

**Construction Notes**

**NON LOAD BEARING INTERNAL PARTITIONS TO GENERAL AREAS**  
 63x38mm treated C24 timber studs located at max 600mm centres (89x38mm stud if over 2.4m high) faced with 12.5mm thick SoundBloc plasterboard and 3mm plaster skim finish (alternative: taped and joining compound on tapered boards). All joints to receive scrim tape prior to skimming. Treated SW noggins and ply pattress to be inserted into studding where heavy objects are fixed to studding. Iso wool (50mm) mineral fibre insulation to be fitted between studs to reduce sound transference where required. Use Moisture Resistant plasterboard in wet areas  
 \*Change stud size if necessary to suit pocket doors\*

**TYPICAL FIRST FLOOR CONSTRUCTION**

18mm OSB/3 or 22mm F5 tongue and groove chipboard over WS200 East joist floor to specialist sub contractor design. 100mm Rockwool Flexi or similar to be fitted between the joists. 12.5mm Type A - British Gypsum wallboard ceiling fixed to joists, finished with 5mm plaster skim for joists at 400mm c/c or 15mm Type F - British Gypsum fireline board for joists at 600mm c/c. Where floor joists run parallel with first floor partitions, 2 No. joists to be bolted together at maximum 600mm centres/to specialist details and located under partition.

Where floor joists run at right angles with first floor partitions, noggins to be incorporated to provide additional fixing points for sole plate

All ceiling penetrations to be sealed with intumescent protection to maintain 30 minutes fire resistance. All strictly in accordance with manufacturer's recommendations.

**LOFT FLOOR CONSTRUCTION**

18mm OSB/3 or 22mm F5 tongue and groove chipboard over attic truss floor to specialist sub contractor design. 100mm Rockwool Flexi or similar to be fitted in floor void. 12.5mm Type A - British Gypsum wallboard ceiling fixed to joists, finished with 3mm plaster skim.

Where floor joists run parallel with first floor partitions, 2 no. joists to be bolted together at maximum 600mm centres/to specialist details and located under partition.

Where floor joists run at right angles with first floor partitions, noggins to be incorporated to provide additional fixing points for sole plate

All ceiling penetrations to be sealed with intumescent protection to maintain 30 minutes fire resistance. All strictly in accordance with manufacturer's recommendations.

Where soil pipes or other services pass through fire rated floors and walls they must be encased to achieve 30 minutes fire resistance (to match penetrated structure). Soil pipes to be wrapped with 100mm sound absorption quilt within boxing comprising 2x 12.5mm plasterboard fixed back to 38x50mm SW framing. Duct casing to pass through compartment and any gas filled with an intumescent foam/sealant. Where casing is not full storey height, pipe to be sealed with intumescent collar of floor penetration.

All junctions and penetrations to be fully sealed to ensure an air tight barrier and provide an minimum of 5PA air test

**WINDOWS/DOORS CONSTRUCTION**

UPVC aluminium frames fitted with sealed, low-e glazed units by Pilkington or similar. Maximum overall U Value of windows including frames to be 1.4 W/m<sup>2</sup>K. Note: this is an area weighted average U-Value, not a centre pane value. G-Value 0.4 max, light transmission 0.7 (70%) minimum. Colour of frames to be confirmed by Client. All accessible windows to have 6.8mm laminated outer pane to comply with BS7550 and must meet security standards compliant with PAS 24-1012. Install 'Velux' or similar double glazed rooflight in position shown all in accordance with current legislation.

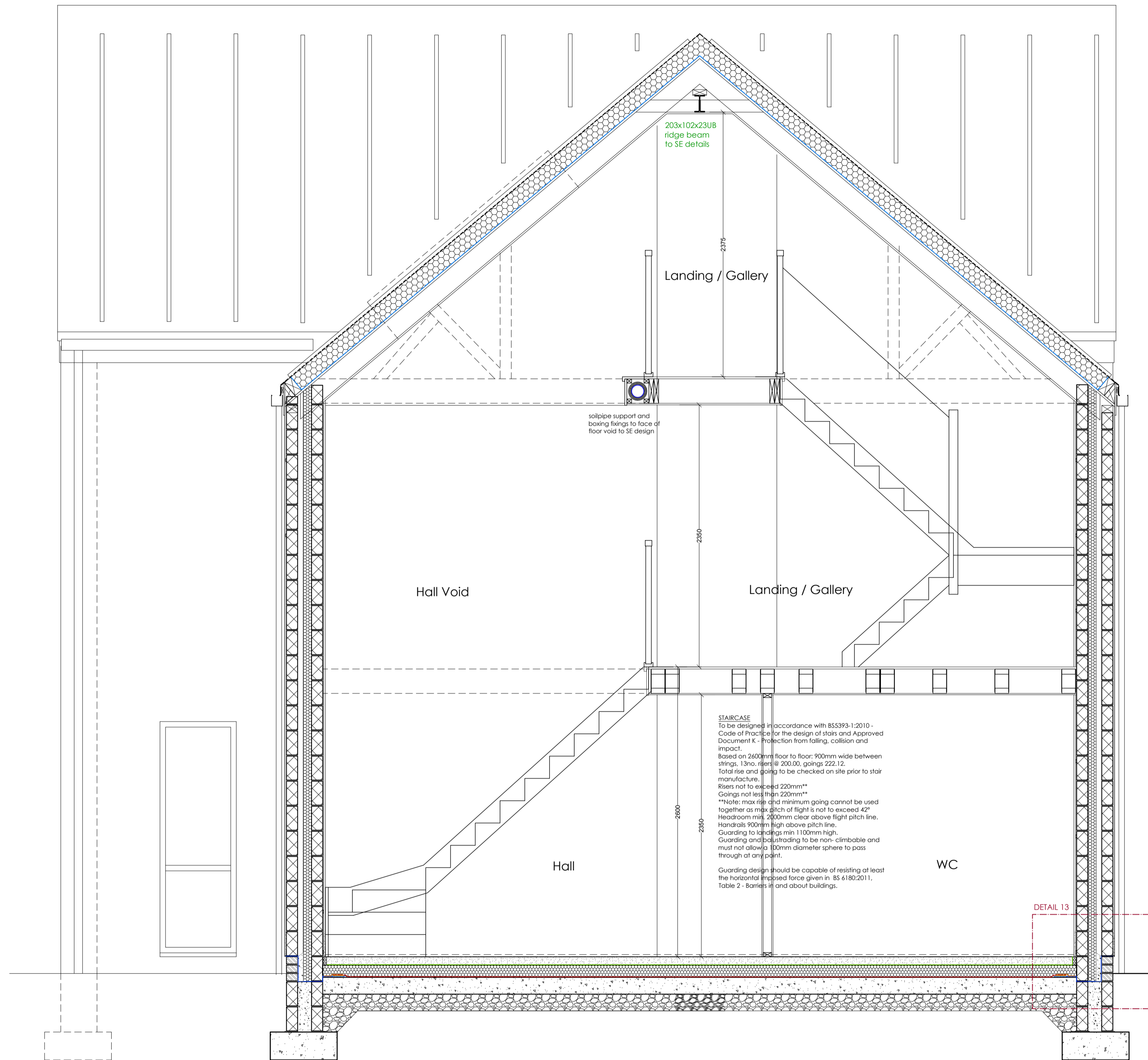
Primary entrance door to achieve a U-Value of 1.4 W/m<sup>2</sup>K and provide a minimum clear opening between face of door and door jamb of 775mm. Level threshold access to be formed, maximum threshold height 15mm.

All ground floor internal doors to have a minimum 750mm clear opening measured between door leaf and opposite door stop

**GLAZING**  
 To any situations where windows are below a level of 800mm above finished floor level and in doorways below a level of 1500mm above floor level including 300mm either side of such doorways, to be in toughened safety glass to BS6206:1981.

All new structural beams (other than roof support) to be fire protected to 30 minutes with intumescent paint

All materials and components to be used fully in accordance with manufacturer's recommendations and instructions. All timber used structurally and in exterior joinery, including roofing battens to be pressure treated against insect and fungal infestation



Section C-C

**Construction Notes**

**PITCHED ROOF**

Roof to achieve a minimum U-value of 0.13 W/m<sup>2</sup>K.

Single ply membrane installed strictly in accordance with manufacturer's instructions and specification.

Outline specification:

Local Monarplan PVC adhered warm roof:

Roof structure to comprise truss and attic truss to specialist design.

18mm wpb plywood or OSB3 deck over truss

100mm S.A. Primer

Vapour Control Layer ref TorchSafe T.A. VCL - Sanded, adhered to primed deck

175mm Thermazone Roofboard insulation adhered to VCL

Monarplan GF Fleeceback membrane fully bonded to Roofboard

Monarplan Coated Metal clips, brims etc mechanically fastened and joined as manufacturer's details.

Monarplan Standing Seam Profile hot welded to membrane at norm 600mm centres

12.5mm plasterboard ceiling with 3mm skim finish

Trusses to be strapped over top of walls using proprietary Expamet or similar straps at maximum 2m centres

subject to truss specialist details.

**EXTERNAL WALLS**

New External Walls - to be cavity construction to achieve a min. U-value of 0.18 W/m<sup>2</sup>K and should meet the requirements Approved Document C5 of the Building Regulations.

Outer skin - 100mm facing brick or 100mm dense concrete block (1.13x) faced with 10mm silicone polymer render, cavity - 125mm wide, containing 75mm thick Kingspan K108 partial fill cavity board insulation, inner skin - 100mm medium density concrete block (0.51x).

Walls to be finished externally with through colour render on external blockwork leaf or facing brick outer leaf (refer to Elevation drawings) and internally with dot and dab 12.5mm plastered with 3mm gypsum plaster skim finish. Inner and outer skins to be tied together with stainless steel RT2 type ties, with insulating retaining clips positioned at 750mm centres horizontally and 450mm centres vertically in staggered pattern and doubled up at openings and at wall returns less than 550mm.

Cavity insulation to be taken down minimum 150mm below top of perimeter floor insulation and remaining cavity to be filled with lean mix concrete up to 225mm below ground level with sloping top surface to allow any water in cavity to escape.

Precast concrete lintels to SE design and structural composite stone door/window surrounds to outer wall leaf with cavity tray over to be inserted in external walls over openings, with a minimum end bearing of 150mm.

Hyload DPC (or similar) to be built into both skins of cavity wall min. 150mm above ground level with DPC to inner skin lapped to DPM/radon barrier. Proprietary insulated finned cavity closers - Kingspan 'Thermabate' or similar approved, to be fitted horizontally and vertically to all openings inserted in accordance with B.S. 5628 part 3, B.S. 9215, and B.S. 8000 part 3.

Cavity wall to be closed at high level with proprietary insulated cavity closer.

Outer leaf brickwork below DPC to be min Class B engineering brick or similar.

Substructure walls to be class A concrete blockwork (or similar approved) taken down to foundation level.

Openings to be provided where necessary to allow drainage / service pipes to pass through substructure walls, leaving a min. clearance of 50mm around diameter of pipe sealed with flexible foam to prevent vermin infestation. Holes to be bridged with 100x100mm section precast concrete lintels, length to suit opening width plus end bearings.

If required by Structural Engineer, 10mm movement joints to comprise polysulphide foam filler with colour matched mastic sealant, all subject to Structural Engineer's design.

**LATERAL RESTRAINT**

Provide 30x5mm galvanised mild steel anchor straps at maximum 2000mm ctrs, fixed along gables, ceilings of roofs and at first and second floor joist level (subject to east-floor joist and truss manufacturers requirements), over timber noggins between the main members, at least half the depth of the main members, by minimum 50mm wide packed tight to outside wall. Straps to span minimum three joists/rafters.

**GROUND FLOOR CONSTRUCTION**

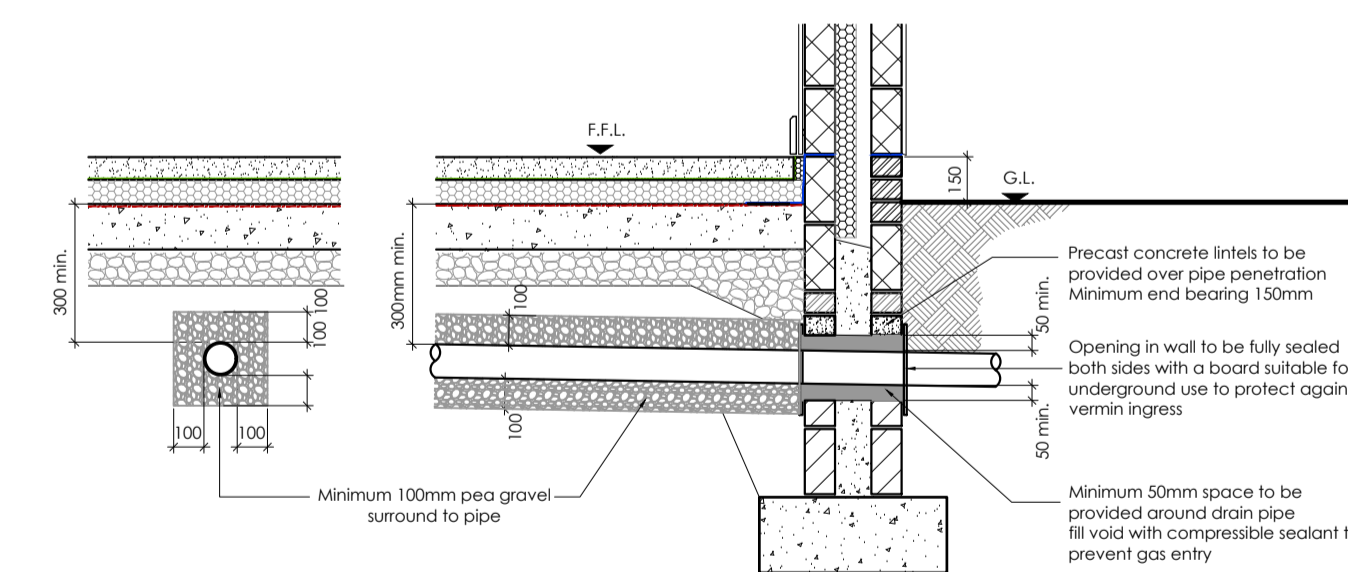
Overall floor construction to achieve maximum 0.13 W/m<sup>2</sup>K U-Value.

To comprise 75mm reinforced sand/cement screed on min 500 gauge polythene separation layer overlapped 150mm at joints and turned 100mm up at perimeter.

120mm Kingspan Kacotherm K103 Floorboard insulation with min. 25mm thick perimeter insulation board to face of walls to insulate edge.

150mm thick concrete floor slab to SE design under Visqueen or similar Radon DPM, lapped and sealed with compatible cavity wall DPC in accordance with manufacturer's instructions.

Slab laid over min 150mm well compacted hardcore with sand blinding.



Typical details of sewer protection measures below solid floor construction

New Dwelling Land at St Ederyn's Church Old St Mellons, Cardiff		Job No. 20.059	Rev. A
GA Section C & Sewer Protection Detail		Dwg No. AL10114	Rev. A
Date Jan 2021	Drawn ***	Scale 1:25 @ A1	
		Unit 1A, Compass Business Park, Pacific Road, Cardiff, CF24 0NL www.cjarchitects.co.uk tel: 072 3462159	