

CONSTRUCTION SPECIFICATION

1. GROUND BEARING SLAB (INSULATION OVER) (0.15W/m2K)
Solid ground floor to consist of 150mm consolidated well-rammed hardcore, under 150mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2, under 1200 gauge DPM/radon barrier with 300mm laps double welled and taped at joints and service entry points using gas proof tape. Install 100mm PIR Floor board insulation (based on a PA ratio of 1.2) over DPM, with 25mm PIR insulation around perimeter. Provide 500 gauge vapour control layer (VCL) over insulation with all joints lapped 150mm and sealed. Turn VCL up minimum 100mm at room perimeters. Finish with 25mm sand/cement finishing screed with light mesh reinforcement.
2. SUSPENDED TIMBER INTERMEDIATE FLOORS
Intermediate floor to comprise 25mm T&G flooring grade chipboard deck mechanically fixed to 50mm x 200mm C24 softwood timber joists (to structural engineer's design.) In wet areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade, glued and screwed to joists in accordance with BS EN 312:2010. Identification marking must be laid upper most to allow for easy identification. Install 100mm Rockwool Sound Insulation slab between joists. Ceilings to be 12.5mm plasterboard with taped joints, and 3mm gypsum skim coat plaster finish in accordance with BS 8481:2006.
Joist spans over 2.5m to be strutted at mid span using 38mm x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). Provide lateral restraint where joists run parallel to walls. Unless specified otherwise by the structural engineer, ceiling joists to be strapped to walls and gable walls using 1.0m x 30mm x 5mm galvanised mild steel horizontal straps to BS EN 845-1:2013 and built into walls at maximum 2.0m centres. Straps to be taken across a minimum of 3 rafters and screw fixed. Provide 38mm wide x 3/4 depth solid noggin between joists at strap positions.
3. 100mm CAVITY WALL (0.18W/m2K)
Cavity wall leaves below ground level formed from either Class A blockwork or semi engineering brickwork with 1:4 cement:sand mortar beds to Structural Engineer (SE) design. Add 30mm PIR insulation to cavity. Cavities below ground level to be filled with lean mix concrete to 150mm below DPC and laid to fall to weepholes. Cavity walls leaves above ground level formed from traditional block and block cavity construction in accordance with BS EN 1996-2:2006. To comprise 440mm x 100mm x 215mm (length x depth x height) lightweight concrete blockwork inner leaf, 100mm cavity and 440mm x 100mm x 215mm (length x depth x height) lightweight concrete blockwork inner leaf (minimum K-value 0.15W/mK or better) to SE design. Walls to be built with 1:1.6 cement/lime/sand mortar and flush pointed to provide integrated vapour control layer. Use stainless steel vertical twist type retaining wall ties built at 750mm centres horizontally, 450mm centres vertically and staggered 225mm centres at reveals and corners. Wall ties to be suitable for cavity width and in accordance with BS EN 845-1:2013. Internal finish to be 12.5mm plasterboard on adhesive dabs with taped joints, beads and stops, and 3mm gypsum skim coat plaster finish. All cavities closed around openings using 30mm thick non-combustible insulated cavity closers. Close cavities at eaves level with 12mm calcium silicate board on treated softwood timber battens mechanically fixed to inner leaf of cavity wall. Cavities in new walls to be made continuous with existing where possible to ensure continuous weather break. If a continuous cavity cannot be achieved, provide a movement joint with vertical insulated damp proof course where new walls abut existing. Tie walls into existing construction with suitable proprietary stainless steel starter bar systems in accordance with BS EN 845-1:2013.

4. TIMBER FRAME WALL TO DORMER (0.16W/m2K)
Timber frame formed from 50mm x 150mm C24 treated softwood timber studs at 400mm centres with 50mm x 150mm C24 treated softwood timber head and sole plates and intermediate horizontal noggins at 450mm centres, or to Structural Engineer design. Install 110mm PIR Framing Board insulation between timber studs. Form drained and ventilated cavity externally with 25mm x 50mm treated softwood timber battens, on 25mm x 50mm treated softwood timber counter battens, on breather membrane, on 18mm grade EN314-3 ply. Apply vertical standing seam zinc cladding, weathering strips, flashing and sealants accordingly. Face internally with 37.5mm Insulated Plasterboard with integrated vapour control layer, taped joints, beads and stops, and 3mm gypsum skim coat plaster finish. All junctions to have watertight construction. Seal all internal perimeter joints with tape and all external perimeter joints with silicone sealant.
5. TIMBER FRAME WALL TO PORCH (0.18W/m2K)
Wall leaves below ground level formed from either Class A blockwork or semi engineering brickwork with 1:4 cement:sand mortar beds to Structural Engineer (SE) design. Allow 100mm cavity between leaves. Outer leaf formed from engineering brick/Class M6 brick from minimum of 50mm below ground level up to DPC. Timber frame formed off of inner cavity leaf from 50mm x 150mm C24 treated softwood timber studs at 400mm centres with 50mm x 150mm C24 treated softwood timber head and sole plates and intermediate noggins at 450mm centres, or to Structural Engineer design. Install 100mm PIR Framing Board insulation between timber studs. Face externally with breathable membrane over 9mm moisture resistant OSB3 sheathing board. Apply wall finish over breather membrane and OSB3 board. Face internally with 32.5mm Insulated Plasterboard with integrated vapour control layer, taped joints, beads and stops, and 3mm gypsum skim coat plaster finish. Ensure insulated plasterboard extends down beyond timber frame and over blockwork cavity walls to meet with perimeter insulation. All junctions to have watertight construction. Seal all internal perimeter joints with tape and all external perimeter joints with silicone sealant. New walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm centres horizontally, 450mm centres vertically and staggered 225mm centres at reveals and corners. Wall ties to be suitable for cavity width and in accordance with BS EN 1995-1-1:2004.

6. DRY-LINING ON ADHESIVE DABS
Install 57.5mm Insulated Plasterboard with integrated vapour control layer, taped joints, beads and stops and a 3mm gypsum skim coat plaster finish in accordance with BS 8212:1995 onto existing masonry wall construction with adhesive dabs and proprietary secondary fixings in accordance with manufacturer's recommendations. Fixings should be long enough to allow a minimum 25 mm penetration into the masonry leaf. Ensure there is a tight fit between the boards and adjoining timbers, and fill all gaps with expanding urethane sealant. To avoid air leakage, seal any remaining gaps and penetrations through the insulation with flexible polyurethane foam and/or flexible sealant.
7. EXTERNAL WALL INSULATION (EWI) (0.18W/m2K)
Apply K Rend LW1 Lightweight Polymer Render, through-coloured external wall insulation (EWI) system, suitable for scraped, ashlar marking, dry dash and spray roughcast finishes. Colour to be confirmed. Installation to be in accordance with the system designer's specification and guidelines. All rendering should be in accordance with the relevant recommendations of BS EN 13914-1:2016.
Position and secure the base profile to the external wall above the DPC using approved profile fixings at 700mm maximum centres. Install 90mm Kingspan Kooltherm KS External Wall Board (as supplied by the system designer) to the external wall and restrain by inserting mechanical fixings through pre-drilled holes into the substrate at the specified minimum rate of five fixings per board. Ensure that all board edges are butted tightly together, and surface alignment is checked as work proceeds. Movement joints in the substrate must be continued through the system by cutting through the insulation boards to coincide with the building's movement joints. Where required, angle beads are fully bedded in mortar at all building corners and at door and window heads and jambs prior to the application of the render.
The render is prepared and applied by trowel or spray machine to the surface of the dry insulation, initially to an approximate thickness of between 6mm and 7mm. The mesh is bedded into this coat with 100mm laps at joints. Additional pieces of reinforcing mesh are used diagonally at the corners of openings. A further coat is applied to give a minimum render thickness of 15mm and the surface ruled level. Care should be taken to butt the render under details such as window sills. The render is allowed to set for approximately 18 to 24 hours, depending on weather and substrate conditions.
For a scraped finish: when the render has set but not fully hardened, the whole surface should be carefully and evenly scraped in a circular motion with a scraping tool, ensuring all laitance is removed. The finished render thickness should be a minimum of 12mm.
For ashlar marking: apply the render to a minimum finished thickness of 15mm. Light ashlar marking (not more than 3 mm deep) is cut into the surface using a Weber square-edged cutting tool.
For a dry dash finish: apply the render to a minimum finished thickness of 12mm and flatten. While the render is still soft, apply the dry dash aggregate with a dashing trowel. On completion, the surface should be checked to ensure an even coverage has been achieved.
For a spray roughcast finish: apply the render to a minimum finished thickness of 12mm and rule flat. When the render begins to 'take-up', provide a light spray of render to achieve an overall thickness of between 15mm and 16mm.
To prevent the finish from drying too rapidly, it should not be applied in direct sunlight. The finished render surface should be protected from rain and frost until the material is dry and hard. Continuous surfaces must be completed without a break. Provide an adequate overhang or an adequately sealed, pressed flashing at the tops of walls.

DRAWING NOTES

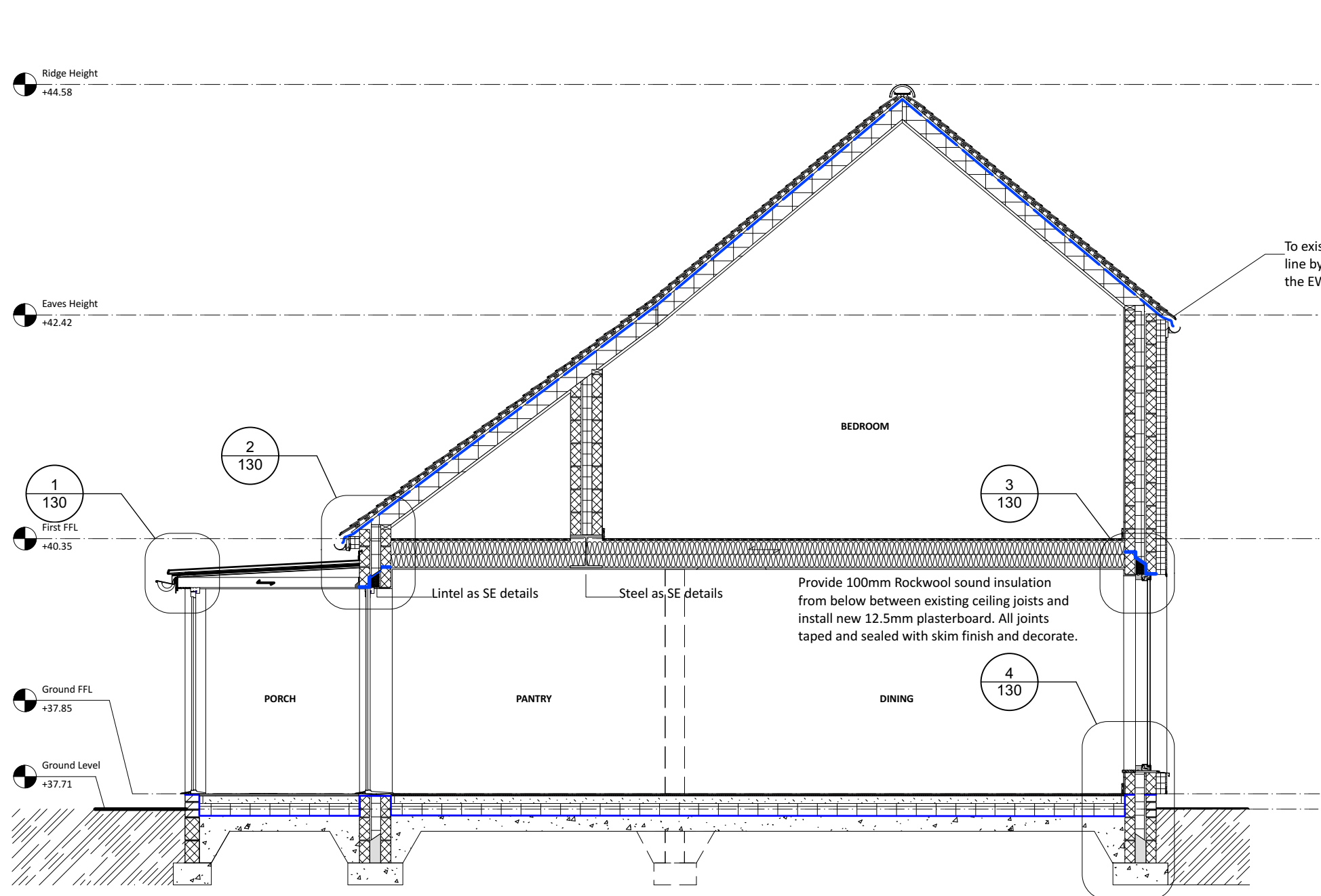
For elevations and vertical setting out, see drawing series 120.
For sections and construction specification notes, see drawing series 130.
For Building Regulations 2010 compliance notes, see drawing 190.

For all structural design specifications, refer to structural engineer's drawings.

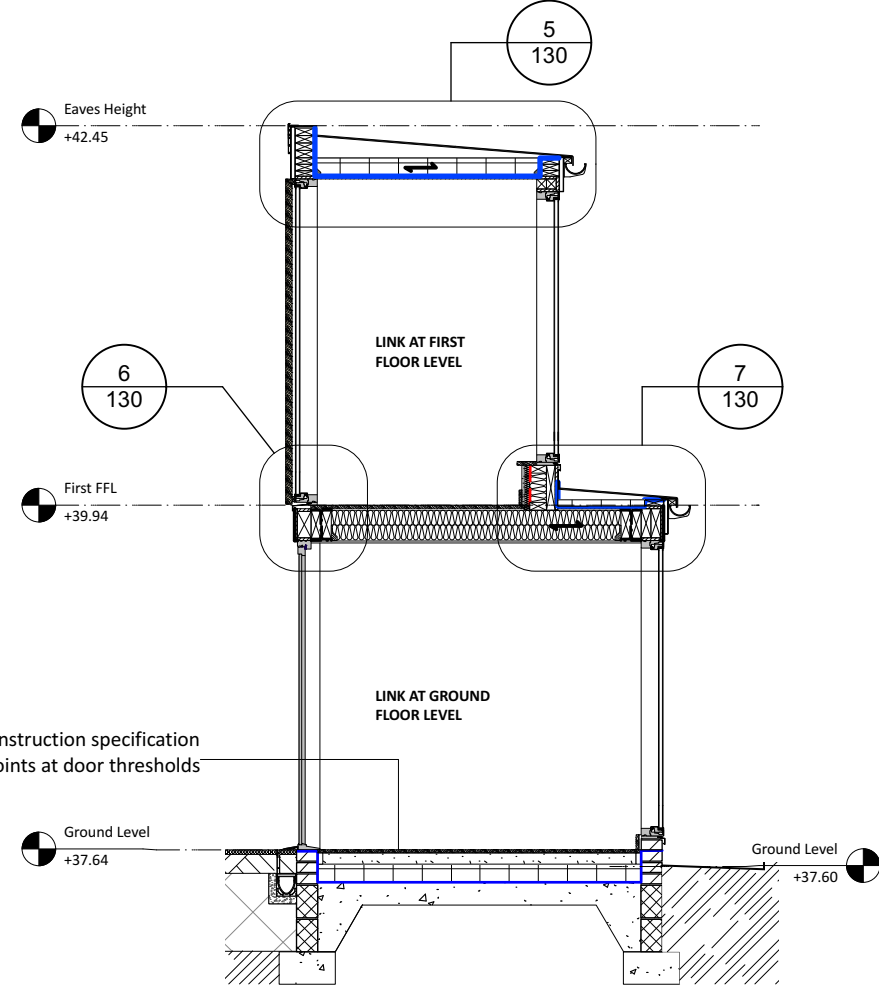
8. TIMBER CLADDING (VERTICAL)
Cladding to be 20mm x 150mm English Oak Wire Brushed, charred vertical timber cladding in accordance with BS 8605-1:2014 fixed to 25mm x 50mm treated horizontal softwood timber battens at 400mm centres, on 38mm x 50mm and 38mm x 100mm treated vertical softwood timber counter battens at 600mm centres, mechanically fixed to wall structure. Contractor to provide samples for approval.
General: Install DuPont Tyvek DrainWrap or equal approved around the building. Install vertical counter battens with insect mesh folded over the batten ends and stapled to their faces. Install horizontal cladding battens over the counter battens. Install vertical timber cladding with solid timber stops at corner details. Ensure 2mm to 3mm tolerance between corner post and board edges. Reveal boards and fillets to windows and doors to be in matching timber. Use stainless steel ring shank cladding nails if the cladding is to be finished with transparent or semi-transparent stain. Alternatively, use either hot-dipped galvanized or aluminum fasteners. Ensure compatibility with the timber species. Cladding should be fastened to each batten with nails spaced at 400mm on center. Cladding to be installed with either (a) staggered joints (minimum 400mm) butted together, or (b) continuous horizontal joints inline with window/door sill/head/jamb. To be confirmed on site between contractor and client prior to installation.
Before installing cladding, make sure that flashings are installed to prevent moisture from entering wall and roof spaces. Install horizontal flashing extending from the top of all wall penetrations (ie all windows and doors) and at any material or material directional change. An additional head trim flashing is required at the head of the window/door to direct water further outward, beyond the thickness of the window. The flashing should tilt downward to allow water to drain away from the wall. Cladding or trim should be 7mm above the flashing ledge. Do not caulk where the flashing and trim or other materials meet. Note that caulking in lieu of flashing is not acceptable. Use high-performance caulks or sealants to seal gaps around windows, doors, corners, and other exterior joints that are exposed to potential water intrusion. Ensure compatibility with the timber species. Do not caulk areas that will prevent moisture from escaping the wall cavity.
Regardless of the time of the year of the installation, all field cuts must be finished. Where temperatures drop below 10 degrees Celsius either during application or within the curing period, use an alkyl oil wood primer to coat end grain exposed by jobsite cuts. Cladding with end cuts coated with alkyl oil primer can be installed before drying without compromising the coating's effectiveness. Above 10 degrees Celsius, use a high quality 100% acrylic-late primer to coat exposed end grain if allowed to dry before installation. With either primer, follow manufacturer's recommendations.

9. FASCIA
Fascias are to be 20mm softwood timber selected, fixed and treated against decay, in accordance with the design. Timber for external feature work should be free from waney edges, large knots and resinous pockets, splits and other unsightly defects. All joints should be cut and fixed neatly. Mitred angles and splay joints should be used to prevent exposure of end-grain. Butt joints to fascia should be splayed. Fascia boards should have two fixings into each rafter and be fixed at a height that maintains the correct pitch in accordance with the roof covering manufacturer's recommendations. Where preservative treated timber is cut or planed, a liberal brush coating of preservative should be applied. All untreated timber that is to be painted should be knotted and primed all round before fixing. When timber requires a stained finish, one coat of stain should be applied before fixing.

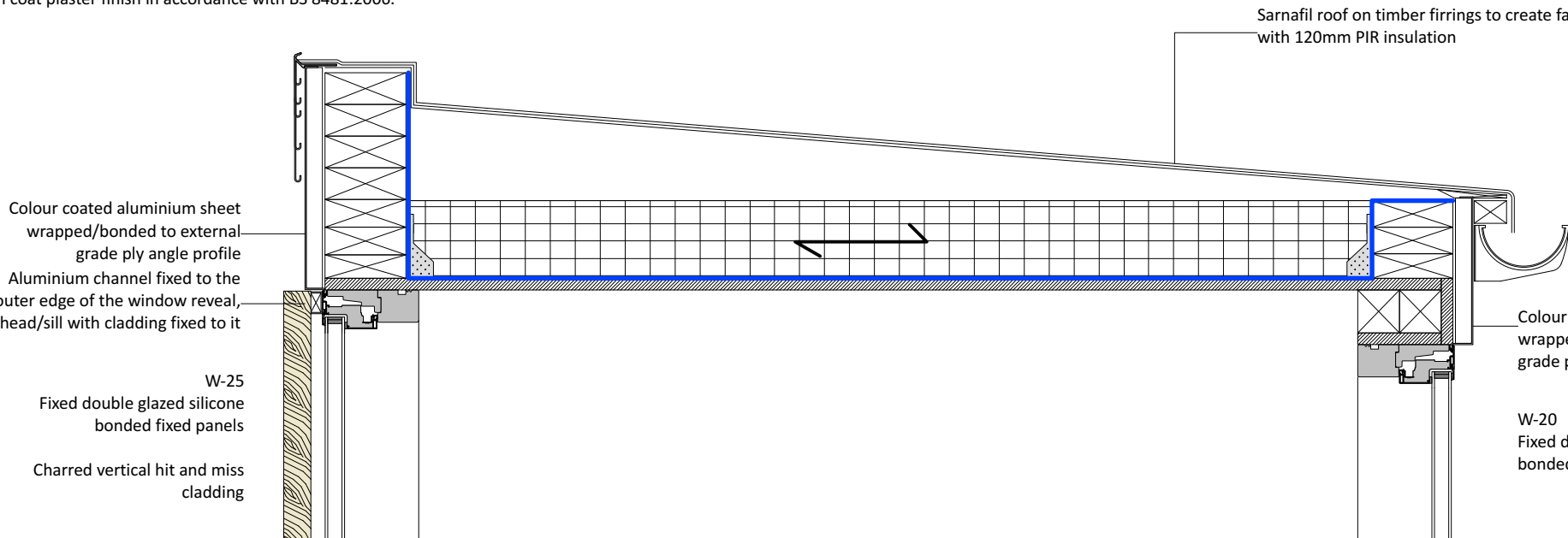
10. WARM PITCHED ROOF (0.15W/m2K)
Pitch to be between 40 degrees with maximum imposed load of 0.75 kN/m2 and maximum dead load of 0.75 kN/m2.
Roof tiles on 25mm x 38mm tanalised softwood tiling battens, on 38mm x 38mm tanalised softwood counter battens, on breather membrane, on 50mm x 150mm treated C24 softwood timber rafters to SE design. Provide eaves carrier membrane, lapped underneath breather membrane and into gutter. Install 150mm PIR insulation between rafters and 32.5mm Insulated Plasterboard with integrated vapour control layer and taped joints, and 3mm gypsum skim coat plaster finish in accordance with BS 8481:2006.
Plain clay roof tiles to be in accordance with BS EN 1304. Battens and counter battens to be in accordance with BS 5534. Fasteners to be in accordance with BS 1202. Mortar bedding and pointing mix to be 1:3 cement:sand. Reinforced bitumen sheet underlay in accordance with BS 8747, breathable membrane in accordance with BS EN 13859-1 or Agreement certified. For clay tiles, lay tiles to a half lap bond with joints slightly open. Align tails. Fixings to tile manufacturer's recommendations.
Unless specified otherwise by the structural engineer, ceiling joists and rafters to be strapped to walls and gable walls at at roof level using 1.0m x 30mm x 5mm galvanised mild steel horizontal straps to BS EN 845-1:2013 and built into walls at maximum 2.0m centres. Straps to be taken across a minimum of 3 rafters and screw fixed. Provide solid noggin between rafters at strap positions. All wall plates to be 50mm x 100mm C24 treated softwood timber and fixed to the inner skin of cavity walls using 1.0m x 30mm x 5mm galvanised mild steel horizontal straps to BS EN 845-1:2013 at maximum 2m centres.
11. ZINC ON VENTED PLY ROOF
Pitch to be 8 degrees with maximum imposed load of 0.75 kN/m2 and maximum dead load of 0.75 kN/m2.
Zinc on breather membrane over 18mm grade EN314-3 plywood with 150mm wide 12mm plywood strip at the eaves to house the T-plate, 6mm below the level of the remaining plywood. 50mm vented void minimum formed by battens running from eaves to edge of rooflight, with insect mesh at both ends. Breather membrane to prevent any condensation. 100mm PIR insulation between and over 47x100mm treated C24 timber rafters (to structural engineer's design) and Adelex Max vapour barrier. Construct ceilings with 15mm plasterboard with taped joints, and 3mm gypsum skim coat plaster finish in accordance with BS 8481:2006.



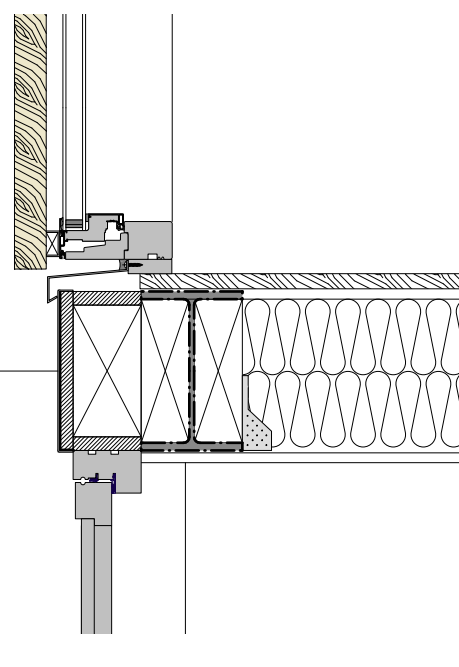
PRO. SECTION A A



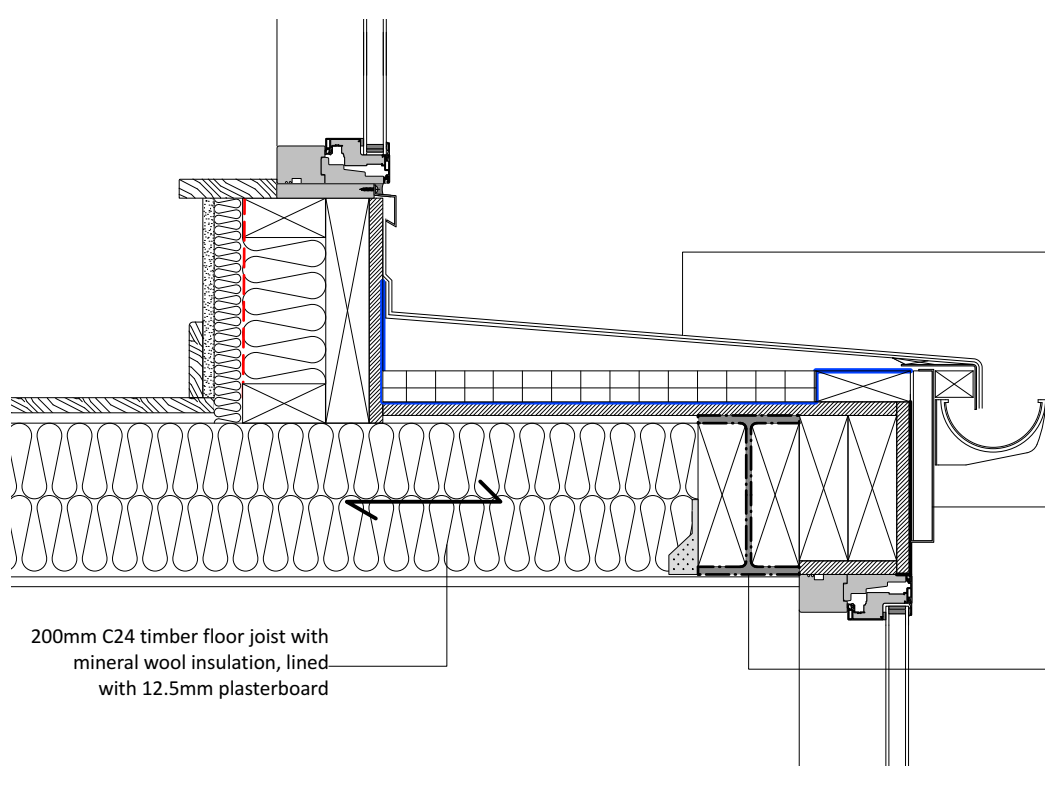
PRO. SECTION B B



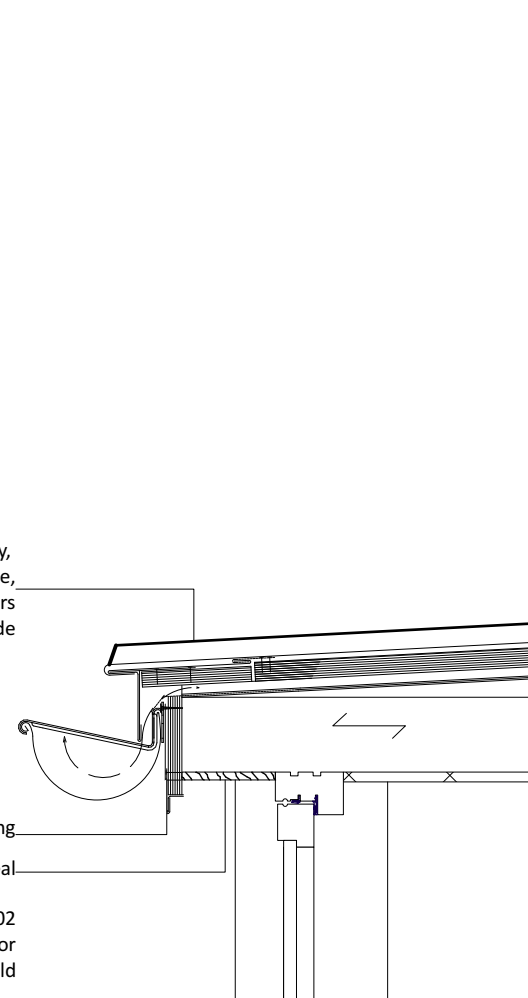
PRO. DETAIL 5
LINK FLAT ROOF 1:10 @ A1



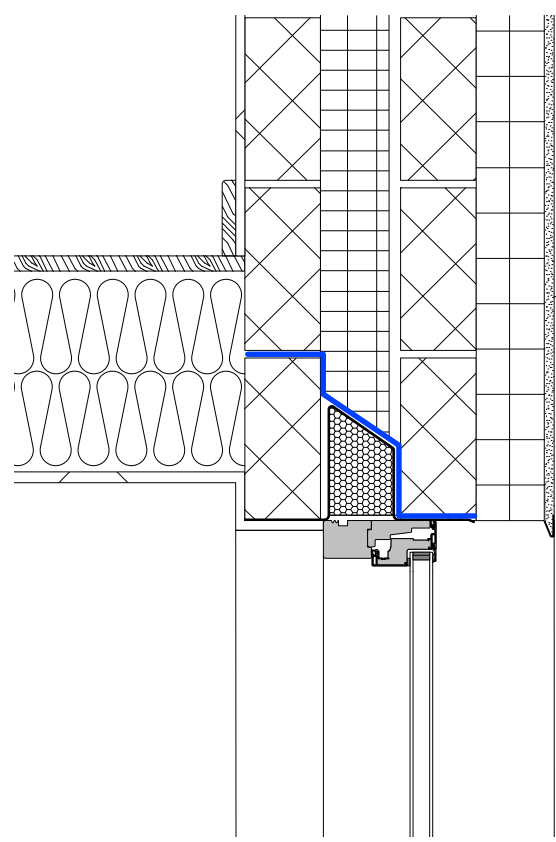
PRO. DETAIL 6
LINK INTERMEDIATE FLOOR 1:10 @ A1



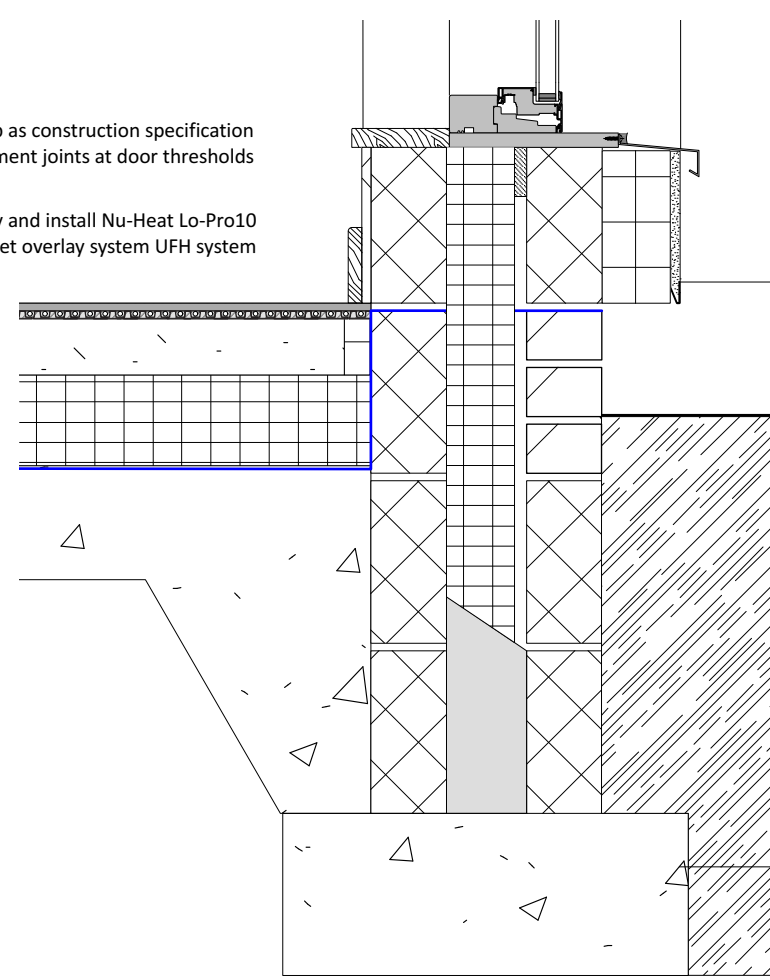
PRO. DETAIL 7
LINK INTERMEDIATE FLOOR 1:10 @ A1



PRO. DETAIL 1
UNINSULATED PORCH 1:10 @ A1



PRO. DETAIL 3
WINDOW HEAD 1:10 @ A1



PRO. DETAIL 4
WINDOW BASE 1:10 @ A1

These details are subject to all relevant statutory approvals. If in doubt, check.
All dimensions are to be checked on site. Areas where quoted are approximate. Figured dimensions only are to be taken from this drawing.
Any discrepancies with other related information is to be reported to Absolute Architecture prior to order construction/installation.
This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Absolute Architecture was commissioned.
Absolute Architecture accepts no responsibility for this document to any party other than the person by whom it was commissioned.

No.	Date	Revision Notes	 ABSOLUTE ARCHITECTURE	Design Firm Absolute Architecture Commercial House, 53b Kingsbridge Road, Newbury, Berkshire, RG14 6DY T: 01635 528188 E: mail@absolute-architecture.co.uk www.absolute-architecture.co.uk	Project Title Ed and Emily Levy DAMP WORKS TO COTTAGE Parkers Cottage, Hurst, Berkshire, RG10 0DS	Drawn By SM	Checked By SS
				Status TECHNICAL	Sheet Title PRO. SECTION AA & BB	Date 14/05/2024	Project ID 583 130