

General Notes:

New wastes to sinks, showers, baths & basins to be 40mm with 75mm deep seal traps, connected to 50mm pipe work with rodding access at all bends (showers may be fitted with proprietary shallow trap as necessary). All for connection to new s.p.s. Washing machine to discharge to 40mm stand-pipe for connection to new s.p. Dishwasher to discharge to proprietary fitting on sink waste. All wc wastes to be 100mm with rodding access at all bends and connections. See plan for s.p. positions. All internal s.p.s to be ducted through roof void to proprietary ridge vents ensuring minimum 1000mm clearance to all opening windows.

Level approach available from site boundary and from parking spaces/garages. Minimum gradient at 1:20 over 3.000m to give total rise of 150mm to level threshold (actual available minimum 4.000m with rise to level threshold of 0.150m to give gradient of 1:25). Cross falls are nominal (4/- 40mm across whole site). Construct level access in brick pavers or similar. Finished surface to be firm, durable and slip resistant with undulations not exceeding 3mm under a 1000mm straight edge. Joints between pavers to be filled flush. NOTE: where level approach compromises minimum 150mm height to DPC, provide minimum 3 coats of liquid DPM to avoid moisture penetration.

Install external lighting above all entry ways in accordance with AD L1. Units to accept energy efficient 2D lamps only and to have integrated photocell for automatic operation when dark (lamp automatically extinguishes with daylight)

This drawing must be read in conjunction with Design Risk assessments. The contractor must prepare method statements for safe working before works commence. The detailed construction and services are not shown on this drawing. Contractor to plot found services on 'as built drawing'

If in doubt ask Do not scale. All dimensions to be checked on site before commencing works. Any deviation or discrepancy from this drawing to be referred to Designer. Copyright reserved. Structural engineer's details & or manufacturers specification must read in conjunction with plans, any deviations to be checked with designer.

Ensure party walls and walls surrounding protected staircase are taken up full height and fire stopped (use Rockwool Firepro - integrity 90 mins or similar).

Walls at Ground floor - 102mm facing brickwork, 100mm cavity width with 50mm Celotex GW3000 Partial fill insulation (retains 50mm residual cavity) and 100mm Durox Supabloc inner skin (Lambda value 0.11w/m-k). Ensure retaining clips and wall ties are installed in strict accordance with manufacturers instructions. Provides 'U' value of 0.26w/m²k. Use cut strips of rigid insulation to prevent thermal bridging at all junctions and Thermabate insulated cavity closers to all openings (conforms to minimum 1/2 hr resistance AD B3). Form bell drip above DPC and all openings. Provide stainless steel wall ties at 450 c/s vertically and 750 c/s horizontally. Finish with 12.5mm plasterboard on jobs. Tape and skim. Use IG Steel lintels to external openings or as specified. Ensure minimum 150mm bearings. Provide additional rigid insulation to all material changes and junctions to avoid thermal bridging. Seal joints between windows/doors and wall structure with sealant pointing to outside and expanding foam or plaster internally. DPC to be minimum 150mm above G.L with first 4 courses below DPC formed in engineering grade brick work.

Walls at first floor - constructed using sand/cement render on expamet galvanised mesh on 100mm Class A blockwork, 100mm cavity width with 50mm Celotex GW3000 Partial fill insulation (retains 50mm residual cavity) and 100mm Durox Supabloc inner skin (Lambda value 0.11w/m-k). Ensure retaining clips and wall ties are installed in strict accordance with manufacturers instructions. Provides 'U' value of 0.26w/m²k. Form bell drip above DPC. Use cut strips of rigid insulation to prevent thermal bridging at all junctions and Thermabate insulated cavity closers to all openings (conforms to minimum 1/2 hr fire resistance AD B3). Provide stainless steel wall ties at 450 c/s vertically and 750 c/s horizontally. Use L1/S IG Steel lintels to external openings or as specified by engineer. Ensure minimum 150mm bearings. Provide additional rigid insulation to all material changes and junctions to avoid thermal bridging. Seal joints between windows/doors and wall structure with sealant pointing to outside and expanding foam or plaster internally. DPC to be minimum 150mm above G.L with first 4 courses below DPC formed in engineering grade brick work.

Flush fitting Titan Trivent Select ventilators (or approved similar) are fitted to all windows. 8000mm² on windows 915mm and wider, 4000mm² on windows below that size (down to 488mm). See calculations below for total background ventilation rate.

Total floor area over two floors = 49m²
Total bedrooms = 2
In accordance with Table 1.2a AD F1 above will require 35,000mm² background ventilation (system 1 - background ventilators and intermittent mechanical extraction)
6 x 8000 = 48,000mm²

Total background ventilation available = 48,000mm²

Apply 'Coolmaster' pyroplast-steel D intumescent paint to all structural steelwork. Apply in strict accordance with manufacturers specification to achieve minimum 30 minutes fire resistance. All in accordance with BS 476, Part 21: 1987.

Where applicable, door openings to ground floor rooms incorporating a w.c. to be set back 250mm from front of pan.

Lobbies to have minimum finished width of 900mm. Door clear opening width to be minimum 775mm (800mm in case of non-head on approach) for ease of access.

All new light switches and socket outlets to be placed between 450 - 1200mm above finished floor level in accordance with section 8 Part M2 Building regulations.

New boiler should be gas fired condensing combi boiler with RST balanced flue, position in accordance with Part J Building Regulations. All heating controls, including TRVs, and pipe-work to be in strict accordance with AD L1b 2006. Boiler to be Alpha CD32C combi boiler with balanced fanned draught, SEDBUK A certified seasonal efficiency 90.2%. Boiler to be installed in conjunction with Alpha Solar Smart system consisting of 2no 2230 x 1120 x 92mm portrait solar collectors, drainback unit (inc thermostatically controlled modulating pump and heat exchanger) and 90 litre unvented Solar cylinder. Specified cylinder is fully O3 compliant and is supplied with unvented kit and expansion vessel. Gas Safe (overseen by Capita Plc) registered engineer to install all appliances and provide commissioning certificate, including maintenance and operating instructions, to client and building control on completion. Ground and first floor to be fitted with OSMA under floor heating system (or similar), to include manifold/pump, wiring and control interface. See details for typical installation of ground/first floor UFH pipework.

At completion as built carbon dioxide emission calculations (DER's) must be submitted that are not greater than the target emission rate (TER) for the dwelling calculation, before commencement of the works, the software used and assessment must be accredited and registered with an approved scheme, also the following information must be provided:
a) The DER calculation must be updated to contain the compliant air pressure test result.
b) The developer/builder during the construction process shall complete the relevant accredited detail checklists, and pass on copies of these to building control at completion.
c) A notice shall be provided at completion stating that the dwellings have been constructed in accordance with the design TER specification and if not any changes to the specification are to be listed.
d) A schedule of key design features contained in the DER shall be provided including heating, and insulation etc.
e) Energy performance certificates, which have been carried out by an accredited assessor with an approved scheme, shall be provided for the dwelling at completion in accordance with Regulation 17E.

Provide new black uPVC 100mm half-round gutters with 75mm down pipes for connection to new soak-away. Ensure suitable rodding access to base of down pipes. New soak aways to be minimum 5.000m from nearest building and be at least 1.000m³. Porosity test to be conducted on site.

All new drainage underground to be in strict accordance with section H Building Regulations. All pipe work underground to be 100mm and laid on 100mm pea-beach for connection to new/existing access chambers. All to BS 4660/5481. Where pipe work passes through external walls, provide concrete lintel over in accordance with diagram 9 Part H Building Regulations. Drainage under floors to be protected against possible ground movement with 100mm pea beach all round.

SAP energy rating for each newly created dwelling to be provided to building control prior to or within 5 days of completion

Details of air pressure testing to show that air permeability is within reasonable limits, which will be carried out on completion to the new dwelling shall be provided to show compliance with Requirement L1A

● **FIRST FLOOR BATHROOM:**
Wall mounted extract fan rated at 15 l/sec and able to be operated intermittently. Duct to external wall and terminate with traditional air brick.

● **GROUND FLOOR WC**
Wall mounted extract fan rated at 15l/sec and able to be operated with light pull with 15 min overrun. Duct to external wall and terminate with traditional airbrick.

● **KITCHEN:**
Hood mounted extractor fan rated at 30 l/sec and able to be operated intermittently and located directly over cooking facilities. Duct to external wall and terminate with traditional air brick.

Electrical installations are to be designed, installed, inspected and tested in accordance with BS 7671:2001. The works are to be undertaken by an installer registered under a suitable electrical self-certification scheme, with installation certificate provided to building control and client on completion to show compliance with AD Part P 2005.

All new wall plates to be treated softwood and to be strapped to walls @ 1800mm c/s with 30 x 5 gms galvanised steel straps. Provide gable roof/flanking wall restraint using 30 x 5 gms straps @ 1000mm c/s and lapped over minimum three rafters with sw noggins under.

● Windows marked with asterisk to conform to AD B1 as means of escape. Minimum dimension of opening light in either plane to be 450mm, with total unobstructed opening of 0.33m². Windows marked for fire escape to have operable area 1100mm maximum/600mm minimum above finished floor level.

New load bearing ground floor partitions to be 100mm Durox block work, lined both sides with 12.5mm plasterboard, Tape & Skim. Seal all wall/floor & wall/ceiling junctions with flexible sealant in accordance with Part E Building regulations. Provide DPC/foundations as for external walls.

New non-loadbearing ground floor partitions to be 100mm Durox block work, lined both sides with 12.5mm plasterboard, Tape & Skim. Seal all wall/floor & wall/ceiling junctions with flexible sealant in accordance with Part E Building regulations. Provide DPC as for external walls. Thicken slab below internal blockwork walls to 300mm with 142 steel mesh reinforcement - 40mm cover top and bottom.

Materials should comply with appropriate British Standards or Agreement Certificates. The materials should be marked, stamped or otherwise to show their suitability. Materials should generally be in accordance with BS8000 series of documents and other accepted good practice (e.g. Quality assured to ISO BS 9000.)

Flanking wall details and other vulnerable junctions are designed to conform to Part E Building Regulations as shown on drawing.

Sound insulation tests performed by an accredited body to show compliance with AD E1 (July 2003), will be required within 5 days of completion.

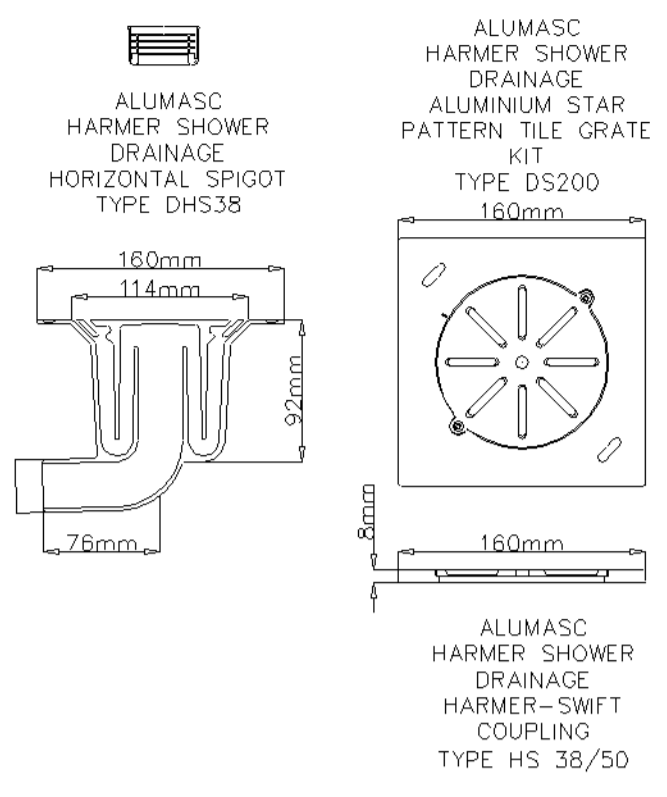
New non-separating lightweight ground/first floor partitions to be 100x50mm studwork insulated with 50mm Rockwool acoustic slab and line both sides with 15mm plasterboard, Tape & skim. Seal all wall/floor & wall/ceiling junctions with flexible sealant in accordance with Part E Building regulations. Double joists beneath first floor partitions or provide timber cross noggins where partitions run at 90° to joist direction.

● Provide smoke detectors/alarms in circulation areas to all 1st floors. Detectors to be maximum 7.5m from door of each habitable room and to be interlinked. All units to have battery back up and to be installed in strict accordance with manufacturer's specification and Part B Building Regulations. All to BS 5839-6:2004

Provide light fittings capable of accepting lamps with luminous efficiency greater than 40 lumens in rooms or circulation areas most frequently used, at a rate of 1 per 25m² of floor area or 1 per 4 fixed light fittings, whichever is greater.

Ensure all new uPVC windows and external doors provide minimum 'U' value of 1.8w/m²k (or install FENSA registered construction to same value).

All units to have adequate trickle ventilation (min 5000mm³) and provide opening lights equivalent to 1/20th floor area for rapid ventilation. Glazing to critical areas conforms to Class A BS6206. As with all emergency escape windows, minimum dimension of opening light in either plane to be 450mm, with total unobstructed opening of 0.33m². Vertical windows marked for fire escape to have operable area 1100mm maximum/800mm minimum above finished floor level.



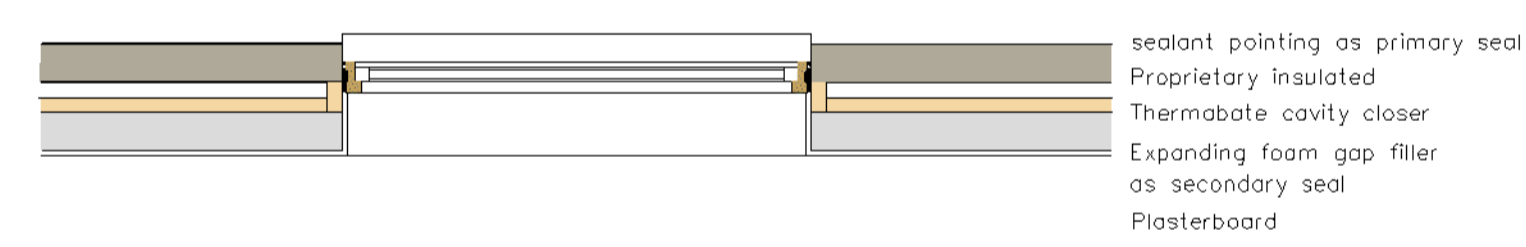
New staircases to be constructed in strict accordance with AD K. Provide 12 gings at 223mm and 13 risers at 200mm. Newsels to be 80x80mm with 20mm² balusters at maximum 100mm centres (100mm sphere must not be able to pass through). Handrail to be 900mm above pitch line. Width over strings to be 855mm. Going of 223mm applies to centre of winders (where applicable). Maintain 2000mm headroom at all times. Double up floor joists to trim stairs. Bolt together using M8 bolts with connector plates between @ maximum 1000mm c/s.

Topfloor precast concrete units to engineer's design with a floating surface of 65mm sand/cement screed laid on 25mm isowool Sound Deadening Floor Roll with a water proof building paper between the screed and insulation. Ceiling finish of single layer 12.5mm Gyproc Wallboard fixed to the floor slab with timber battens of Gyproc Resilient Channel. Ceiling void to be filled with a minimum 25mm thickness of isowool APR 1200.

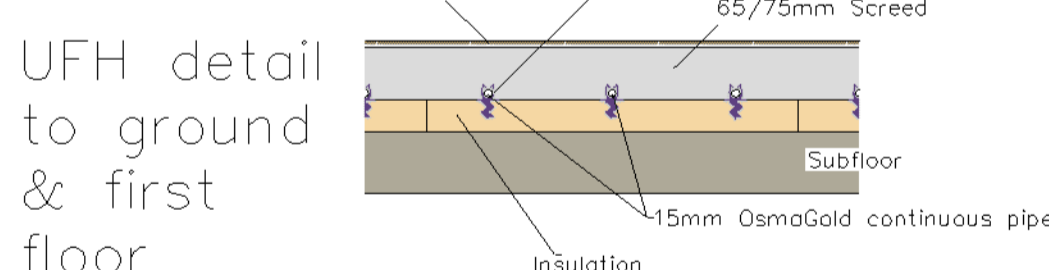
Provide 75mm Sand/Cement screed on 500g vapour control layer over 100mm Celotex TB3000 insulation on 1200g DPM. All on 'topfloor' precast units or similar to engineer's design. Use cut strips of rigid insulation to avoid thermal bridging at floor/wall junctions. Gives 'U' value of 0.18w/m²k.

All new foundations to be minimum 1000mm deep. Actual depth determined by Building Inspector on site subject to local soil conditions.

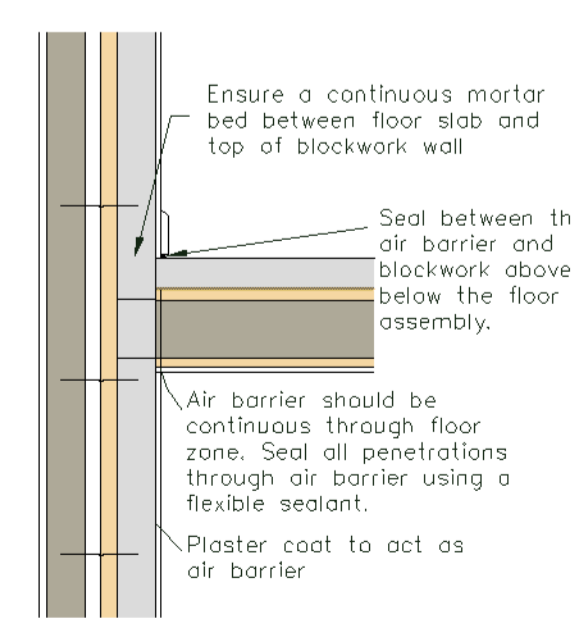
Set frame back to overlap cavity closer by minimum 30mm



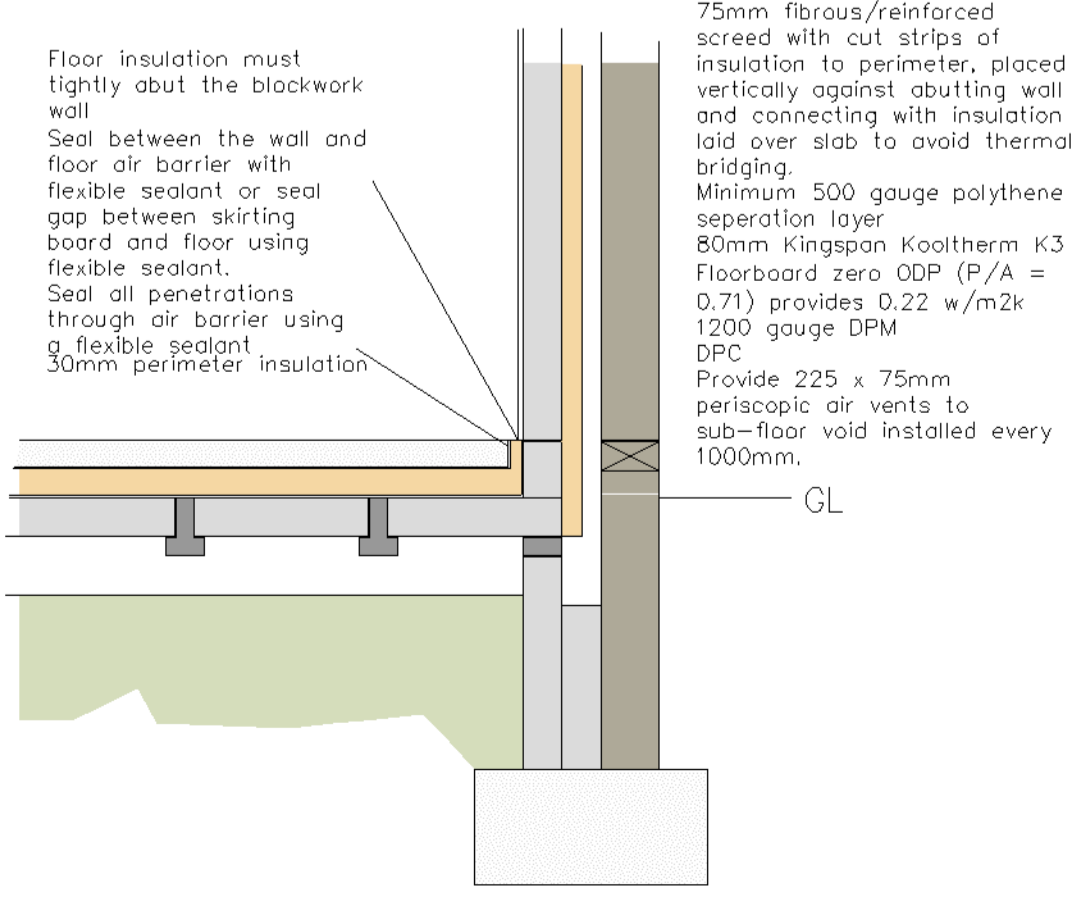
Window/Door Reveals (ACD: MCI-WD-05)



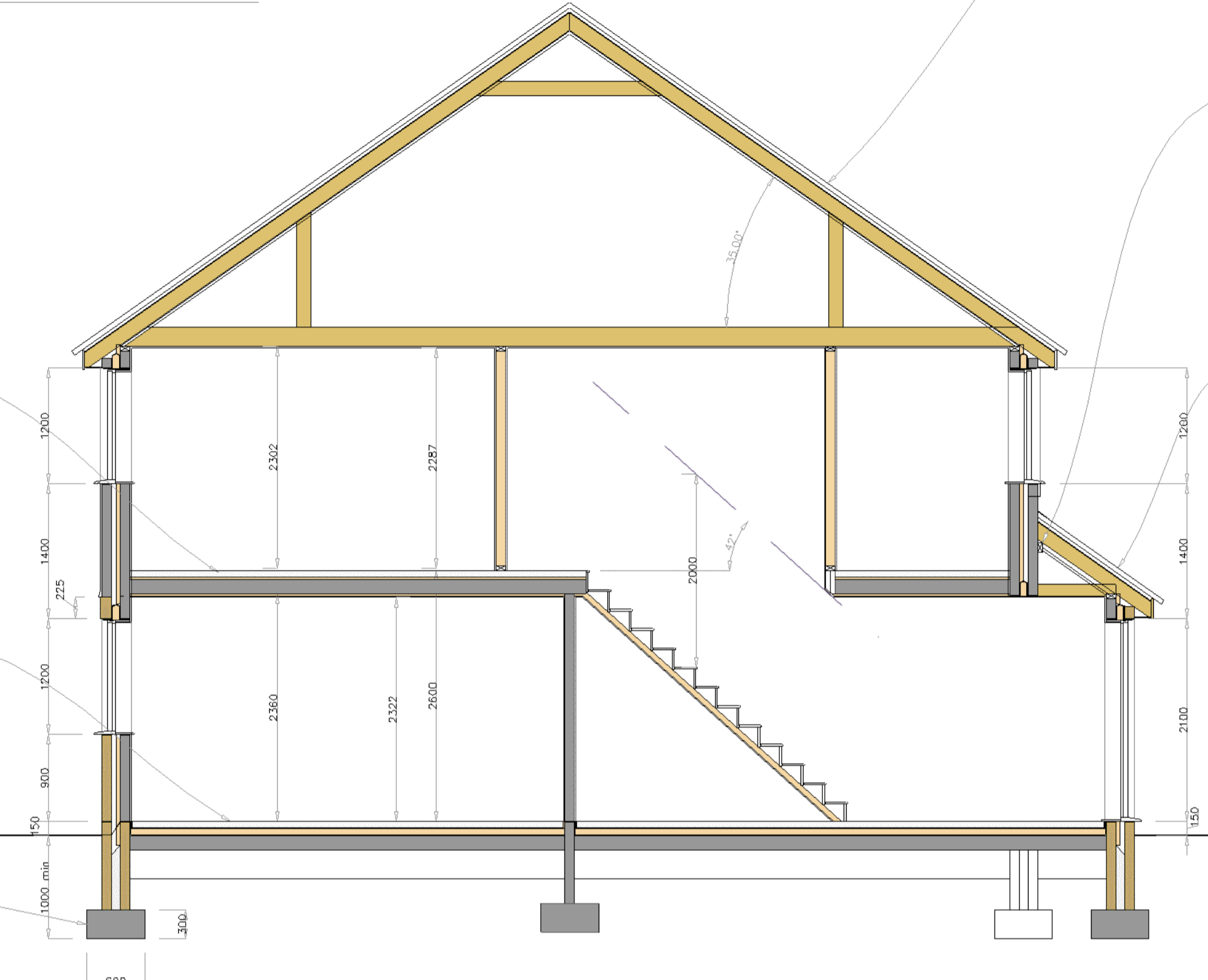
UFH detail to ground & first floor



Concrete Intermediate floor (ACD: MCI-IF-01)



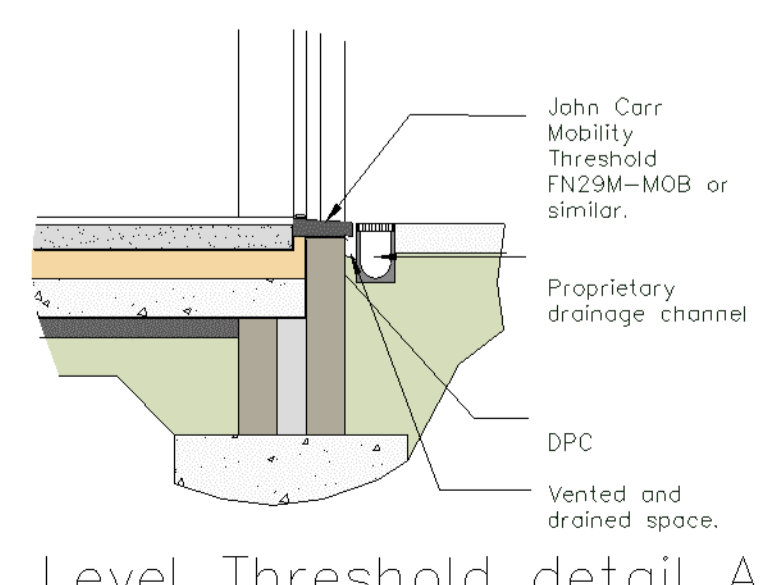
Floor Perimeter (ACD: MCI-GF-01)



SECTION A - A 1:50

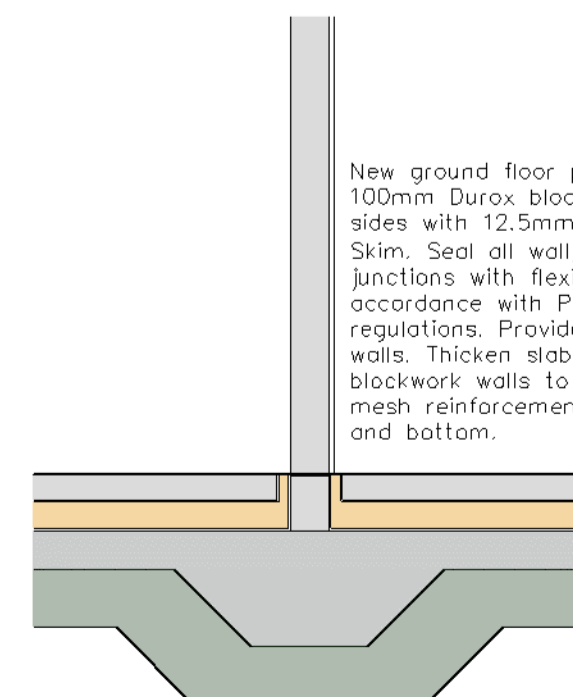
Cavity tray with straight stop end. cavity trays to rise minimum 140mm from outer to inner leaf, to be self-supporting or fully supported, and have joints lapped and sealed. The rise across the cavity should be at least 1:20.

Window/Door Head/Cill (ACD: MCI-WD-03/04)



New tile roof covering, battens and breather membrane to BS 5250:2002 (suitable for warm pitch applications i.e. Kingspan Nilvent).
100mm ventilated air gap
Tri Iso 10 Multifill insulation
25mm retaining battens
12.5mm foil backed plasterboard, taped and skimmed.
At the bottom of the roof, Tri Iso should be cut to fit between the rafters, and taken down between the joists to either the wall plate or dry-lining insulation as shown. The Tri Iso should be stapled to the joists and all cut or open edges sealed with a suitable tape. All junctions of Tri Iso with rafters, joists or wall plate should also be sealed with tape to create an airtight seal. It is important that the Tri Iso extends to either the wall plate or wall insulation to ensure continuity of insulation material/air tightness

Warm pitch roof (ACD: MCI-RE-04)



Non loadbearing solid partitions

New pitched roof formed using plain tiles on Kingspan Nilvent breather membrane (membrane should be laid horizontally and be draped between rafters. Membrane should overlap eaves/fascia by 50-60mm). All on pre-formed trusses to manufacturers design with Tri-Iso Super10 multifill insulation fixed to underside with 25mm spacer battens (insulation to run from ridge to eaves in all cases). Finish with 12.5mm foilbacked plasterboard, taped and skimmed. See ACD:MCE-RE-04

New wall plate to mono pitch roof to be secured to external wall using M12 rawl bolts at 600c/s. Provide cavity tray protection above new wall/roof junction. Roof as specified provides minimum 30 minutes fire resistance as required for a suitable escape route by table A1 Appendix A, AD B.

PITCH ROOF OVER PORCH:
New pitched roof at 35° formed using plain tiles on Kingspan Nilvent breather membrane (membrane should be laid horizontally and be draped between rafters. Membrane should overlap eaves/fascia by 50-60mm). All on 100 x 50mm C16 rafters at 400mm centres. Ceiling joists to be 100 x 50mm C16 at 400mm centres underlined with 12.5mm plasterboard, taped and skimmed.

Use minimum Code 4 lead flashings and soakers to all abutments (see details).

25mm turn into brickwork chase and lead welded at laps and at 450mm (approx) centres
Code 4 rolled lead sheet to BSEN12588 in lengths not exceeding 1500mm with 100mm end to end lap joints
Code 5 lead clips spaced at laps and at 400 mm centres

SHEET SIZE A1

Location:	Rev of 177 Whitby Wood Lane	Revision:	A	B	C
Job No:	RCAD498-2	Client:	Ashwin Patel	Date:	August 2009
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