

All pipes and tanks in attic void to be adequately lagged

First Floor Construction

22mm T&G flooring grade moisture resistant chipboard type C4 to BS8201:2011 fixed in accordance with manufacturers recommendations on 170 x 47mm C16 floor joists at Max. 400mm centres as indicated to BS EN 1995-1-1:2004+A2:2014, 100mm thick Rockwool flexi insulation laid between the floor joists to provide sound insulation, minimum weight of insulation to be 10kg/m³

All joists are to be regularized in depth unless otherwise stated on drawings. Joists shall be 25-75mm clear of wall face when running parallel.

Joists to include herringbone strutting, plasterboard support at all wall and ceiling junctions. Floor joists to be restrained when running parallel to external wall with 30x5mm mild steel straps @ max. 2000mm centres and built into blockwork inner skin. Wall plate to existing gable wall of property is to be fixed with a minimum of M12 bolts at max. 600mm centres

Trimming joists where necessary to be doubled up joist size floor members bolted together @ 600mm c.c. with 12mm bolts with dog toothed type washers. Timber to timber connections to be made using type TTL Catnic or similar approved galvanised mild steel joist hangers fully secured to timbers with manufacturers recommended fixings.

38x38mm herringbone strutting @ the mid-point span of floor joists where the distance between is between 2.5 and 4.5 metres and at every third of the span where gap exceeds 4.5 metres. Strutting is not required below 2.5m

New cavity wall to proposed extension to comprise 100mm external skin of face brickwork/rendered blockwork, 125mm cavity with flexible stainless steel wall ties spaced at 750mm horizontal & 450mm vertical to BS1243.

75mm PIR insulation board to cavity to leave 50mm clear to external skin
100mm Thermalite Turbo block internal with 9.5mm plasterboard on 15mm plaster
cavity & 3mm skim. Wall to achieve min. U value of 0.21. Catnic CG110/100
lintals over openings with min. 150mm end bearing & 225mm long cavity wall ties.

Cavity to be sealed at eaves with non-combustible cavity barrier such as 6mm masterboard or gypsum based boards of minimum 12mm thickness. Cavities to be closed at the external door/window reveals with Kingspan Kooltherm vertical cavity closer or similar approved to suit cavity width and are to lap into cavity tray upstands fitted to all ground floor openings with weepholes at max. 450mm centres and min. of 2 per opening. All frames to be bedded at their cills on impregnated foam strips, pointed to their perimeter externally with an approved mastic compound with a polyethylene strip backing & sealed from the inside generally with expanding polyurethane foam. Cavity trays to extend a minimum of 25mm beyond the cavity closer and cover the ends of the lintols and in turn to be closed at their end with proprietary cavity tray stop ends. Tray to rise a min of 140mm above the top of the opening.

All new windows to be upvc double glazed with a 20mm air gap and low E glazing. Cavity to be closed at cill level with an insulation block to prevent thermal bridging. Provide Catnic or similar insulated steel lintols over openings with 150mm end-bearing and cavity tray over. Provide lead core or similar insulated dpc around all external openings. New windows to meet 16 W/m²K U value and horizontal and vertical dpc to be provided to all cavity closures such as eaves, cills and reveals throughout the construction.

Below ground cavity walls to be formed with Class A dense concrete blockwork 7N/mm² 20kg or Class B semi-engineering brickwork with thickness to match cavity walls above. Provide a minimum of 3 courses of facing brickwork from dpc level down to below existing ground level. All bed in (1:3) sand and cement mortar. Wall ties as described in external walls. Cavity to be filled with weak mix of concrete to within 225mm of dpc level

The foundations indicated are based on the assumption that ground conditions on site are good. If necessary the foundations are to be designed & detailed by a structural engineer appointed by the client.

Foundations designed in accordance with BS8004 2015 / BS EN8103-1: 2011
Code of Practice for Foundations

Profile of foundations as indicated in sections, generally 600x300mm mass concrete grade C25/20 – 20N/mm minimum strength, 20mm nominal coarse aggregate to CP 2004 Foundations taken down to firm natural soils with minimum safe allowable bearing pressure of 110kN/m²

Excavation for foundations to be taken down to a minimum of 760mm below existing ground level to the satisfaction of L. A. building control officer

Roof construction to comprise interlocking roof tiles or reconstituted slate finish on treated s.w. battens installed to BS5534 : 2015 on Tyvek breathable membrane on trusses supplied and designed by Specialist to BS268 Part 3 1985 and to include all necessary temporary & permanent struts, trimmers, ties, binders and bracing. Roof and ridge tiles are to be mechanically fixed to BS5534 : 2014. Calculations to be provided by Truss Manufacturer for approval prior to fixing of truss. Roof insulation

Continuous 5mm ventilation gap to be provided at ridge level.

Roof insulation to be cross lapped between and over ceiling joists and comprise 100mm Rockwool Rollbatt between joists with 200mm Rockwool Twin Roll laid over joists in opposite direction to provide a U value of 0.14W/m²K. Alternative insulation combinations can be used providing they achieve the min. U value of 0.15

100x25mm diagonal & longitudinal bracing as reqd. by Truss Manufacturer

Roof trusses to be secured to cavity wall using 900x30x5mm lateral restraint straps @ max. 2.0m c.c

☐ Over-fascia vent system to meet Building Regulations

DPC tray above lintols

—Cathnic (or similar) CG 110/100 lintol

—DPC tray below cills

Roof/cavity wall abutment to be flashed with Code 4 milled lead sheet to BS 1178 dressed minimum of 125mm vertically up the face of the wall & 25mm into wall to lap with cavity tray. All flashings and trays to be strictly installed in accordance with manufacturers instructions. Lead to be fixed with lead wedges & be sealed with polysulphide mastic seal to suit. Provide weep holes at every 4th, perp at abutment.

100x47mm C16 softwood rafters and joists at 400mm c.c. supported on similar size C24 wallplate fixed with M12 bolts at max. 600mm centres. Vent tiles at max. 1500 centres to top course but one to provide cross ventilation to roof void.

* DPC level at min. 150mm above yard level

Yard to comprise 75mm concrete on min. 75mm hardcore with falls away from building to a suitable outlet

50mm sand/cement self leveling screed on 100mm PIR insulation board or similar approved to achieve a U value of 0.18W/m²K and turned up under dpc at wall abutments. Joints to be taped between insulation boards. Insulation to be laid on 100mm mass concrete floor slab (1:3:6) mix C30 N/mm² with a separating layer of minimum of 500 gauge polythene between. 20mm nominal coarse aggregate on 1200 gauge Visqueen dpm and Radon protection. Membrane to BS8215:1991. Dpm to underlap horizontal dpc. All joints to be lapped, folded and taped on 50mm sand blinding on minimum of 150mm compacted/consolidated hardcore. Where site levels require hardcore depths in excess of 150mm then it is to be laid and compacted in a maximum of 225mm layers.

20mm nominal, coarse aggregate on 1200 gauge Visqueen dpm and Radon protection. Membrane to BS8215:1991. Dpm to underlap horizontal dpc

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SECTION A.A.

CONSTRUCTION DETAIL

PROJECT

PROPOSED IMPROVEMENTS/ALTERATIONS

II, ANTHONY HILL COURT,

PENTREBACH,

MERTHYR TYDFIL.

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DRAWING CONSTRUCTION DETAIL

SCALE 1:50 **DATE** JUNE 2022

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DRG.NO. 7