



Black uPVC gutters and white uPVC fascia and soffits

UNVENTED PITCHED ROOF (imposed load max 0.75 kN/m² - dead load max 0.75 kN/m²) To achieve U-value 0.15 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 1995-1-1:2004 Eurocode 5: Design of timber structures. Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on minimum 25mm thick treated vertical counter battens on breathable felt to relevant BBA Certificate, proprietary eaves carrier system to be installed. Battens to be fixed to 47 x 150mm grade C24 rafters at max 400mm centres, max span 3.47m. 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.

Wall Build U-value = 0.18 W/m².K:

FULL FILL CAVITY WALL To achieve minimum U Value of 0.18 W/m²K (actual U Value achieved 0.16 W/m²K) New cavity wall to comprise of 103mm suitable facing brick. Full fill the cavity with 115mm Celotex Thermaclass Cavity Wall 21 as manufacturer's details. Inner leaf to be 100mm lightweight block, 0.45 W/m²K. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1.6 cement mortar. Vertical joints in the board must be staggered and all joints tightly butted. All details including corner and junction to be as relevant BBA certificate. Location to be assessed for suitability of insulation boards. 10mm cavity to be provided if required.

Hyload D.P.C. to inner and outer leaves, 150mm above external ground level.

All new walls below ground to be constructed using blockwork compliant with BS EN 771 and suitable for below ground level or semi engineering brickwork. Walls to be built using 1:4 masonry mortar mix or equal approved specification to BS EN 1996-1-1. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

Provide minimum 300 mm x 600mm concrete foundation, concrete mix to conform to BS EN 206:2013 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:2015 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a Structural Engineer should be sought. New foundations to be tied into existing with 4 no h16 bars minimum 300mm embedment into existing footings with resin anchors.

Perimeter insulation around screed to prevent thermal bridging.

Floor Build- SOLID FLOOR INSULATION OVER SLAB Solid ground floor to consist of 150mm consolidated well-rammed hardcore, blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 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 90mm thick Celotex GA4000 insulation. 25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped by 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.

Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.

Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes with 100mm concrete cover laid under the extension. Pipes to terminate at new 65mm x 215mm air bricks with cavity tray over.

Drawing Specific Notes:

Where named products are proposed on these drawings, the manufacturer's typical details should be adhered to in the first instance, from which these details have been drawn. If there is found to be a discrepancy between the drawings and the manufacturer's details, the PM must be informed by the contractor prior to proceeding. The manufacturer's details will take precedence and should be followed unless otherwise agreed.

Red dimensions and text indicate setting out notes.

Foundations and ground floor designs to be amended as necessary in accordance with LABC/ NHBC guidance for building on clay soils near trees.

Structural Engineers details are to take precedence with all specifications.

Mains operated linked smoke alarm detection system to BS EN 14604 and BS 5839-6:2019 to at least a Grade D category LD3 standard. System to be mains powered with battery back up. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all levels/storeys and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be an interlinked heat detector in the kitchen.

All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.

The extension should meet the following Minimum U values

Wall	0.18 W/m ² K
Roof	0.15 W/m ² K
Floor	0.18 W/m ² K

All dimensions and particulars are to be checked on site before work commences and any discrepancy to be reported to PM Home Consultants. This drawing can be scaled for Planning purposes. **DO NOT SCALE** this drawing for setting out, use written dimensions only. Any work commenced before Council approval is at the Clients risk

The drawing must be read in conjunction with all other related drawings and documentation.

Proteus Management
Home Extension Consultants

Project: Front extension at 3 Penmaes, Rhayader, LD65PN		
Drawing Title: Section one		
Drawing Number: 3021	Date: 20/08/23	Revision: A
Scale: (at A3) 1:20		Status: Planning
Client: Mrs Ann Fell		

01 Section 1 - As Proposed
3021 1:20 (at A3)

