

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH RELEVANT PARTS OF THE BUILDING REGULATIONS 1985 AND SUBSEQUENT AMENDMENTS, STRUCTURAL ENGINEER'S DETAILS & CALCULATIONS (where applicable), CODES OF PRACTICE & MANUFACTURERS' RECOMMENDATIONS.

The building fabric should be constructed so that there are no reasonably avoidable thermal bridges in the insulation layer caused by gaps between the various elements, at the joints between elements and at the edges of elements such as those around window and door openings. Reasonable provision should also be made to reduce unwanted air leakage through the new envelope parts.

FOUNDATIONS

The building area is to be stripped of all vegetable soil and rubbish, minimum 150mm deep. Generally concrete fill foundations, minimum depth of 1.0m or to suit local ground conditions. Foundation width to external walls to be 600mm wide for double storey extensions and 450mm wide for single storey, 300mm wide for internal load bearing walls (100mm thick). Concrete to be grade GEN1. There appears to be no trees in the vicinity of the proposed extension which should affect the foundation depth or ground slab design however the contractor is to make his own site investigations and liaise with building control in due course

WALLS BELOW DPC

All blockwork to be high density block otherwise skin formed in brickwork. Bitumen polythene dpc to BS743, to external walls and at eaves of openings, to 'tie-in' with the existing dpc and be a minimum of 150mm above finished ground level. Damp proof course to be continuous with dpm. Cavities to be filled up to within 75mm of the ground level (225mm of dpc) with fine concrete and weepholes left. Reinstated ground around the new building where excavated for foundations.

EXTERNAL WALLS

To be of cavity construction 295mm thick, comprising of 100mm brick/100mm Hemelite block with 20mm thick two coat render outer skin (painted), 50mm clear cavity, 45mm Celotex Tuff-R Zero CW3045Z partial fill cavity insulation, 100mm Toplite GT1 thermal block finished with 12mm lightweight plaster. All to achieve a 'U' value of 0.28 W/m² K. To be bonded to existing house by means of mild steel galvanised 'Crocobloc' profile, insert a vertical dpc at the junction, stick out brickwork to form continual cavity between the new and existing building (alternatively tooth and bond brickwork into existing walls and maintain cavity throughout). Head of cavity closed with a slate/supalux board or similar material, cavities closed at jamb with proprietary cavity closure product such as Thermabate or similar approved. Both skins to be tied together @ 750mm c/c horizontally and 450mm c/c vertically, by vertical twist stainless steel wall ties to BS1243, doubled up at reveals. Cavity trays to BS743, with weepholes to be formed over all new external openings. Movement and bed reinforcement joints are required in accordance with individual manufacturers recommendations. Generally movement joints to be within 3m of a corner and then after every 6m on a straight run. In addition bed re-enforcement is required to 2 courses above and below any openings both methods are recommended regardless of overall length of walling. However to be verified with manufacturers.

GROUND FLOOR CONSTRUCTION

Minimum 65mm thick 1:3 sand/cement screed laid in accordance with CP204, on 125mm grade 20 concrete oversite slab with A142 mesh on 500 gauge polythene on 70mm Celotex GA4000 insulation (P/A=0.55) with strips of boards cut to fit around the perimeter to prevent horizontal thermal bridging, on 1200 gauge polythene dpm dressed up at perimeter walls with dpc, on sand blinding on minimum 150mm well compacted hardcore/granular fill. DPM to be dressed under dpc. All to achieve a 'U' value of 0.22 W/m² K. If applicable, maintain ventilation to the existing suspended timber floor by means of 100mm diameter upvc ducts laid under the new floor. No radon measures necessary.

INTERNAL PARTITIONS

To be studwork, overall thickness = 105mm, 75x38mm timber studs @ 600mm c/c horizontally with cross noggins @ 450mm c/c staggered vertically, framed up on a head & sole plate. Line with no. 1 layer of 15mm Soundbloc board to either side (plasterboard having a density of minimum 10kg/m³), tape all joints and finish with plaster skim coat. Insert 25mm Isowool APR 1200 insulation. Walls to be finished with s/w timber skirting.

INTERNAL DOORS

Supply and fit new 38x100mm s/w timber door linings to door opening positions and new internal flush doors as directed by client. Finish door lining with new s/w timber architrave to match the existing.

1st FLOOR CONSTRUCTION

To comprise of 50x195mm s/w joists, grade C16 @ 400mm c/c hung off steel joist hangers by Catnic or similar approved spanning side to side of exterior wall to solid timber strutting minimum 38mm thick at the 1/3 rd span point. Provide lateral restraint to the external walls at right angles to the joists by means of mild steel galvanised straps @ maximum 2m c/c strapped across the first three joists, provide timber noggins and packing pieces on the line of the straps between the first two joists. Finish with 22mm tongue & groove boarding (moisture resistant chipboard to be used within b/h room areas), line underside of joists with 1no. layer of 12.5mm plasterboard 10 or 15mm standard wallboard (minimum density of minimum 10kg/m³), with plaster skim finish and insert 100mm ROCKWOOL Flexi slab insulation between the joists for soundproofing measures.

STAIRCASE

Is existing - no change.

NEW STEEL BEAMS

Where applicable all new steel beams, columns, posts, padstones etc. are to be provided in accordance with the structural engineers details and calculations, see separate cover. Any new steel beams are to be clad in 2no. layers of 12.5mm plasterboard or similar equivalent to achieve 1/2 hour fire resistance.

LINTELS

Galvanised steel lintels by Caradon Catnic to BS5950 with minimum 150mm end bearings, to all new openings or unless superseded by the structural engineers details and calculations. Catnic lintel reference CG(E)90/100. Provide with proprietary cavity tray over complete with stop ends.

WINDOWS/EXTERNAL DOORS

To be white upvc and double glazed to match the existing house. To provide ventilation of minimum 1/20th of the room floor area, plus background ventilation of not less than 4000 sq mm to kitchen or bathroom and 8000sq mm to a habitable room by means of a trickle ventilator. Security for doors and windows to comply with BS EN 335, BS 3621, BS 3621, BS 3621 & BS 10621. Glazing to comply with BS6206 for safe breakage and is to be clearly marked as such and shall be formed in a 24mm double glazed unit comprising 4mm outer, 16mm argon filled cavity, 4mm inner pane, glass to be soft coat low-E Pilkington K ('U' value = 1.60W/m²K). Ensure a minimum 30mm overlap of window frame with the cavity closer, fitted in accordance with manufacturers recommendations. Client to advise of exact specification requirements and oversize with the contractor verifying all sizes with client prior to manufacture. Finish internal sill of window with 18mm thick, white MDF window board. All new windows to be manufactured and installed by a FENSA approved contractor. The new first floor bedroom window shall be for means of escape purposes and shall have a minimum unobstructed opening of 0.33m² of at least 450mm wide x 750mm high with the bottom of the opening cill positioned at a height of not more than 1100mm above the finished floor level.

Window schedule

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| a. Porch | : 900w x 2100 door |
| b. Living room | : 1800w x 1200d window with side casements & central fanlight
: 600w x 1200d window with top fanlight (x2)
: 2475w x 2100h combination door/window |
| c. Kitchen | : 1200w x 1050d window with side casement and top fanlight |
| d. Bed 1 | : 1800w x 1200d window with side casements & central fanlight
: 600w x 1200d window with top fanlight |
| e. En-suite | : 1800w x 750d window with top fanlights |

PITCHED ROOF

Construction : erect new 50x100mm C16 rafters @ maximum 400mm centres, supported at the mid-span by 75x200mm timber purlin struttled down onto ceiling beam. Rafters birdsmouthed on 75x100mm s/w timber wallplate held down with 900x30x5mm mild steel galvanised straps fixed to wall @ maximum 2m centres. Ceiling joists to be 50x195mm C16 @ maximum 400mm centres, spanning side to side, fixed between and spiked to timber wallplates to top of wall. Where ceiling joists are parallel to wallplate provide 30x5mm mild steel galvanised straps taken over three joists @ maximum 800mm centres with noggins fixed between joists not less than half the depth of the joist. Provide white plastic soffit/fascia boards, by swish celuka or similar approved, to the joist ends to finish incorporating ventilation, see below.

Existing roof : is to be stripped back of its tiles, batten and felt with the existing rafters to be removed as necessary to enable the new roof design to be configured, see drawing and engineers details.

Roof finish : to comprise of plain roof tile to match the existing roof, sample to be submitted to client for approval, laid in accordance with manufacturers recommendations including for matching half round ridge tiles bedded in 1:3 sharp sand mortar butt jointed together to the ridge. Mechanical fixings to roof ridge tiles to comply with BS5534. Roof tiling to be fixed to 22x38mm treated timber battens (gauged and lap to be determined on site) with galvanised nails. All battens fixed to untearable roofing felt, type IF, with minimum 100mm laps at all joints and laid parallel to the eaves. Ridge detail to have 2m wide strip laid over underlay. An eaves carrier will be provided, draped into gutter, as recommended by the manufacturer of breathable membrane.

Insulation : lay 270mm ROCKWOOL 'Rollbatts' (comprising of 100mm between joists with a further 170mm over) over 500 gauge polythene vapour barrier fixed to underside of ceiling joists. To be finished with 12.5mm plasterboard with all joints being taped and left ready to receive plaster skim coat. Roof insulation to achieve 'U' value of 0.16 W/m² K.

Ventilation : provide equivalent of continuous 10mm wide strip vent (by Glidevale or similar) at the eaves on each side and equivalent of continuous 5mm wide vent at high level by proprietary tile vents.

RAINWATER GOODS (effective roof area to be drained = 42m²)

To be finished in black upvc. Generally to be 100mm half round gutters draining into 63mm diameter downpipes as shown and discharging into new soakaway minimum 5m from any building. Underground pipes to be 100mm diameter upvc laid in pea shingle bedding. Soakaway generally to be a Sustainable Urban Drainage System (SUDS) using a modular storage/soakaway cell system such as Waving 'AquaCell' or similar equivalent based upon a capacity to hold 2m³. On the basis a typical cell of 1.0x0.5x0.4m will provide 0.25m³ of water storage provision should be made for 8 crates, 2m long x 1m wide x 0.8m deep. The final shape and depth of the soakaway shall be determined depending if there is a high water table discovered, i.e. the footprint size of the soakaway shall be greater and its depth more shallow. To be installed in accordance with manufacturers recommendations. If the new soakaway is serving any existing downpipes from the original house, the capacity of the soakaway should be increased 1m² per 20m² of roof area served.

DRAINAGE

All works to be carried out in accordance with BS EN 752 (formerly BS8301). All plastic pipework to be by Hepworth or similar approved. 100mm diameter pipes to be laid at minimum 1:40 gradients and laid in pea shingle bedding. Polypropylene inspection chambers (PPIC) to be provided at all changes in flow direction or gradients, 475mm diameter up to invert 1.0m deep, 1050mm diameter for inverts in excess of 1.0m deep. Any internal manholes to be fitted with a double sealed screw down cover. Drains passing through walls to have concrete plank lintel to opening to give 50mm space all round pipework. Where a drain passes beneath a building it is to be encased in 100mm concrete surround or bedded and covered in flexible fill and protected by a 450mm wide A142 wire mesh provided with the concrete oversite to floor slab on the line of the drain run. Any redundant drains to be grubbed up or sealed.

PLUMBING

All to comply with BS EN 12056 (formerly BS5572).

(i). Confirmation a supply of wholesome water (means supply or equivalent complying with Section 67 of the Water Industry Act 1991) to the following locations;

- any place where drinking water is drawn off,
- wash hand basins, bidets, baths, showers and sinks,
- sanitary appliances although it is noted alternative supplies to sanitary appliances may be considered (i.e. rainwater harvesting).

(ii). Confirmation heated (including softened) wholesome water will be supplied to the following locations;

- wash hand basins, bidets, baths, showers and sinks (in areas where food is prepared).
- Hot water storage systems (where applicable) should be designed and installed in accordance with BS-6700:2006+A1: 2009. Indirectly heated unvented (closed) storage water heater should comply with BS EN 12897:2006.

(vi). The hot water supply to any bath should resist temperatures and pressures should the safety controls fail. A tamper proof blending valve is to be fitted to any bath so that water does not exceed 48 degrees Centigrade. Water to the distribution system should not exceed 60 degrees Celsius.

(vi). The hot water storage and supply system installed is required to be commissioned in accordance with the procedures set out in the Domestic Heating Compliance Guide. Commissioning documentation to be provided at completion.

Extend the existing hot and cold water feed pipework to the new sanitary fitting positions. All sanitary appliances to be fitted with minimum 75mm sealed traps. Provide rodding eyes to all dead-end runs, with plumbing branch lengths and diameters as follows;

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|---------------|---|
| • Washbasin | : max. 1.7m for 32mm pipe, max. 3m for 40mm |
| • Bath/shower | : max. 3m for 40mm, max. 4m for 50mm |
| • Sink | : max. 2m for 40mm, max. 4m for 50mm |
| • WC | : max. 6m for 100mm |

All new en-suite appliances are to connect into the existing soil and vent pipe on rear elevation, kitchen sink into existing back inlet gully. For the new GF cloakroom provide a new 100mm diameter stub stack fitted with air admittance valve to be located in corner of room, this stub stack will discharge above the highest spillage level of the appliances served. Any internal stack passing through habitable rooms to be surrounded in 25mm ROCKWOOL glass fibre quilt and 2no. layers of 12.5mm plasterboard on timber framing, complete with access panel. Ensure the soil and vent pipe shall terminate with ELECTRICAL WORKS

ELECTRICAL WORKS

The existing installation is to be extended to the new areas. All electrical work required to meet the requirements of Part P (Electrical Safety) will be designed, installed, inspected and tested by a person competent to do so. A copy of a certificate in accordance with BS7671 provided by a person competent to do so to be given to the local authority. Carry out the alterations to the existing installation to suit the new proposals. Exact specification requirements to be verified in due course with client. At least three quarters of all new rooms shall be fitted with energy efficiency light fittings (only capable of accepting lamps having a luminous efficiency greater than 45 lumens per circuit-watt). These fittings to be positioned in rooms or circulation areas most frequently used, the number not less than 3 per 4 fixed lighting fittings. Be advised that problems have recently arisen due to the current trend for fitting electrical down lighters. The areas of concern relate to fire prevention, sound insulation and thermal insulation. If the client intends to install down lighters in this proposal please advise them that they, or the contractor, should discuss the matter with Building Control. Incorrect installation will prevent the completion certificate being issued.

HEATING INSTALLATION

The existing gas central heating system is to be extended with new radiators being provided with the extension. Supply and fit self finished panel radiators, sized to suit each individual room, fitted with thermostatically controlled valves. The existing boiler is to be verified to ensure whether it is capable of serving additional radiators to the system. All works to be carried out by a suitably qualified Gas Safe Register engineer.

MECHANICAL VENTILATION

Provide mechanical extract fans to the following areas to meet the required performance.

- Bathroom/en-suite : 15 litres/second and fitted with a humidistat.
- WC cloakroom : 6 litres/second.
- Kitchen : 30 litres/second by means of a cooker hood.

* ensure there is a 10mm air inlet gap at the base of the door for any room with no window.

All mechanical vents to be by Vent Axia or similar approved and to be of 'thru-wall' design unless otherwise specified. All fans are to terminate direct to fresh air except positions being determined on site with client.

FIRE DETECTION

Carry out the installation of mains operated fire detection system to BS5446 : Part 1, with interconnected smoke detectors being provided on ground floor hallway, 1st floor landing and a heat detector in the kitchen.

FINISHES

Exact requirements in terms of internal decorations or external landscaping works, if any, to be advised by client.

ANY DEVIATIONS FROM THE APPROVED DRAWINGS ARE CARRIED OUT ENTIRELY AT THE RISK OF THE CLIENT/CONTRACTOR.

THIS SPECIFICATION DOES NOT PURPORT TO COVER EACH AND EVERY ITEM REQUIRED TO COMPLETE THE PROJECT HOWEVER THE CONTRACTOR IS ADVISED TO VERIFY THE FULL EXTENT OF THE WORKS WITH THE CLIENT.

ONLY WRITTEN DIMENSIONS ARE TO BE USED & THE DRAWING MUST NOT BE SCALED - IF UNCLEAR REFER BACK FOR CLARIFICATION. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO ANY MANUFACTURING PROCESSES.

THE CLIENT IS ADVISED OF HIS OBLIGATIONS UNDER THE CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015 AMENDMENTS AND THE NEED TO MANAGE THE HEALTH AND SAFETY ISSUES ASSOCIATED WITH THE MANAGEMENT OF THE PROJECT. <https://www.aps.org.uk/cdm2015.html>

THE CONTRACTOR IS TO ENSURE ADEQUATE PRECAUTIONS ARE TAKEN IN RESPECT OF HEALTH AND SAFETY LEGISLATION THROUGHOUT THE DURATION OF THE WORKS.

THE CLIENT IS ADVISED OF HIS OBLIGATIONS UNDER THE PARTY WALL ACT ETC. 1996 AND THE NEED TO SERVE NOTICE ON ADJOINING PROPERTIES WHERE REQUIRED UNDER THIS LEGISLATION.

GROUND FLOOR PLAN 1:50 @ A1



1st FLOOR PLAN 1:50

THIS DRAWING TO BE READ IN CONJUNCTION WITH
STRUCTURAL ENGINEERS DETAILS & CALCULATIONS

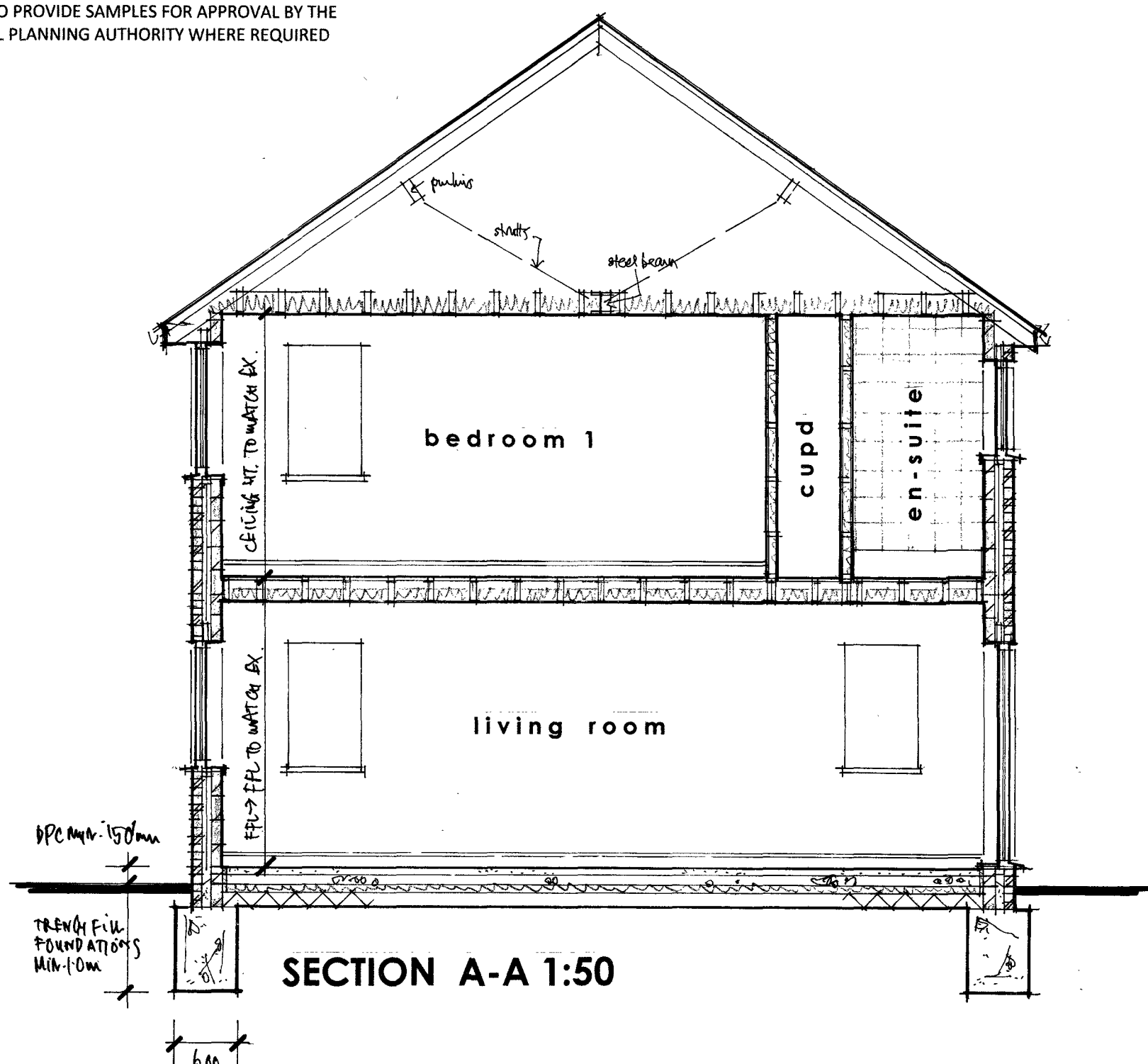
PROPOSED ELEVATIONS 1:100



SCHEDULE OF FINISHES

ELEVATIONS	-	face brickwork
WINDOWS	-	white PVCu plastic & double glazed
ROOF	-	plain roof tile
EAVES	-	white PVCu and double glazed
R/W GOODS	-	black PVCu half round guttering with 63mm diameter downpipes

THE CONTRACTOR IS TO PROVIDE SAMPLES FOR APPROVAL BY THE CLIENT AND THE LOCAL PLANNING AUTHORITY WHERE REQUIRED



SECTION A-A 1:50