

PITCHED ROOF

To achieve min U-value required of 0.18 W/m²K Roofing tiles to match existing fixed to tile battens secured over breathable sarking felt allowing the breather felt to sag at least 10mm over preservative-treated counter battens (min 38mm x 50mm). Provide 100mm Kingspan K107 insulation between 47 x 200mm timber rafters at 400 c/c and 42.5mm Kingspan Kooltherm K118 Insulated Plasterboard fixed under rafters with skim finish. Restraint strapping - 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved every 1 at 2m centres. Maintain a 50mm air gap above insulation in the roof pitch to ventilate roof. Provide opening at eaves level at least equal to continuous strip 25mm wide and opening at ridge equal to continuous strip 5mm wide to promote ventilation.

Cross ventilation to be provided by a proprietary eaves ventilation strip equivalent to a 25mm continuous gap at eaves level with insect grill and 50mm air gap between felt and insulation

PARTIAL FILL CAVITY WALL

To achieve minimum U Value of 0.28W/m²K 12.5mm K-Rend or similar approved on 100mm dense concrete block, 50mm clear residual cavity, 50mm Kingspan Thermawall TW50 fixed to inner leaf of 100mm lightweight block, Internal finish 12.5mm plasterboard on dabs.

NEW AND REPLACEMENT WINDOWS & DOORS to be double glazed and to achieve U-value of 1.6 W/m²K.

SOLID FLOOR INSULATION OVER SLAB

To meet min U value required of 0.22 W/m²K Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 100mm ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 100mm Kingspan Kooltherm K3. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. 25mm perimeter upstand insulation acting as expansion joint for concrete slab and screed.

INTERMEDIATE FLOOR

Over flooring to be 22mm flooring grade chipboard with Marine ply to ensuite area. Floor joists as per structural engineers specification and design. 12.5mm gypsum plasterboards to ceilings to achieve 30min fire resistance. 100mm quilt insulation between joists suspended on chicken wire

ESCAPE WINDOWS

Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. Windows to have an unobstructed openable area of 450mm high x 450mm wide, minimum 0.33m sq. 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/m²K. Roof-lights to be double glazed with 16mm argon gap and soft low-E glass to be fitted in accordance with manufacturer's instructions with rafters doubled up to sides and suitable flashings etc.

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

Rafters birdmouthed over 100 x 50mm wall plate, wall plate fixed to blockwork with 1000 x 30 x 5mm galvanised straps at 1 every 2m Cntrs

FLASHING

Code 4 lead flashing fitted into mortar joint 25mm deep, lead flashing min 75mm above roofing tiles

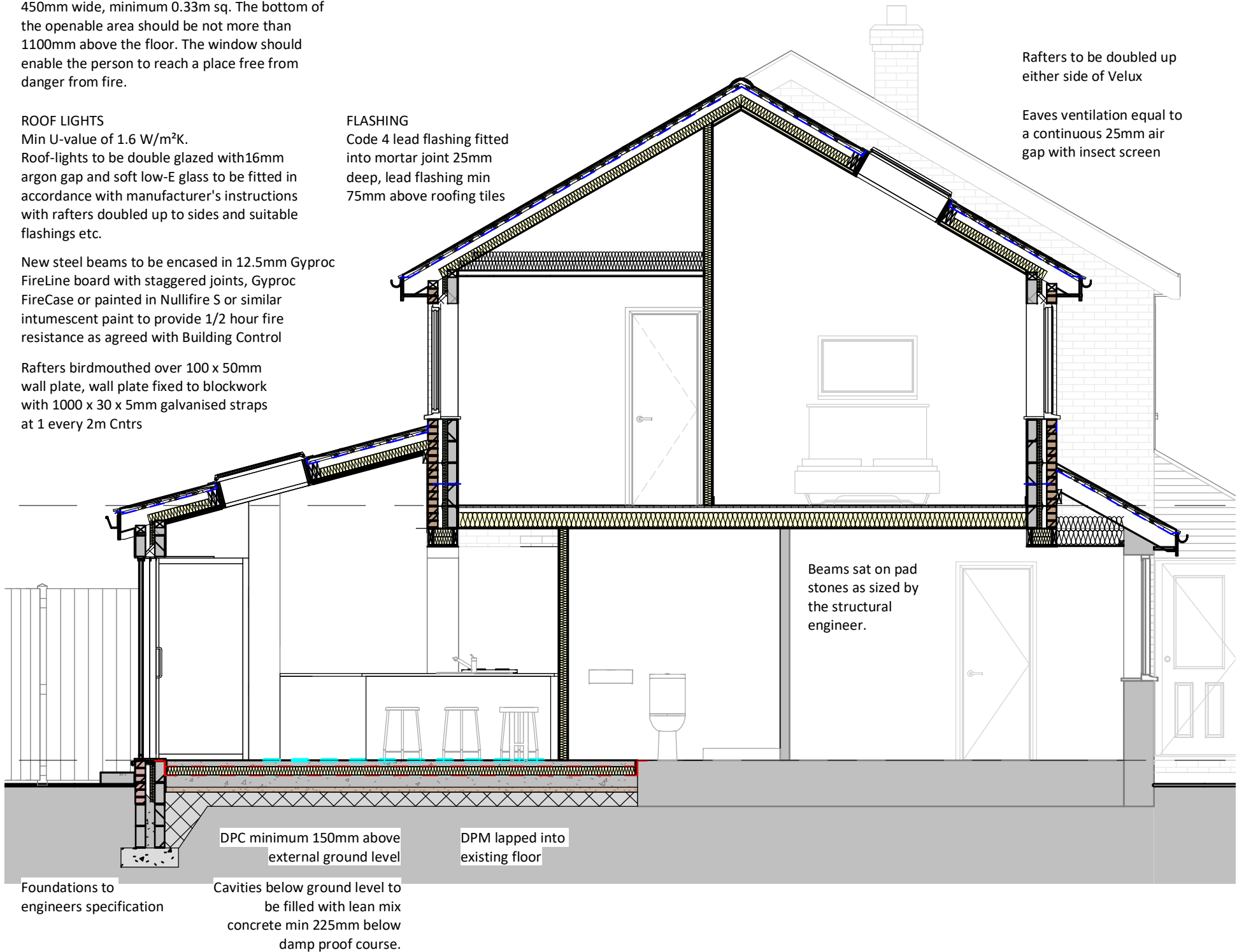
PITCHED ROOF INSULATION AT CEILING LEVEL

Pitch 22-45°(imposed load max 0.75 kN/m²- dead load max 0.75 kN/m²)

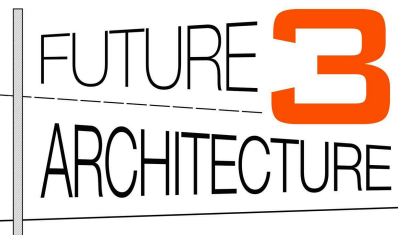
To achieve U value of 0.18 W/m²K

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. Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on sarking felt supported on 47 x 100mm grade C24 rafters at max 400mm centres max span 2.12m. Rafters supported on 100 x 50mm sw wall plates. Insulation at ceiling level to be 100mm Rockwool insulation laid between ceiling joists with a further 170mm layer over joists (cross direction).

Construct ceiling using sw joists at 400mm centres, finished internally with 12.5mm plasterboard and min 3mm thistle multi-finish plaster. Provide polythene vapour barrier between insulation and plasterboard. Provide opening at eaves level at least equal to continuous strip 25mm wide on two opposite sides to promote cross-ventilation. Mono pitched roofs to have ridge/high level ventilation equivalent to a 5mm gap via proprietary tile vents spaced in accordance with manufacturer's details. Restraint strapping - 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 galvanized straps or other approved to BSEN 845-1 at 2m centres.



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