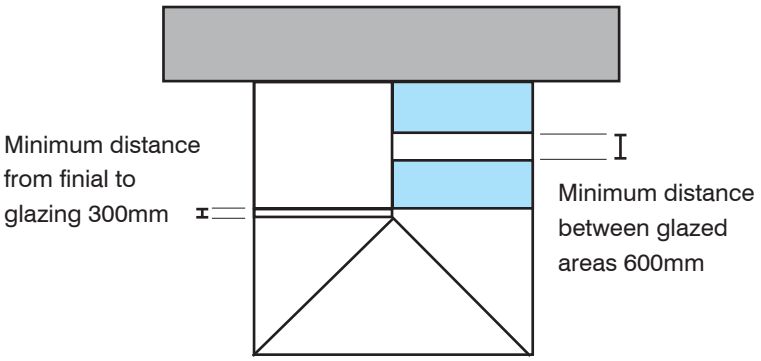
INTEGRATED GLAZED PANEL POSITIONING

Glazing can be fitted immediately adjacent to the host wall or MUST be at least 450mm away from the host wall.

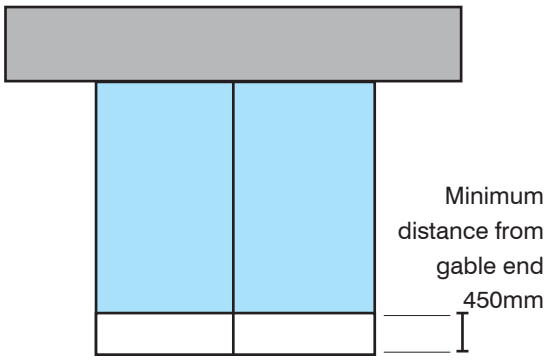
Glazing area - bars must be a minimum of 300mm centres and are spaced at a max 1000mm centres - multiple glass panels in series is possible. e.g. 1800mm glazed area in 3x 600mm or 2 x 900mm

GLAZING AREA HOST WALL / STRUCTURE

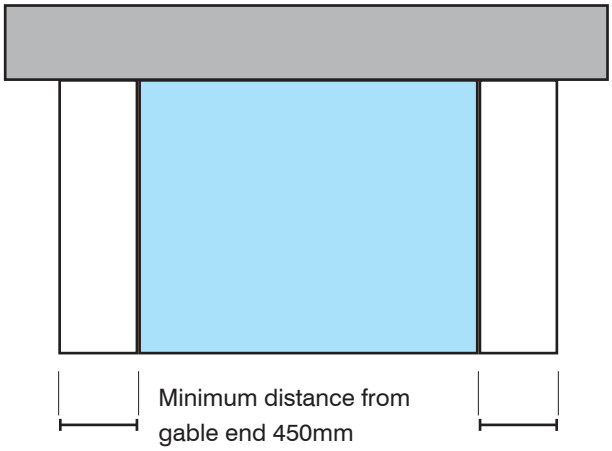
Georgian and Victorian



Gable



Lean-to



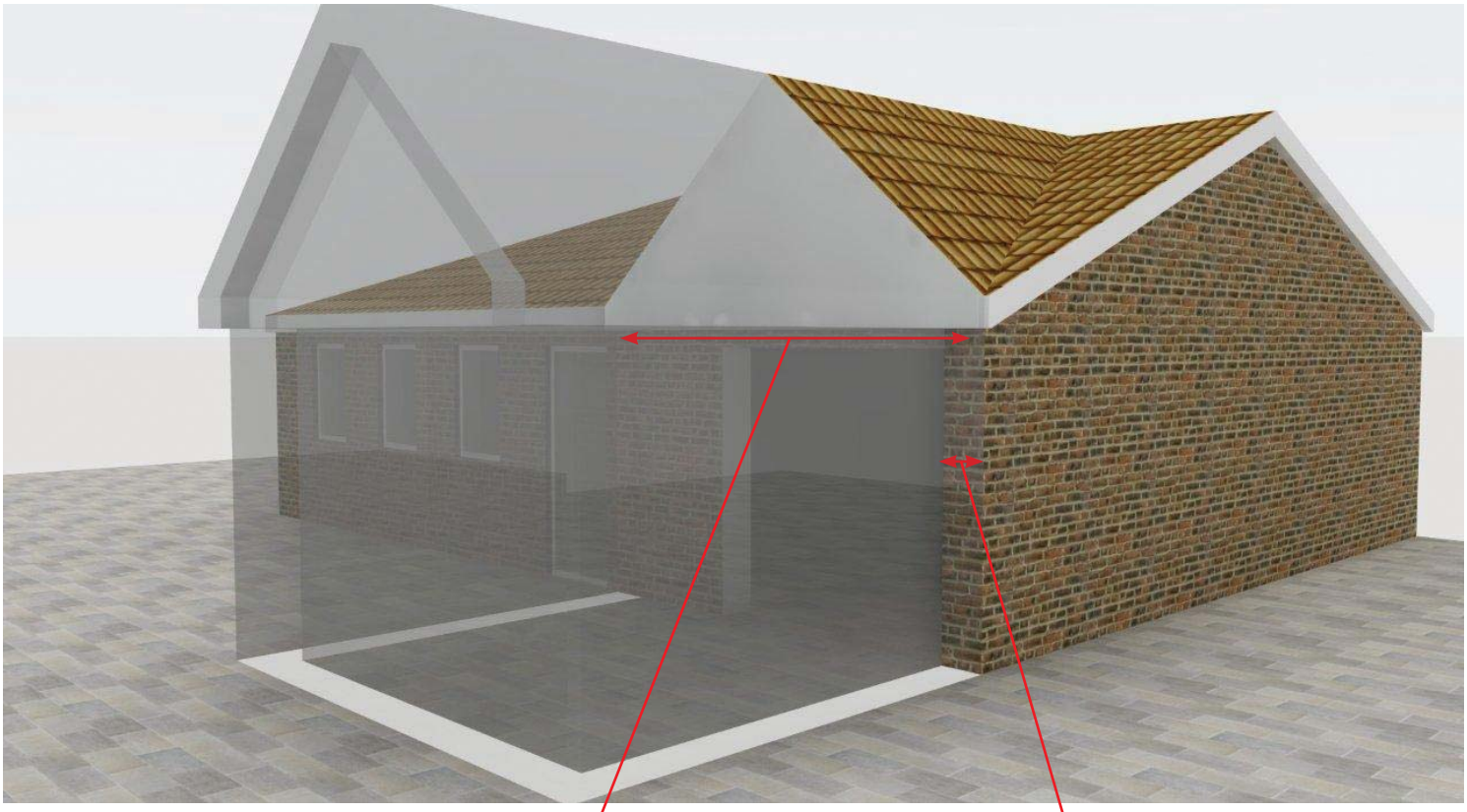
SPREAD RESTRAINT STRAP

To prevent spread of the roof against the host building it may be necessary to include a strap.

The spreading forces can ordinarily be contained within the adjoining brick wall however there will be occasions when this wall does not have enough strength.

Examples of this are shown below:-

1. No return on the brick wall (the return should be a minimum of 750mm
2. The height of the brick work across the face is insufficient as in bungalow situations.
   (If it is less than 1000mm, a strap is specified)



2. Not enough brick work above door to transfer load.
i.e. less than 1000mm

1.Return on brickwork less than 750mm

FULL RANGE OF STYLE SHAPES AND OPTIONS

KEY

Existing Wall

Box Gutter

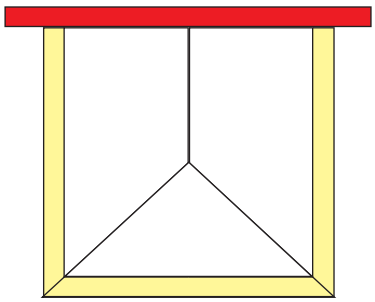
Box Beam

Tapered Box Gutter (Supplied)

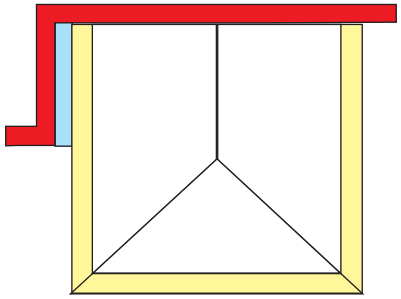
S Structural Support

Georgian - Pitch 15° to 40°

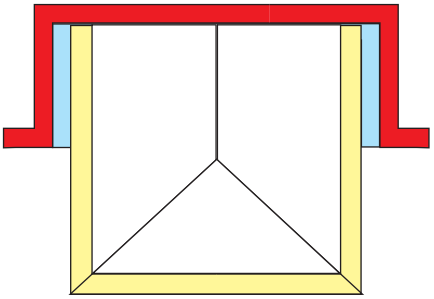
MINIMUM RIDGE LENGTH 300MM



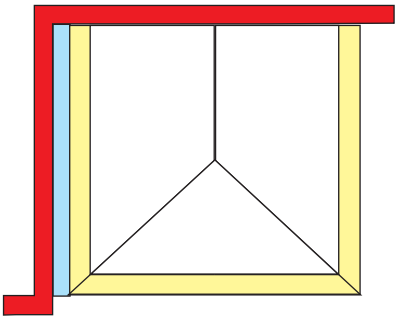
Georgian



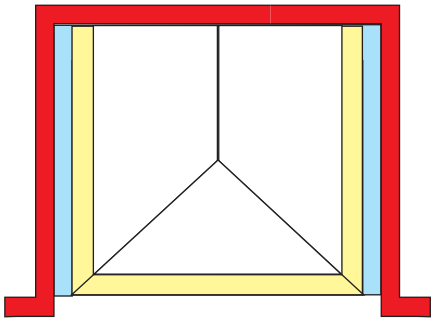
Georgian with left or right box gutter (Left hand shown)



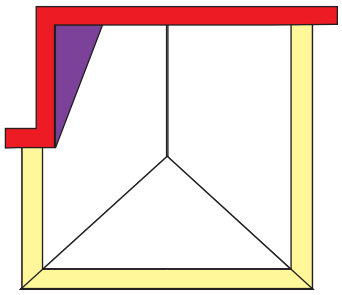
Georgian with left and right box gutter



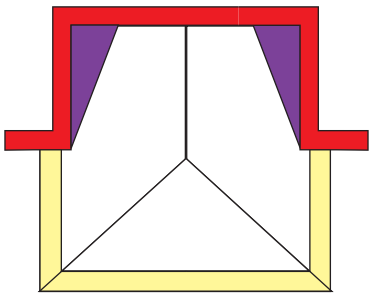
Georgian with left or right box gutter (Wall protruding, left hand shown)



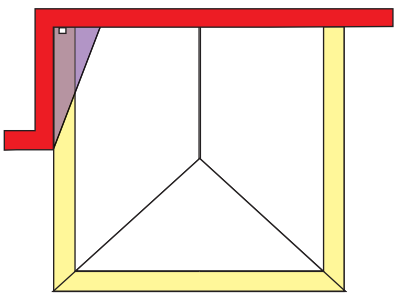
Georgian with left and right box gutter (Wall protruding)



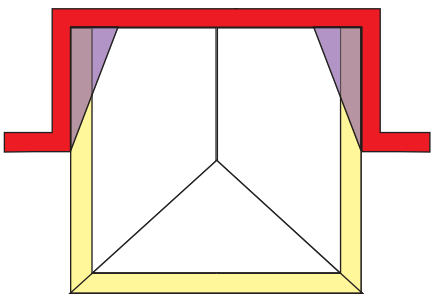
Georgian with left or right wrap (Left hand shown)



Georgian with left and right wrap



Georgian with left or right wall (Left hand shown)



Georgian with left and right wall

Equal pitch only and no out of square

FULL RANGE OF STYLE SHAPES AND OPTIONS

KEY

Existing Wall

Box Gutter

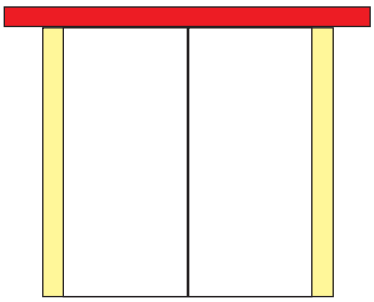
Box Beam

Tapered Box Gutter (Supplied)

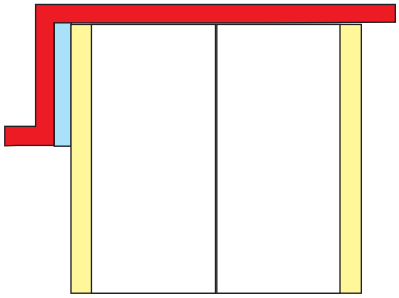
S Structural Support

Gable - Pitch 15° to 40°

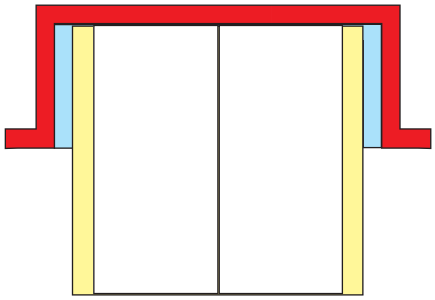
MINIMUM RIDGE LENGTH 300MM



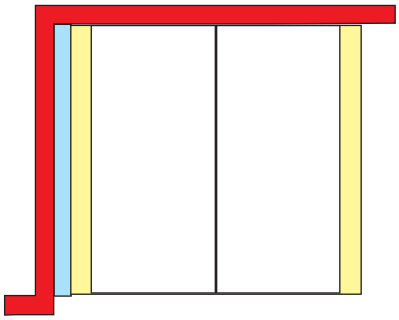
Gable



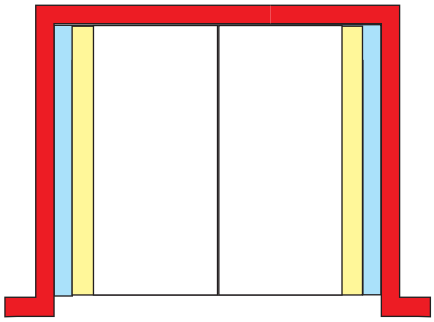
Gable with left or right box gutter (Left hand shown). 6m limit.



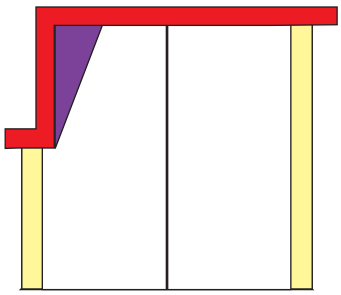
Gable with left and right box gutter



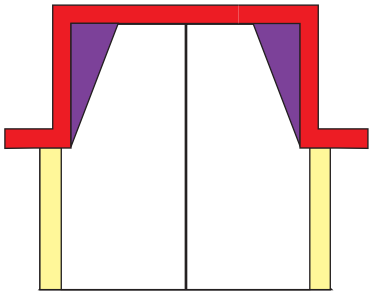
Gable with left or right box gutter (Wall protruding, left hand shown)



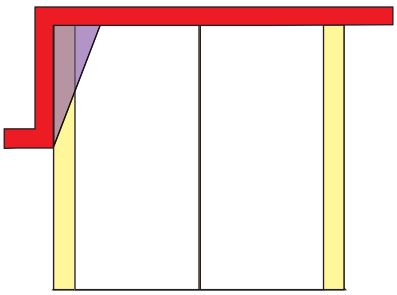
Gable with left and right box gutter (Wall protruding)



Gable with left or right wrap (Left hand shown)



Gable with left and right wrap



Gable with left or right wall (Left hand shown)

Equal pitch only and no out of square

FULL RANGE OF STYLE SHAPES AND OPTIONS

KEY

Existing Wall

Box Gutter

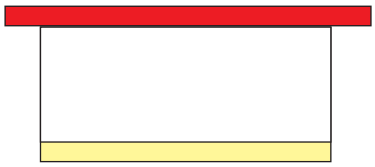
Box Beam

Tapered Box Gutter (Supplied)

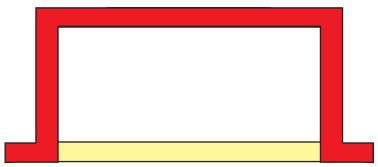
S Structural Support

Lean-to - Pitch 12½° to 40°

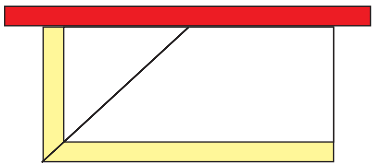
MINIMUM WALL PLATE LENGTH 300MM WITH ONE HIP - 600MM WITH 2 HIPS



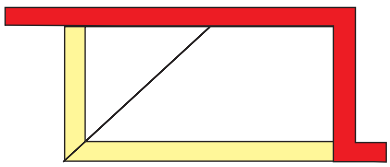
Lean-to raked.
7m max beam.



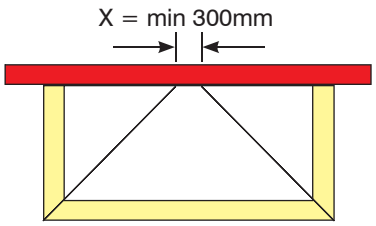
Lean-to non-raked



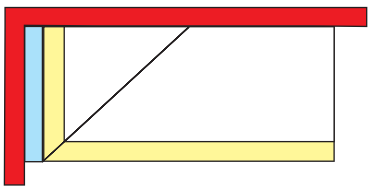
Lean-to left or right hip, raked (Left hand shown)



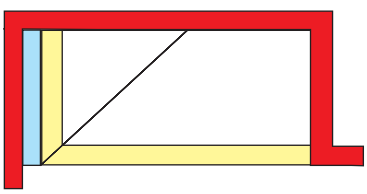
Lean-to left or right hip, non-raked (Left hand shown)



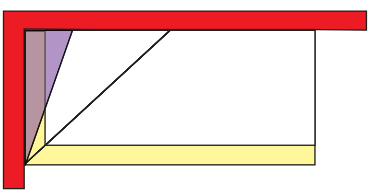
Lean-to double hip (half Wok)
If X or Y increases use half ridge.



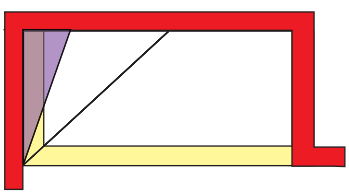
Lean-to box gutter, left or right hip, raked (Left hand shown)



Lean-to box gutter, left or right, non raked (Left hand shown)



Lean-to left or right wall hip, raked (Left hand shown)



Lean-to left or right wall hip, non-raked (Left hand shown)

Equal pitch only and no out of square

FULL RANGE OF STYLE SHAPES AND OPTIONS

KEY

Existing Wall

Box Gutter

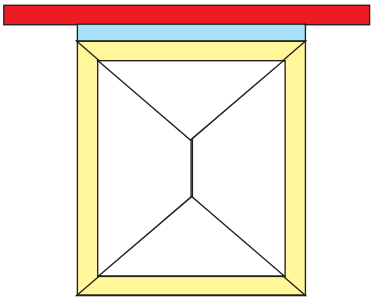
Box Beam

Tapered Box Gutter (Supplied)

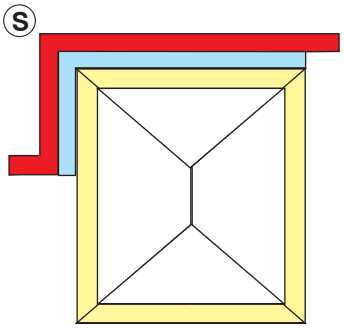
S Structural Support

Double Hipped Georgian - Pitch 15° to 40°

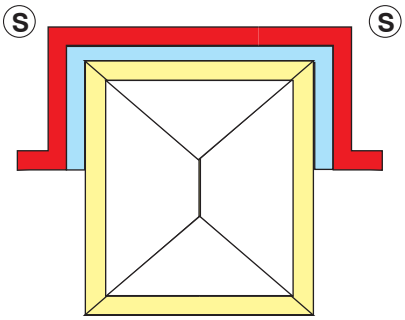
MINIMUM RIDGE LENGTH 600MM



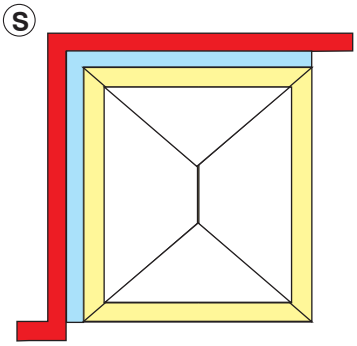
Double Hipped Georgian BBG



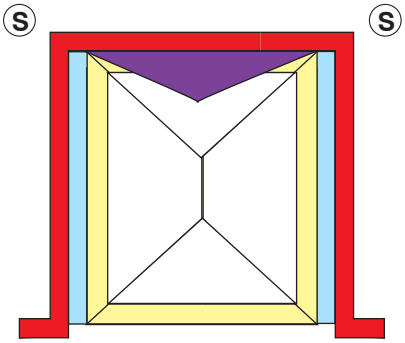
Double Hipped Georgian Left or right BBG (Left hand shown)



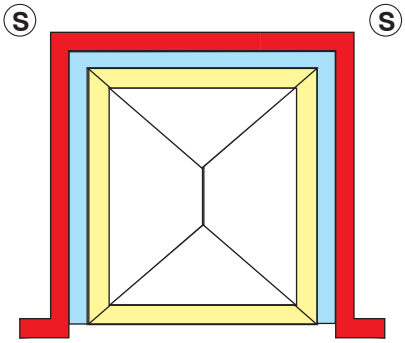
Double Hipped Georgian Left and right BBG



Double Hipped Georgian



Double Hipped Georgian - tapered box gutter



Double Hipped Georgian - 265 box gutter

Equal pitch only and no out of square

FULL RANGE OF STYLE SHAPES AND OPTIONS

KEY

Existing Wall

Box Gutter

Box Beam

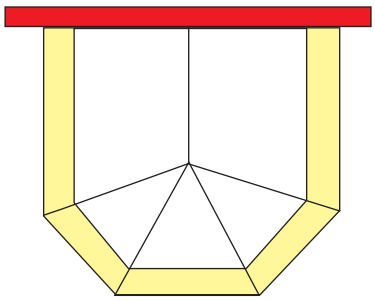
Tapered Box Gutter (Supplied)

S Structural Support

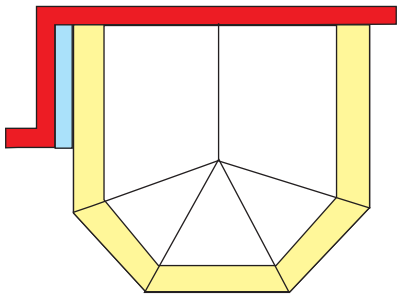
Victorian - Pitch 15° to 40° (3&5 bay)

MINIMUM RIDGE LENGTH 300MM

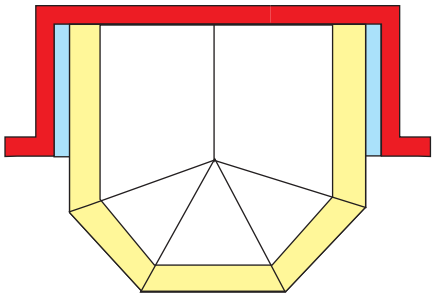
Facet sizes must be equal size and equal angle



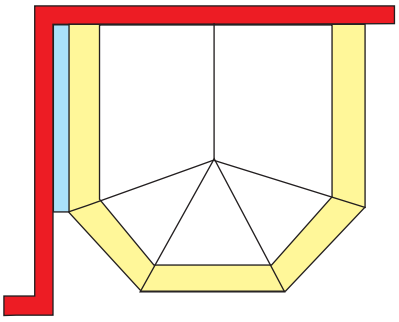
Victorian



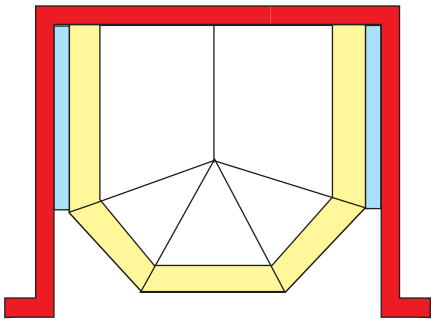
Victorian with left or right box gutter (Left hand shown)



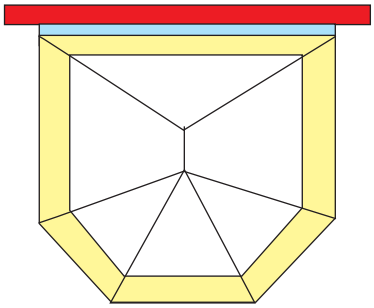
Victorian



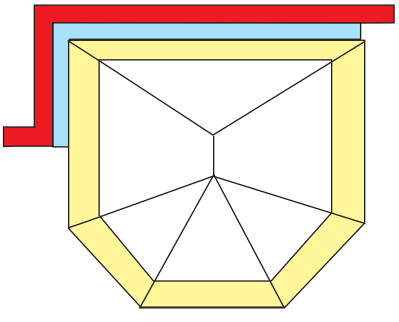
Victorian with left or right box gutter (Wall protruding, left hand shown)



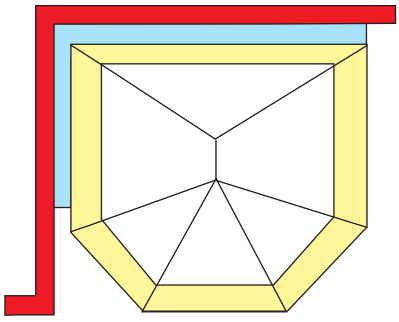
Victorian with left and right box gutter (Wall protruding)



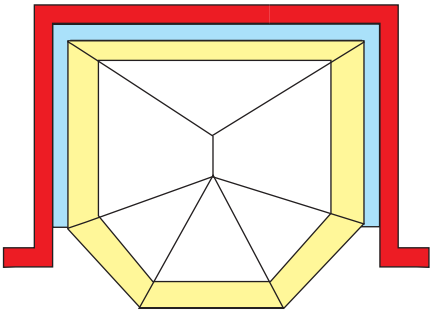
Victorian Hipped Back



Victorian hip back left or right BBG (Left hand shown)



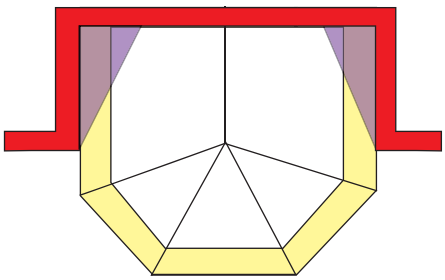
Victorian with left or right box gutter (Wall protruding, left hand shown)



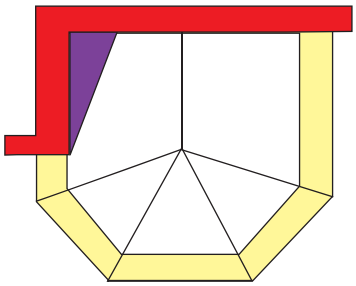
Victorian with left and right box gutter

Equal pitch only and no out of square

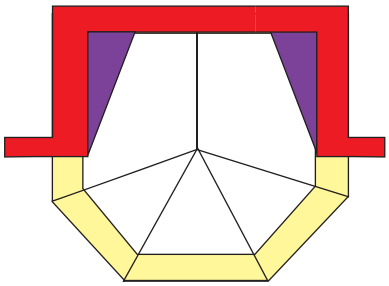
FULL RANGE OF STYLE SHAPES AND OPTIONS



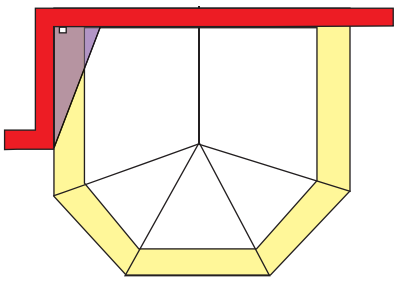
Victorian with left and right wrap



Victorian with left or right wrap (Left hand shown)



Victorian with left and right wrap



Victorian with left or right wall (Left hand shown)

Equal pitch only and no out of square

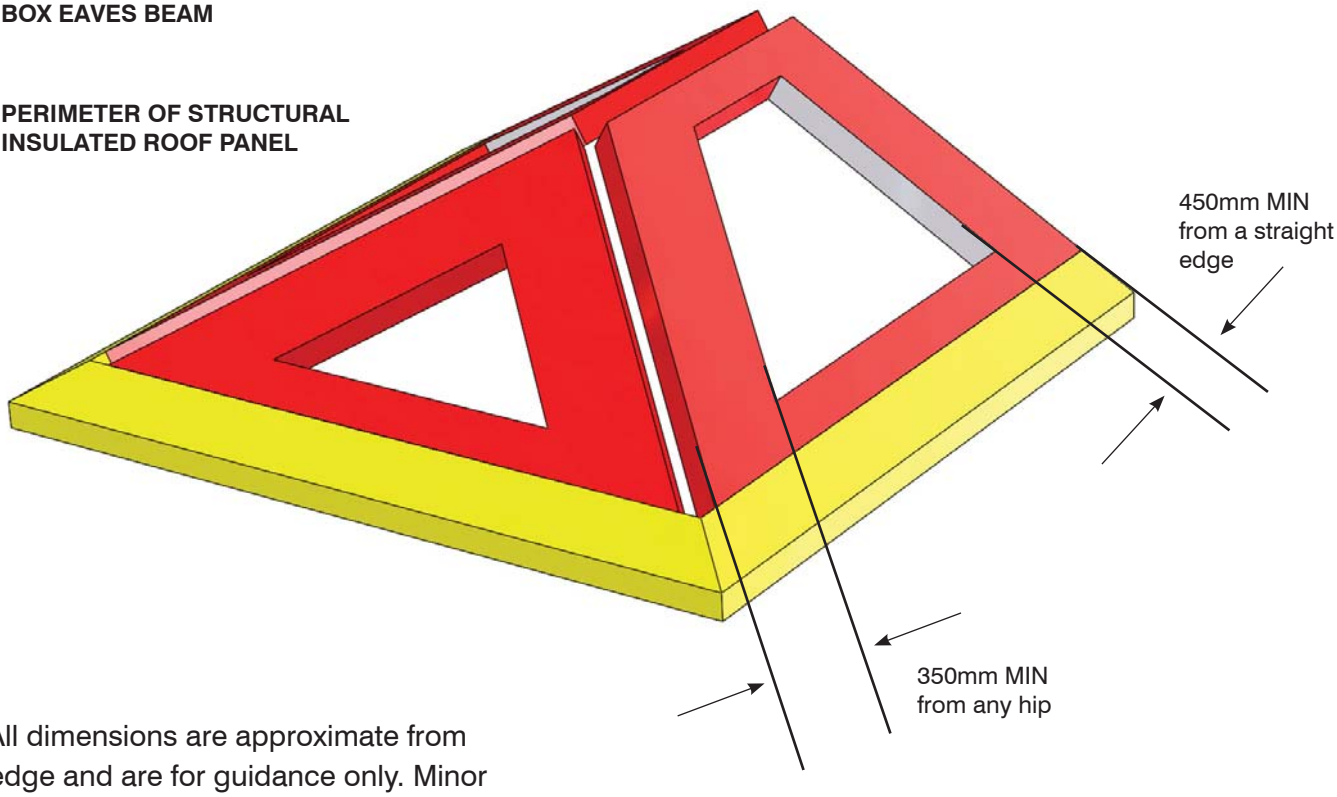
APPENDIX 1

VELUX WINDOW INSERTION GUIDELINES

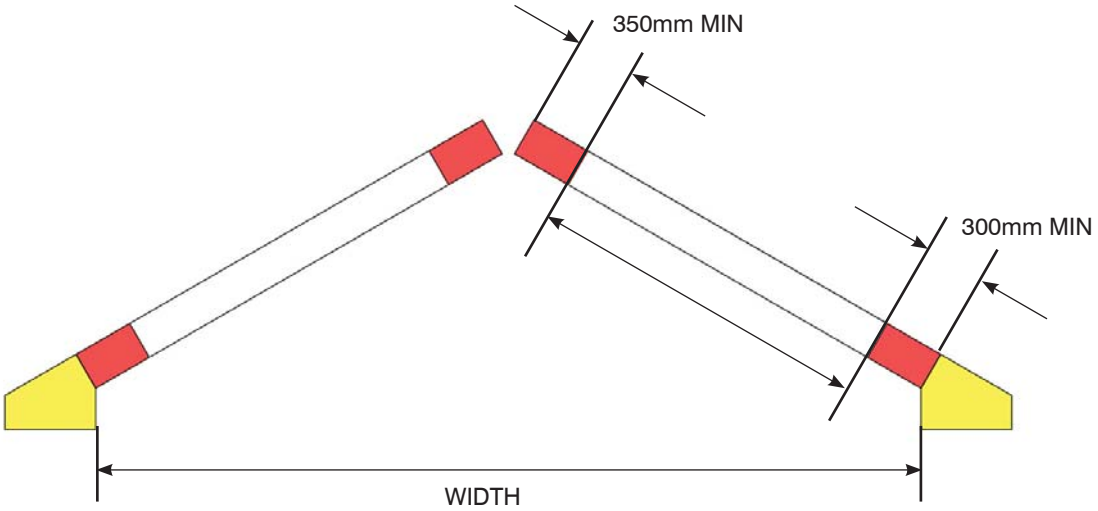
Should your client prefer a roof window, then Ultraframe recommends Velux. See p26 - 37 for details on the sizes / product codes of relevant Velux roof windows that can be physically inserted. Velux roof windows NOT supplied by Ultraframe but a specific flashing kit is manufactured by Ultraframe to weather your Velux

BOX EAVES BEAM

PERIMETER OF STRUCTURAL INSULATED ROOF PANEL



Note: All dimensions are approximate from panel edge and are for guidance only. Minor dimensional changes possible depending on roof pitch design. Final checks must be made via U-Design.

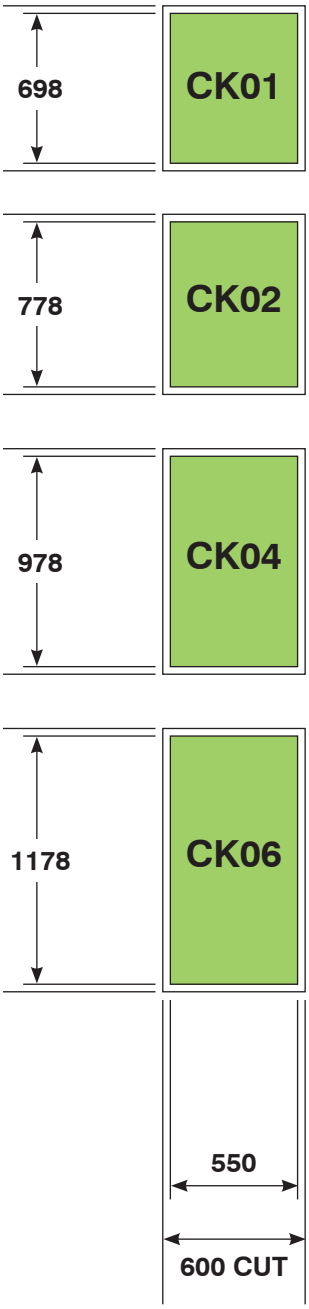


APPENDIX 2

VELUX WINDOWS - ROOF WINDOW SIZE CODE

Ultraframe recommends Velux roof windows for use in UltraRoof380. The codes below eg. CK02 can be referenced in the Velux brochure and sourced in your local trade intermediary / merchant / specialist.

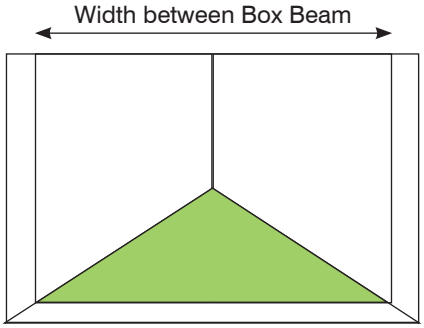
p27 - 37 explains which Velux window (and how many) can be inserted into your preferred extension style (rules are for each elevation) which is influenced by the roof's width, projection and loadings.



APPENDIX 3

GEORGIAN FRONT ROOF WINDOW OPTIONS

Use this chart to determine if Single or Double Velux roof windows can be installed in each elevation - N.B. FINAL ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

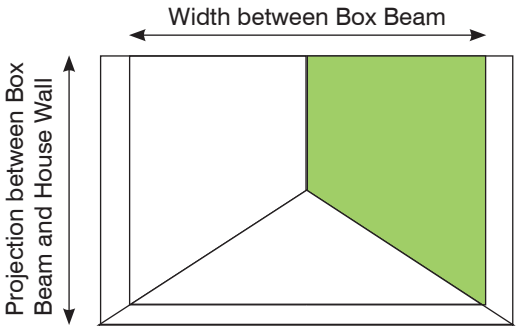
2 Two of this specified Velux can be used in this elevation

WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
		PK25	CK01	CK02	CK04	CK06
3m	15° - 45°					
3.5m	15° - 45°					
4m	15°					
	20°					
	25°					
	30°					
	35°					
	40°					
	45°					
4.5m	15°					
	20°					
	25°					
	30°					
	35°					
	40°					
	45°					
5m	15°					
	20°					
	25°					
	30°					
	35°		2			
	40°		2	2		
	45°		2	2	2	
5.5m	15°		2	2		
	20°		2	2		
	25°		2	2		

APPENDIX 3

GEORGIAN SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

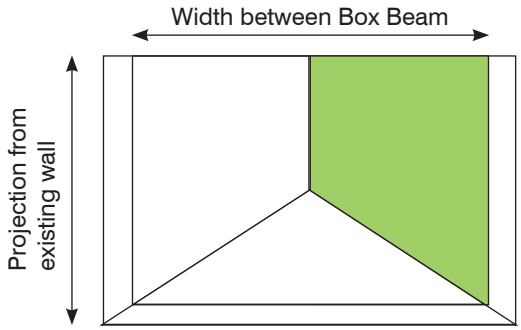
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	3m	15° - 45°					
3m	3m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
3.5m	3m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
4m	3m	15°					
		20°		2			
		25°		2			
		30°		2			
		35°		2			
		40°		2			
		45°		2	2		
4.5m	3m	15°		2	2		
		20°		2	2		
		25°		2	2		
		30°		2	2	2	
		35°		2	2	2	
		40°		2	2	2	
		45°		2	2	2	
5m	3m	15°		2	2		
		20°		2	2		
		25°		2	2		
		30°		2	2	2	
		35°		2	2	2	
		40°		2	2	2	2
		45°		2	2	2	2

APPENDIX 3

GEORGIAN SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

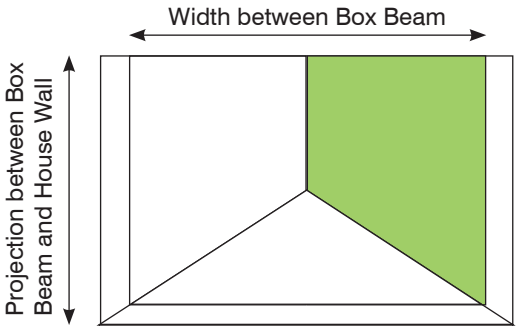
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	3.5m	15° - 45°					
3m	3.5m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
3.5m	3.5m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
4m	3.5m	15°					
		20°		2			
		25°		2			
		30°		2	2		
		35°		2	2		
		40°		2	2	2	
		45°		2	2	2	2
4.5m	3.5m	15°		2	2	2	
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
5m	3.5m	15°		2	2	2	
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2

APPENDIX 3

GEORGIAN SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

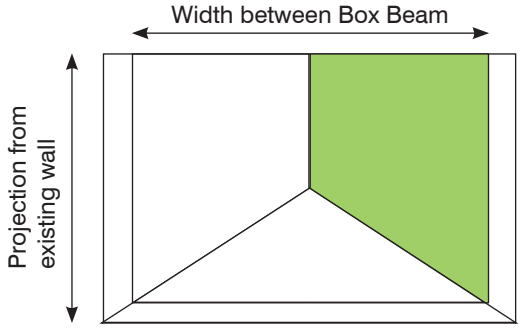
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	4m	15° - 45°					
3m	4m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
3.5m	4m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
4m	4m	15°					
		20°		2			
		25°		2			
		30°		2	2		
		35°		2	2		
		40°		2	2	2	
		45°		2	2	2	2
4.5m	4m	15°		2	2	2	
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
5m	4m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2

APPENDIX 3

GEORGIAN SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

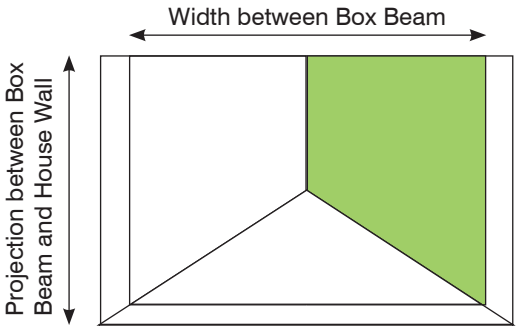
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	4.5m	15° - 45°					
3m	4.5m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
3.5m	4.5m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
4m	4.5m	15°					
		20°		2			
		25°		2			
		30°		2	2		
		35°		2	2		
		40°		2	2	2	
		45°		2	2	2	2
4.5m	4.5m	15°		2	2	2	
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
5m	4.5m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2

APPENDIX 3

GEORGIAN SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

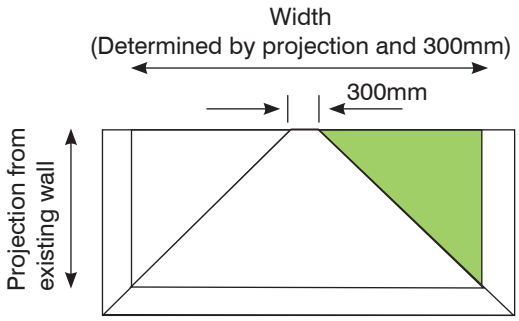
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	5m	15° - 45°					
3m	5m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
3.5m	5m	15°					
		20°					
		25°					
		30°					
		35°					
		40°					
		45°					
4m	5m	15°					
		20°		2			
		25°		2			
		30°		2	2		
		35°		2	2		
		40°		2	2	2	
		45°		2	2	2	2
4.5m	5m	15°		2	2	2	
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
5m	5m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2

APPENDIX 3

HIPPED LEAN TO SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

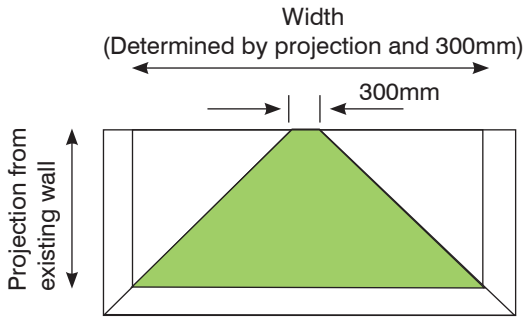
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	-	15° - 45°					
3m	-	15°					
		20°		■			
		25°		■	■		
		30°		■	■		
		35°		■	■		
		40°	■	■	■	■	
		45°	■	■	■	■	■
3.2m	-	15°		■	■		
		20°		■	■		
		25°	■	■	■	■	
		30°	■	■	■	■	
		35°	■	■	■	■	■
		40°	■	■	■	■	■
		45°	■	■	■	■	■
3.5m	-	15°	■	■	■	■	■
		20°	■	■	■	■	■
		45°	■	■	■	■	■

APPENDIX 3

HIPPED LEAN TO SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

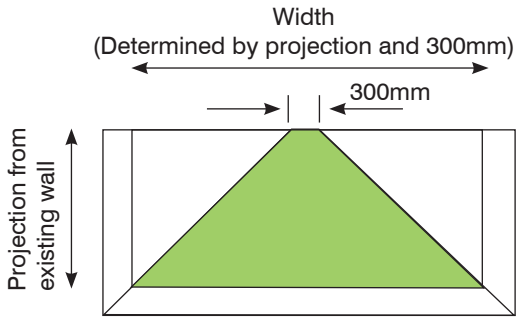
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	5060mm	15°					
		20°					
		25°					
		30°					
		35°		2	2		
		40°		2	2		
		45°		2	2	2	
2.5m	5.5m	15°		2			
		20°		2	2		
		25°		2	2		
		30°		2	2		
		35°		2	2	2	
		40°		2	2	2	2
		45°		2	2	2	2
2.5m	6m	15°		2	2	2	
		20°		2	2	2	
		25°		2	2	2	
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
2.5m	6.5m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
2.5m	7m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2

APPENDIX 3

HIPPED LEAN TO SIDE ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

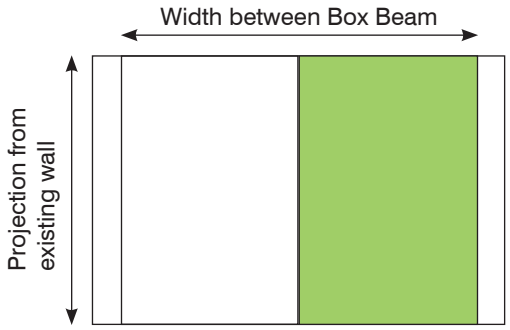
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
3m	6060mm	15°		2	2	2	
		20°		2	2	2	
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
3m	6.5m	15° - 45°		2	2	2	2
3m	7m	15°		2	2	2	2
		20°		2	2	2	2
		45°		2	2	2	2
3.2m	6464mm	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
3.2m	7m	15° - 45°		2	2	2	2
3.2m	7.5m	15°		2	2	2	2
		20°		2	2	2	2
		45°		2	2	2	2
3.5m	7060mm	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
3.5m	7.5m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
3.5m	8m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2

APPENDIX 3

GABLE FRONT ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

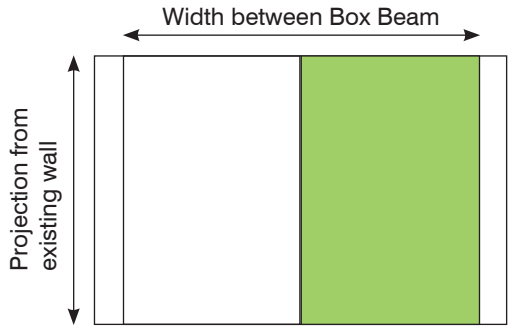
2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
2.5m	2.5m	15°	■				
		20°	■				
		25°	■				
		30°	■	■			
		35°	■	■	■		
		40°	■	■	■		
		45°	■	■	■	■	
2.5m	3m	15°	■	■	■		
		20°	■	■	■		
		25°	■	■	■		
		30°	■	■	■	■	
		35°	■	■	■	■	
		40°	■	■	■	■	■
		45°	■	■	■	■	■
2.5m	3.5m	15°	■	■	■	■	
		20°	■	■	■	■	■
		25°	■	■	■	■	■
		30°	■	■	■	■	■
		35°	■	■	■	■	■
		40°	■	■	■	■	■
		45°	■	■	■	■	■
2.5m	4m	15°	■	■	■	■	■
		20°	■	■	■	■	■
		25°	■	■	■	■	■
		30°	■	■	■	■	■
		35°	■	■	■	■	■
		40°	■	■	■	■	■
		45°	■	■	■	■	■
2.5m	4.5m	15°	■	■	■	■	■
		20°	■	■	■	■	■
		25°	■	■	■	■	■
		30°	■	■	■	■	■
		35°	■	■	■	■	■
		40°	■	■	■	■	■
		45°	■	■	■	■	■

APPENDIX 3

GABLE FRONT ROOF WINDOW OPTIONS

Chart Below For Single and Double Window Options Only For More Options Check With U-Design or Ultraframe - N.B. ROOF WINDOW OPTIONS MUST BE CHECKED BY U-DESIGN



One of this specified Velux can be used in this elevation

2 Two of this specified Velux can be used in this elevation

PROJECTION	WIDTH	ROOF PITCH	VELUX OPTION AVAILABLE				
			PK25	CK01	CK02	CK04	CK06
3m	2.5m	15°					
		20°					
		25°					
		30°		2			
		35°		2	2		
		40°		2	2		
		45°		2	2	2	
3m	3m	15°		2	2		
		20°		2	2		
		25°		2	2		
		30°		2	2	2	
		35°		2	2	2	
		40°		2	2	2	2
		45°		2	2	2	2
3m	3.5m	15°		2	2	2	
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
3m	4m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2
3m	4.5m	15°		2	2	2	2
		20°		2	2	2	2
		25°		2	2	2	2
		30°		2	2	2	2
		35°		2	2	2	2
		40°		2	2	2	2
		45°		2	2	2	2

APPENDIX 4 - APPROPRIATE FIXINGS

The correct selection/specification of fixings for UltraRoof380 is CRITICAL.

Ultraframe recommends HILTI chemical anchors where specified and expanding anchors in other locations (to resist pull out forces).Using HILTI product codes/descriptions, use a HIT-V 80mm x M8 threaded anchor (stud*) fastened into a 10mm clean drill hole with gun injected mortar or adhesive capsules (with a minimum 80mm embedded) - always rigorously follow the manufacturers guidance www.hilti.com
In addition Ultraframe recommends the following alternatives; Fischer M8/M10 masonry injection anchor FIS V
Rawl Fixings M8/M10 CFS RM50 or CFS RP30

* Design load for each stud 2.5kN

APPENDIX 5

CAVITY TRAY ASSESSMENT / VERTICAL DPC REQUIREMENT

It is good practice to undertake a risk assessment to determine IF cavity trays should be retro fitted.

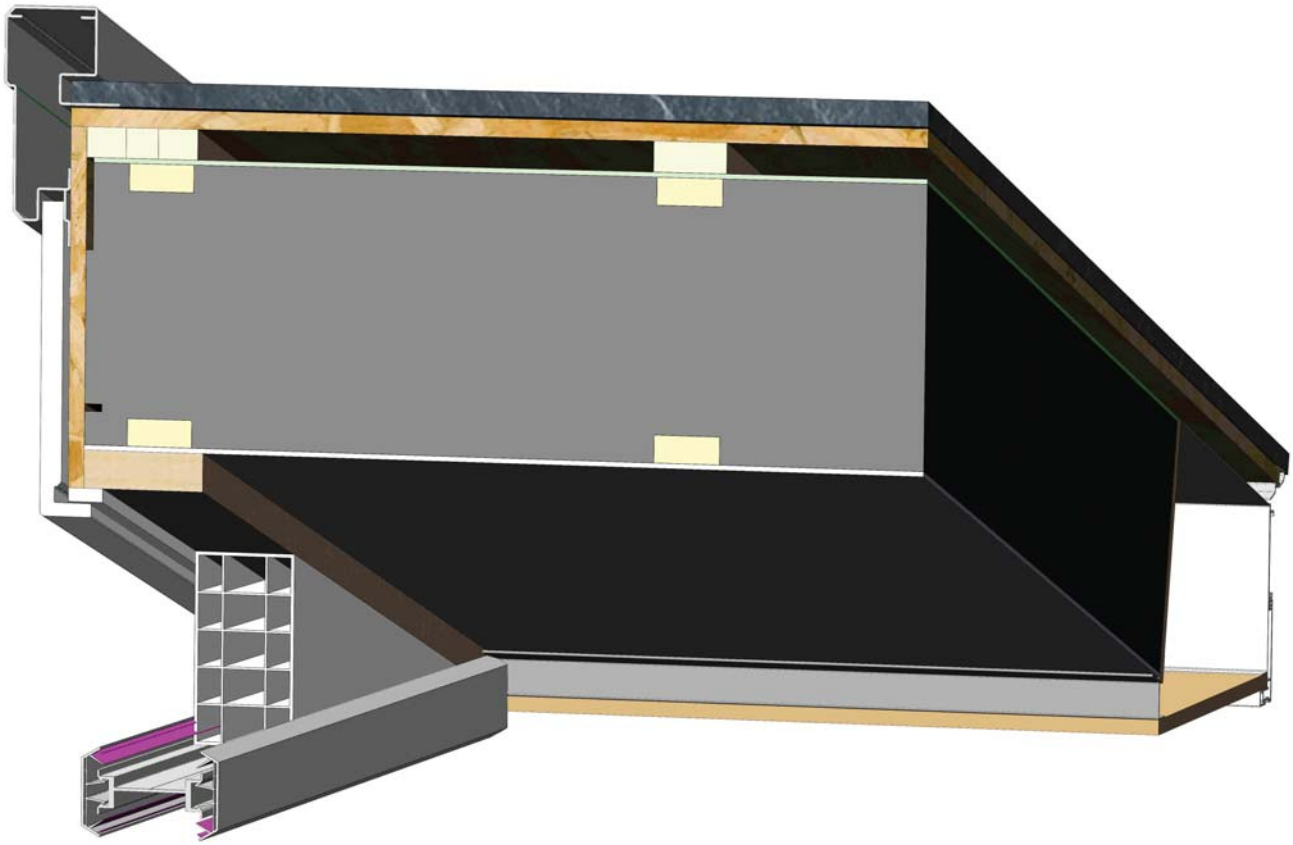
In zones 1 and 2, cavity tray installation is based upon risk assessment - factors include determining if elevation faces prevailing wind, absorbancy of brickwork and monitor joint type. Cavity trays MUST be installed in severe/very severe exposure zones (3 and 4).

KEY	EXPOSURE ZONES	Approximate wind-driven rain* (litres/m² per spell)
	1 Sheltered	Less than 33
	2 Moderate	33 to less than 58.5
	3 Severe	58.5 to less than 100
	4 Very Severe	100 or more

* Maximum wall spell index derived from BS8104

APPENDIX 6

GABLE TIE BEAM



A gable tie beam is supplied on every gable project the tie beam has an offset of 21mm and the underside lines up with the top of the existing frames – see illustration.

Additionally a further box beam can be fastened to the tie beam – the specification of this item depends upon wind loads at the installation address and the design specification of the fenestration products below (eg large span doors).

APPENDIX 7
MATRIX

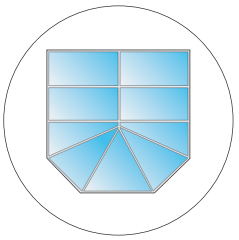
For accurate loading and pricing use the electronic structural design guide and U-Design software

Victorian 3 Bay

All matrices include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Minimum ridge length is 300mm.
All facets must be equal size and equal angle.

Pitch Factor (addition)	
15° - 25°	as matrix
25.1° - 30°	+4%
30.1° - 35°	+8%
35.1° - 40°	+12%



Width (mm)

Projection (mm)

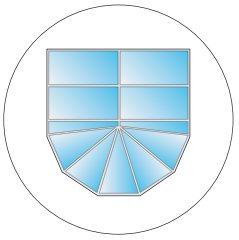
£	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
2500	£2,346	£2,468	£2,587	£2,705	£2,820	£2,933	£3,044	£3,153	£3,261	£3,366	£3,469	£3,570	£3,669
2750	£2,532	£2,665	£2,796	£2,926	£3,053	£3,178	£3,301	£3,422	£3,541	£3,658	£3,773	£3,886	£3,997
3000	£2,717	£2,862	£3,006	£3,147	£3,286	£3,423	£3,558	£3,691	£3,822	£3,951	£4,078	£4,203	£4,326
3250	£2,902	£3,060	£3,215	£3,368	£3,519	£3,668	£3,815	£3,960	£4,103	£4,244	£4,383	£4,520	£4,655
3500	£3,088	£3,257	£3,424	£3,589	£3,752	£3,913	£4,072	£4,229	£4,384	£4,537	£4,688	£4,836	£4,983
3750	£3,273	£3,454	£3,633	£3,810	£3,985	£4,158	£4,329	£4,498	£4,665	£4,830	£4,992	£5,153	£5,312
4000	£3,458	£3,651	£3,842	£4,031	£4,218	£4,403	£4,586	£4,767	£4,946	£5,123	£5,297	£5,470	£5,640
4250	£3,643	£3,849	£4,052	£4,253	£4,451	£4,648	£4,843	£5,036	£5,227	£5,415	£5,602	£5,787	£5,969
4500	£3,829	£4,046	£4,261	£4,474	£4,685	£4,893	£5,100	£5,305	£5,508	£5,708	£5,907	£6,103	£6,298
4750	£4,014	£4,243	£4,470	£4,695	£4,918	£5,138	£5,357	£5,574	£5,788	£6,001	£6,211	£6,420	£6,626
5000	£4,199	£4,440	£4,679	£4,916	£5,151	£5,383	£5,614	£5,843	£6,069	£6,294	£6,516	£6,737	£6,955

Victorian 5 Bay

All matrices include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Minimum ridge length is 300mm.
All facets must be equal size and equal angle.

Pitch Factor (addition)	
15° - 25°	as matrix
25.1° - 30°	+4%
30.1° - 35°	+8%
35.1° - 40°	+12%



Width (mm)

Projection (mm)

£	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
2500	£2,508	£2,633	£2,755	£2,876	£2,994	£3,109	£3,222	£3,333	£3,442	£3,548	£3,652	£3,754	£3,853
2750	£2,693	£2,830	£2,965	£3,097	£3,227	£3,354	£3,479	£3,602	£3,723	£3,841	£3,957	£4,070	£4,181
3000	£2,878	£3,027	£3,174	£3,318	£3,460	£3,599	£3,736	£3,871	£4,004	£4,134	£4,262	£4,387	£4,510
3250	£3,064	£3,224	£3,383	£3,539	£3,693	£3,844	£3,993	£4,140	£4,284	£4,427	£4,566	£4,704	£4,839
3500	£3,249	£3,422	£3,592	£3,760	£3,926	£4,089	£4,250	£4,409	£4,565	£4,719	£4,871	£5,020	£5,167
3750	£3,434	£3,619	£3,801	£3,981	£4,159	£4,334	£4,507	£4,678	£4,846	£5,012	£5,176	£5,337	£5,496
4000	£3,620	£3,816	£4,011	£4,202	£4,392	£4,579	£4,764	£4,947	£5,127	£5,305	£5,481	£5,654	£5,825
4250	£3,805	£4,013	£4,220	£4,424	£4,625	£4,824	£5,021	£5,216	£5,408	£5,598	£5,785	£5,970	£6,153
4500	£3,990	£4,211	£4,429	£4,645	£4,858	£5,069	£5,278	£5,485	£5,689	£5,891	£6,090	£6,287	£6,482
4750	£4,175	£4,408	£4,638	£4,866	£5,091	£5,314	£5,535	£5,754	£5,970	£6,183	£6,395	£6,604	£6,811
5000	£4,361	£4,605	£4,847	£5,087	£5,324	£5,559	£5,792	£6,023	£6,251	£6,476	£6,700	£6,921	£7,139

Price List effective from Monday July 4th 2016.
All prices quoted are in pound sterling and exclude VAT. U.K. mainland delivery charge is £103
This publication is for guidance only. The Ultraframe computer system is the final arbiter on price

APPENDIX 7
MATRIX

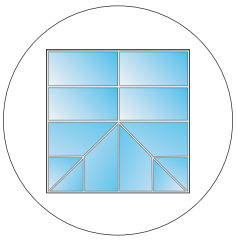
For accurate loading and pricing use the electronic structural design guide and U-Design software

Georgian

All matrices include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Corners to be 90° and building to be square.
Minimum ridge length is 300mm.

Pitch Factor (addition)	
15° - 25°	as matrix
25.1° - 30°	+4%
30.1° - 35°	+8%
35.1° - 40°	+12%



Width (mm)

Projection (mm)

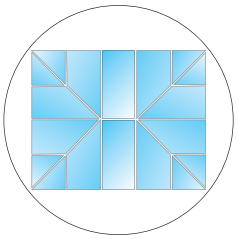
£	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
2500	£2,413	£2,560	£2,707	£2,854	£3,001	£3,149	£3,296	£3,443	£3,590	£3,737	£3,884	£4,031	£4,178
2750	£2,598	£2,757	£2,916	£3,076	£3,235	£3,394	£3,553	£3,712	£3,871	£4,030	£4,189	£4,348	£4,507
3000	£2,784	£2,955	£3,126	£3,297	£3,468	£3,639	£3,810	£3,981	£4,152	£4,323	£4,494	£4,665	£4,836
3250	£2,969	£3,152	£3,335	£3,518	£3,701	£3,884	£4,067	£4,250	£4,432	£4,615	£4,798	£4,981	£5,164
3500	£3,154	£3,349	£3,544	£3,739	£3,934	£4,129	£4,324	£4,518	£4,713	£4,908	£5,103	£5,298	£5,493
3750	£3,340	£3,546	£3,753	£3,960	£4,167	£4,374	£4,581	£4,787	£4,994	£5,201	£5,408	£5,615	£5,821
4000	£3,525	£3,744	£3,962	£4,181	£4,400	£4,619	£4,838	£5,056	£5,275	£5,494	£5,713	£5,931	£6,150
4250	£3,710	£3,941	£4,172	£4,402	£4,633	£4,864	£5,095	£5,325	£5,556	£5,787	£6,017	£6,248	£6,479
4500	£3,896	£4,138	£4,381	£4,624	£4,866	£5,109	£5,351	£5,594	£5,837	£6,079	£6,322	£6,565	£6,807
4750	£4,081	£4,335	£4,590	£4,845	£5,099	£5,354	£5,608	£5,863	£6,118	£6,372	£6,627	£6,881	£7,136
5000	£4,266	£4,533	£4,799	£5,066	£5,332	£5,599	£5,865	£6,132	£6,399	£6,665	£6,932	£7,198	£7,465

Hipped Back Georgian

All matrices include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Corners to be 90° and building to be square.
Minimum ridge length is 600mm.

Pitch Factor (addition)	
15° - 25°	as matrix
25.1° - 30°	+4%
30.1° - 35°	+8%
35.1° - 40°	+12%



Hip width (mm)

Projection / Length (mm)

£	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250
3750	£3,990									
4000	£4,175	£4,394								
4250	£4,360	£4,591	£4,822							
4500	£4,546	£4,788	£5,031	£5,274						
4750	£4,731	£4,985	£5,240	£5,495	£5,749					
5000	£4,916	£5,183	£5,449	£5,716	£5,982	£6,429				
5250	£5,101	£5,380	£5,658	£5,937	£6,215	£6,674	£6,952			
5500	£5,287	£5,577	£5,868	£6,158	£6,449	£6,919	£7,209	£7,500		
5750	£5,472	£5,774	£6,077	£6,379	£6,682	£7,164	£7,466	£7,769	£8,071	
6000	£5,657	£5,972	£6,286	£6,600	£6,915	£7,409	£7,723	£8,038	£8,352	£8,666

APPENDIX 7
MATRIX

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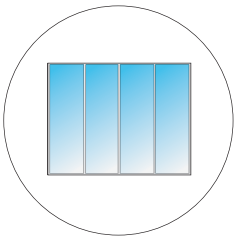
Lean-to



All matrices include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Corners to be 90° and building to be square.
With one hip minimum wall plate length is 300mm.
With two hips minimum wall plate length is 600mm.

Pitch Factor (addition)			
12.5° - 15°	as matrix	25.1° - 30°	+12%
15.1° - 20°	+4%	30.1° - 35°	+16%
20.1° - 25°	+8%	35.1° - 40°	+20%

Width (mm)

Projection (mm) / £	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500
2000	£1,630	£1,735	£1,840	£1,945	£2,051	£2,156	£2,261	£2,366	£2,471	£2,576	£2,682
2250	£1,788	£1,904	£2,020	£2,136	£2,252	£2,368	£2,484	£2,600	£2,716	£2,832	£2,948
2500	£1,945	£2,072	£2,199	£2,326	£2,453	£2,580	£2,707	£2,834	£2,961	£3,088	£3,215
2750	£2,103	£2,241	£2,379	£2,517	£2,655	£2,793	£2,931	£3,068	£3,206	£3,344	£3,482
3000	£2,261	£2,410	£2,559	£2,707	£2,856	£3,005	£3,154	£3,303	£3,451	£3,600	£3,749
3250	£2,419	£2,579	£2,738	£2,898	£3,058	£3,217	£3,377	£3,537	£3,696	£3,856	£4,016
3500	£2,577	£2,747	£2,918	£3,088	£3,259	£3,430	£3,600	£3,771	£3,941	£4,112	£4,283
3750	£2,734	£2,916	£3,097	£3,279	£3,460	£3,642	£3,823	£4,005	£4,186	£4,368	£4,549
4000	£2,892	£3,085	£3,277	£3,469	£3,662	£3,854	£4,047	£4,239	£4,431	£4,624	£4,816

Width (mm)

Projection (mm) / £	5750	6000	6250	6500	6750	7000
2000	£2,787	£2,892	£2,997	£3,102	£3,207	£3,313
2250	£3,065	£3,181	£3,297	£3,413	£3,529	£3,645
2500	£3,342	£3,469	£3,596	£3,723	£3,850	£3,977
2750	£3,620	£3,758	£3,896	£4,034	£4,172	£4,309
3000	£3,898	£4,047	£4,195	£4,344	£4,493	£4,642
3250	£4,175	£4,335	£4,495	£4,655	£4,814	£4,974
3500	£4,453	£4,624	£4,794	£4,965	£5,136	£5,306
3750	£4,731	£4,912	£5,094	£5,275	£5,457	£5,639
4000	£5,009	£5,201	£5,394	£5,586	£5,778	£5,971

Price List effective from Monday July 4th 2016.
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APPENDIX 7
MATRIX

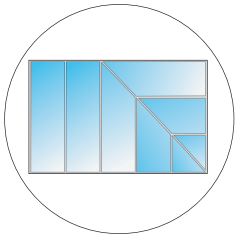
For accurate loading and pricing use the electronic structural design guide and U-Design software

One Hipped Lean-to

All matrices include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Corners to be 90° and building to be square.
With one hip minimum wall plate length is 300mm.
With two hips minimum wall plate length is 600mm.

Pitch Factor (addition)			
12.5° - 15°	as matrix	25.1° - 30°	+12%
15.1° - 20°	+4%	30.1° - 35°	+16%
20.1° - 25°	+8%	35.1° - 40°	+20%



Width (mm)

Projection (mm) £	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500
2000											
2250											
2500	£3,248	£3,375	£3,502	£3,629	£3,756	£3,883	£4,010	£4,137	£4,264	£4,391	£4,518
2750	£3,630	£3,768	£3,906	£4,044	£4,181	£4,319	£4,457	£4,595	£4,733	£4,871	£5,009
3000	£4,031	£4,180	£4,329	£4,478	£4,627	£4,775	£4,924	£5,073	£5,222	£5,370	£5,519
3250	£4,472	£4,632	£4,791	£4,951	£5,111	£5,271	£5,430	£5,590	£5,750	£5,909	£6,069
3500	£4,941	£5,111	£5,282	£5,453	£5,623	£5,794	£5,964	£6,135	£6,306	£6,476	£6,647

Width (mm)

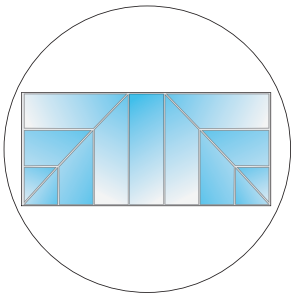
Projection (mm) £	5750	6000	6250	6500	6750	7000
2000						
2250						
2500	£4,645	£4,772	£4,899	£5,026	£5,153	£5,280
2750	£5,147	£5,285	£5,422	£5,560	£5,698	£5,836
3000	£5,668	£5,817	£5,966	£6,114	£6,263	£6,412
3250	£6,229	£6,388	£6,548	£6,708	£6,868	£7,027
3500	£6,817	£6,988	£7,159	£7,329	£7,500	£7,670

Two Hipped Lean-to

All matrices include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Corners to be 90° and building to be square.
The minimum wall plate length is 300mm.

Pitch Factor (addition)			
12.5° - 15°	as matrix	25.1° - 30°	+12%
15.1° - 20°	+4%	30.1° - 35°	+16%
20.1° - 25°	+8%	35.1° - 40°	+20%



Width (mm)

Projection (mm) £	5750	6000	6250	6500	6750	7000
2500	£5,947	£6,074	£6,201	£6,328	£6,455	£6,582
2750			£6,949	£7,087	£7,225	£7,363
3000					£8,034	£8,182

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APPENDIX 7
MATRIX

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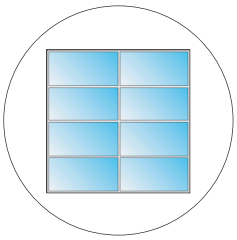
Gable



All matricies include UltraTile in any colour.
Glass, glazing prep charge and Velux prep charge additional cost.
All roof pitches across hips to be equal.

Pitch Factor (addition)	
15° - 25°	as matrix
25.1° - 30°	+4%
30.1° - 35°	+8%
35.1° - 40°	+12%

Minimum ridge length is 300mm.
Corners to be 90° and building to be square.
A gable tie beam - see p39 - is supplied on all roofs, irrespective of size.
An additional powder gable bolster beam is fitted in some circumstances - see p39 - cost £50.00

Width (mm)

Projection (mm)	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
2500	£2,089	£2,215	£2,341	£2,466	£2,592	£2,718	£2,843	£2,969	£3,095	£3,220	£3,346	£3,472	£3,597
2750	£2,263	£2,400	£2,537	£2,673	£2,810	£2,947	£3,084	£3,221	£3,358	£3,494	£3,631	£3,768	£3,905
3000	£2,436	£2,584	£2,732	£2,880	£3,028	£3,177	£3,325	£3,473	£3,621	£3,769	£3,917	£4,065	£4,213
3250	£2,610	£2,769	£2,928	£3,087	£3,247	£3,406	£3,565	£3,724	£3,884	£4,043	£4,202	£4,361	£4,520
3500	£2,783	£2,954	£3,124	£3,295	£3,465	£3,635	£3,806	£3,976	£4,147	£4,317	£4,487	£4,658	£4,828
3750	£2,957	£3,138	£3,320	£3,502	£3,683	£3,865	£4,046	£4,228	£4,409	£4,591	£4,773	£4,954	£5,136
4000	£3,130	£3,323	£3,516	£3,709	£3,901	£4,094	£4,287	£4,480	£4,672	£4,865	£5,058	£5,251	£5,443
4250	£3,304	£3,508	£3,712	£3,916	£4,120	£4,324	£4,527	£4,731	£4,935	£5,139	£5,343	£5,547	£5,751
4500	£3,477	£3,692	£3,908	£4,123	£4,338	£4,553	£4,768	£4,983	£5,198	£5,413	£5,629	£5,844	£6,059
4750	£3,651	£3,877	£4,103	£4,330	£4,556	£4,782	£5,009	£5,235	£5,461	£5,688	£5,914	£6,140	£6,367
5000	£3,824	£4,062	£4,299	£4,537	£4,774	£5,012	£5,249	£5,487	£5,724	£5,962	£6,199	£6,437	£6,674

Typical roof price build up sequence

1. Calculate roof price from matrix.
2. Add any pitch uplift to matrix price relevant to shape/design
3. Add uplifts for UltraTile ridge and hip options.
4. Decide on fascia / soffit colours - add uplift to matrix price, if non white.
5. Decide on soffit depth, if 150mm add 6% to matrix price.
6. If glass panels are chosen add any roof vent price options.
7. Add Velux prep charge (and flashing kit).
8. Prep for glazing charge.
9. Add other options - gallows support, tapered box gutter.

	Roof sub total	**A**
	Site delivery	**B**
	Total Price	**A +B**

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APPENDIX 8

ROOF OPTIONS

		LIST PRICE (unless stated differently)
Pitch charges	See each individual matrix	See matrix
Box Gutter	265 aluminium conservatory style Gallows bracket for 265mm Tapered sloped fabricated box gutter	£50 / LM £300 £50 / LM
150mm Soffit	Bigger over hang at eaves / To be used for Loggia columns	Add 6%
Soffit / Fascia	White is included in price Foiled Light Oak Rosewood or black - Georgian/Victorian - Gable and Lean To	No charge Add 1% Add 2½ %
Prep for Glass panels	Rectangles only, one off charge	Add £95 nett
Ultraframe Classic roof vents	Grey external, white internal	

	Up to 800 x 800mm	Over 800 x 800mm
With Brass or Chrome mech	£ 110	£140
Electric mech/switch	£400	£400
Rain sensor & thermostat	£600	£600

Prep for Velux	Velux Roof window not supplied - prep suits CK01, CK02, CK04, CK06	Add £100
Velux flashing kit	Velux do not supply a suitable flashing kit - order from Ultraframe	Add £85
Intrusion / Cut outs	Roof is prepped for cut outs e.g. Soil pipes - Up to 200mm x 200mm - Up to $3m^2$ - Over $3m^2$	 Add £88 per intrusion POA POA
Tiled hips / ridge	Upgrade from grey powder coated aluminium hip bar / ridge detail	Add £70 / hip & ridge
Gable bolster		£40 / LN

380 ultraRoof
engineered by ultraframe

☐ **ORDER** ☐ **QUOTE ENQUIRY**

ACCOUNT No. (if known) ☐

Company Name .....

Order Number .....

Job Reference .....

Company Contact .....

Telephone No. .....

Fax No. .....

Delivery Address .....

.....

Delivery Date Req .....

Quotation Ref (if previously quoted) .....

CRITICAL INFORMATION

Site Postcode .....

Roof Pitch .....

HOW TO PLACE AN ORDER FOR ULTRAROOF

1. Carefully read the UltraRoof380 guide.
2. Sketch plan & elevations.
   (If necessary, attach photos of existing property.
   Indicate on drawings if any part of project is existing).
3. Mark and caption the positions of all walls, brick piers, windows/doors, cut outs / intrusions.
4. Mark the **preferred** positions of any a) roof windows or b) rectangular glazed panels.
5. Upon placement of your UltraRoof380 order, an order confirmation is generated which must be signed and emailed back.

NOTES:
Please see p2 of UltraRoof380 guide for list of what **IS** / **IS NOT** included

PLEASE SKETCH YOUR PREFERRED DESIGN HERE - mark window, door & wall positions/ types. **INDICATE ON DRAWINGS IF ANY PART OF THE PROJECT IS EXISTING**

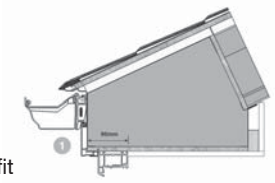
PLAN VIEW

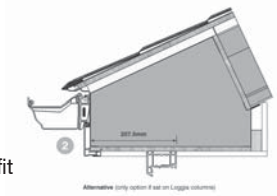
FRONT ELEVATION

LEFT ELEVATION

RIGHT ELEVATION

DECIDE ON EAVES SET OUT Tick box (a) or (b)

☐ (a) Standard Soffit 

☐ (b) 150mm Soffit 

SPECIFICATION OPTIONS

TILE COLOUR
☐ Carbon grey ☐ Harvest brown
☐ Terra brick

HIP AND RIDGE TYPE / FINISH
☐ Powder coated aluminium hip cap & ridge ☐ Hip & ridge tile in same material as UltraTile
HIP / RIDGE COLOUR ☐ Grey ☐ Brown ☐ Brick

GLAZING OPTIONS ☐ Rectangular glazed panels in positions above (mark plan) ☐ Unglazed for 24mm units ☐ Conservaglass 4S Blue ☐ Conservaglass 4S Neutral

ROOF VENTS (mark plan)
☐ Brass Mech ☐ Chrome Mech
☐ Electric Switch/Mech ☐ Rain Sensor / Thermostat

☐ **GALLOWS BRACKET FOR BOX GUTTER** (if design needs one) QTY: _____

GABLE BOLSTER ☐

GUTTER / DOWNPIPE & SOFFIT COLOUR ☐ White ☐ Black ☐ Brown ☐ Caramel

VELUX ROOF WINDOWS (not supplied) ☐ CK01 ☐ CK02 ☐ CK04 ☐ CK06
Please indicate positions above (mark plan).
When purchasing your Velux roof windows, Velux flashing kit not suitable **please tick here for compatible Ultraframe kit**. ☐
Not included: Internal battens. Velux roof windows, 12.5 plasterboard.

IMPORTANT

The installer is responsible for ensuring that where UltraRoof is supported by means such as masonry or timber frame walls, the structure provides enough lateral support and resistance to wind uplift. Further guidance can be obtained through UltraRoof380's technical documentation/guides. Ultraframe be responsible for the structural adequacy of any existing building work used as part of an overall project. Whilst assistance is provided ultimate responsibility for securing Building Regulations and planning permission lies with the retail installer. **For further guidance please contact the Technical Support Team on 0843 208 6953 or email techsupport@ultraframe.co.uk**

SIGNED ..... DATE .....

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Transforming light and space

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Job No.: 3240 UltraRoof V1 QTY100 06/16