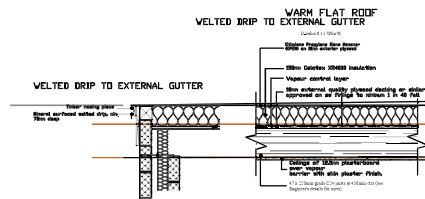


# ROOFS DETAIL AND WINDOWS & DOORS

**WARM FLAT ROOF**  
(Imposed load max 1.0 kN/m<sup>2</sup> – dead load max 0.75 kN/m<sup>2</sup>)  
To achieve U value 0.15 W/m<sup>2</sup>K

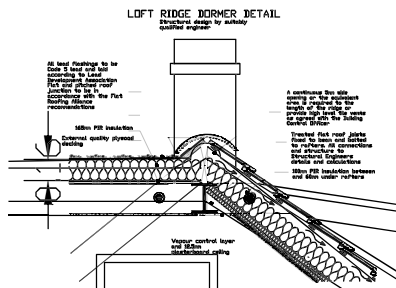
EDPM 18mm external quality ply (ply optional, see manufacturer's details) over 150mm Celotex XR4000 insulation.  
Insulation bonded to VCL fixed to 18mm exterior grade plywood on firings to give 1:40 fall on 47 x 195mm C24 timber joists at 450 ctrs to give a max span of 4.382m (see Engineer's details for sizes). Ceiling construction to be 12.5mm plasterboard over vapour barrier with skim plaster finish.  
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.



**WARM FLAT ROOF**  
1:40

**TRUSSED RAFTER ROOF**

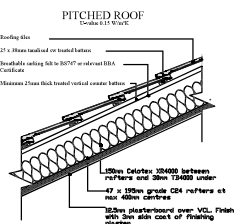
To achieve U-value 0.15 W/m<sup>2</sup>K  
Pitched roof to be formed using proprietary prefabricated manufactured trusses. Design of roof trusses to be produced by specialist truss manufacturer to BS EN 1995-1-1:2004 Eurocode 5: Design of timber structures and submitted to Building Control for approval prior to commencement of work. Trusses to be placed at max 600ctrs in accordance with BS 8103-3:2009 and BS EN 1995-1 on suitable wall plates fixed using proprietary galvanised steel truss clips. All strapping, fixing and bracing to be in accordance with manufacturer's instructions. Mechanically fix trusses to 100 x 50mm sw treated wall plates using galvanised steel truss clips.  
Form ceiling using 12.5mm plasterboard and min 3mm thistle multi-finish plaster. Insulation at ceiling level to be two layers of Rockwool insulation to total 300mm laid between over joists (cross direction). Provide polythene vapour barrier between insulation and plasterboard.  
Where required provide opening at eaves level at least equal to continuous strip 25mm wide on two opposite sides to promote cross-ventilation and provide mono pitched roofs with ridge/high level ventilation equivalent to a 5mm gap via proprietary tile vents spaced in accordance with manufacturer's details.  
Loft hatches should be suitable designed and installed to ensure optimum air tightness.



**LOFT RIDGE DORMER DETAIL**  
1:40

**UNVENTED PITCHED ROOF**

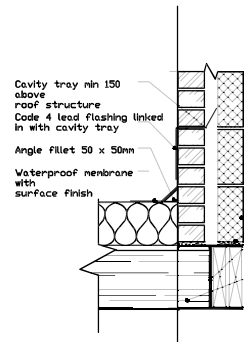
Pitch 22-45° (Imposed load max 0.75 kN/m<sup>2</sup> – dead load max 0.75 kN/m<sup>2</sup>)  
To achieve U-value 0.15 W/m<sup>2</sup>K  
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1:2004 Eurocode 5: Design of timber structures. Roofing tiles to match existing on 25 x 38mm galvanised sw treated battens, battens fixed to minimum 25mm thick treated vertical counter battens over breathable felt to relevant BBA Certificate, proprietary eaves carrier system to be installed. Counter battens to be fixed to 47 x 195mm grade C24 rafters at max 400mm centres, span to Engineer's details. Rafters supported on 100 x 50mm sw wall plates.  
Insulation to be 150mm Celotex XR4000 between rafters and 30mm TB4000 under. Fix 12.5mm plasterboard (joints staggered) over VCL. Finish with 3mm skim coat of finishing plaster to the underside of all ceilings.  
Restraint strapping – Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanised straps or other approved to BSEN 845-1 at 2m centres.



**PITCHED ROOF**  
1:30

**LEAD WORK AND FLASHINGS**

All lead flashings, any valleys or soakers to be Code 5 lead and laid in accordance with BS 5534 and BS EN 12588.  
Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc.



1:20

**BEAMS**

Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details. New steel beams to be encased in 12.5mm Gyproc Fireline board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance, as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

**LINTELS**

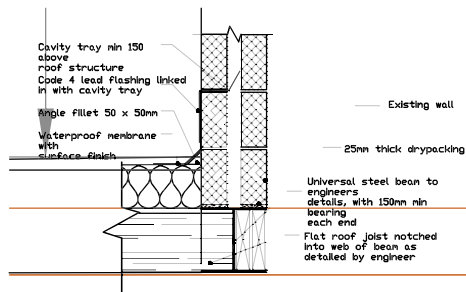
For uniformly distributed loads and standard 2 storey domestic loadings only  
Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1-1, with a concrete strength of 50 or 40 N/mm<sup>2</sup> and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.  
For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacturer's standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.  
Independent lintels to have an insulated cavity closure between the inner and outer lintel. Common leaf lintels base plates should not be continuous and the lintel core to be insulated.

**FLAT ROOF RESTRAINT**

100mm x 50mm C16 grade timber wall plates to be strapped to walls using 1000mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres, straps to be fixed to internal wall faces.

**STRAPPING FOR PITCHED ROOF**

Gable walls should be strapped to roofs at 2m centres. All external walls running parallel to roof rafters to be restrained at roof level using 1000mm x 30mm x 5mm galvanised mild steel horizontal straps or other approved to BSEN 845-1, straps to be screw fixed, built into walls at max 2000mm centres, and taken across a minimum of 3 rafters. Provide solid noggins between rafters at strap positions. All wall plates to be 100 x 50mm fixed to inner skin of cavity wall using 30mm x 5mm x 1000mm galvanized metal straps or other approved to BSEN 845-1 at maximum 2m centres.



1:20

**ESCAPE WINDOWS**

Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms.  
The window should have an unobstructed clear openable area that is at least 0.33m<sup>2</sup> and have no clear dimension less than 450mm high or 450mm wide.  
The bottom of the openable area should be not more than 1100mm above the floor.  
The window should enable the person to reach a place free from danger from fire.

**ROOF LIGHTS**

Min U-value of 1.6 W/m<sup>2</sup>K.  
Roof-lights to be double glazed with 16mm argon gap and soft low-E glass. Window Energy Rating to be Band C or better. Roof lights to be fitted in accordance with manufacturer's instructions, with rafters doubled up to sides and suitable flashings etc.

**SAFETY GLAZING**

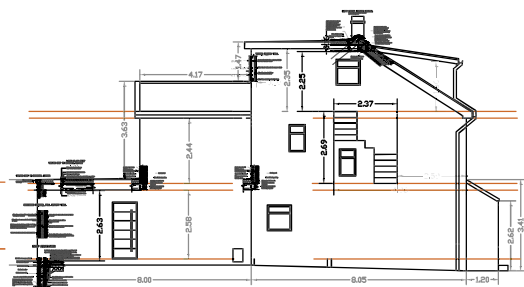
All glazing in critical locations to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1 and Part K (Part N in Wales) of the current Building Regulations, i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows.

**NEW AND REPLACEMENT WINDOWS**

New and replacement windows to be double glazed with 16-20mm argon gap and soft coat low-E glass. Window Energy Rating to be Band B or better and to achieve U-value of 1.4 W/m<sup>2</sup>K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.  
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.  
Windows and door frames to be taped to surrounding openings using air sealing tape.  
Windows to be fitted with trickle vents to provide adequate background ventilation in accordance with Approved Document F.

**NEW AND REPLACEMENT DOORS**

New and replacement doors to achieve a U-Value of 1.4W/m<sup>2</sup>K. Glazed areas to be double glazed with 16-20mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1 and Part K (Part N in Wales) of the current Building Regulations. Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.  
Windows and door frames to be taped to surrounding openings using air sealing tape.



**GABLE ELEVATION**  
1:200

Revision notes:		
Rev.	Date:	Notes:
A	30/08/2023	PLANNING ISSUE - ROOFS DETAIL

<b>Drawn by:</b>	AB
<b>Client:</b>	AB

<b>Project:</b>	302 PLECKGATE ROAD, RAMSGREAVE BB1 8QU
<b>Drawing Title:</b>	ROOFS DETAIL PLANNING ISSUE

<b>Date:</b>	30/08/2023
<b>Scale @ A3:</b>	1:200, 1:40 & 1:20
<b>Revision:</b>	A

<b>DRAWING NUMBER:</b>	A007
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