

SERVICES
All wiring and electrical work will be designed, installed, inspected and tested in accordance with the requirements of BS7671, the IEE 18th edition Wiring Guidance and Building Regulations Part P (Electrical Safety), by a competent person registered with an electrical self-certification scheme, authorised by the Secretary of State (BRE, BSI, ELECSA, NAPIT or NICEIC). The competent person is to send to the local authority a self-certification certificate within 30 days of completion of the electrical works. The Client must receive both a copy of the self-certification certificate and a BS7671 Electrical Installation Test Certificate and forward copies to Building Control. Electrical services are to be extended from existing power and lighting ring mains. Install light fittings of an energy efficient type, with non-GLS tungsten bayonet or Edison type bases. Compact fluorescent lamps to be used throughout.

Alterations to any gas installations to be undertaken by a registered GAS SAFE engineer and alterations to any heating and hot water services to be undertaken by a person registered under the Building Engineering Services Competence Accreditation Ltd. All new radiators to be pressed steel wall mounted fitted with thermostatic radiator valves and all concealed pipework to be insulated.

All service installations are to be tested and commissioned on completion in order they are left in the manner in which they are to be used. A relevant commissioning notice is to be issued to the Local Authority on completion. In addition, the Contractor is to prepare a basic Operating and Maintenance manual for the property, to include technical

Mechanical ventilation to be installed within:
- kitchen providing extract rate of 60 litres/second or 30 litres/second where adjacent to a hob
- bathroom providing extract of 15 litres/second
- WC providing extract rate of 6l/s
- utility room providing extract rate of 30l/s

Extract ducts to run horizontally to exit through side external walls via louvre grille or to run vertically through roof fabric, terminating via standard vent tile.

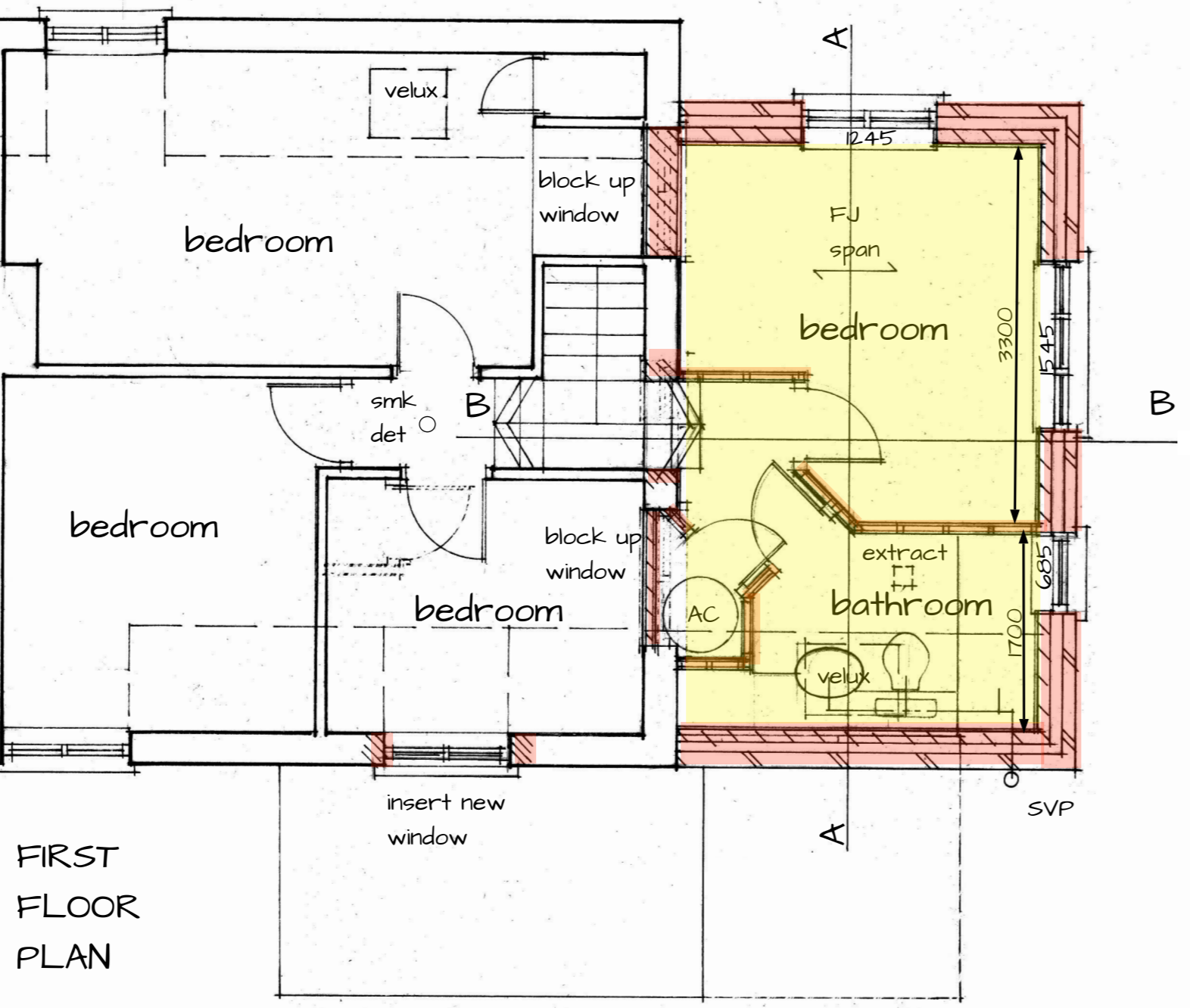
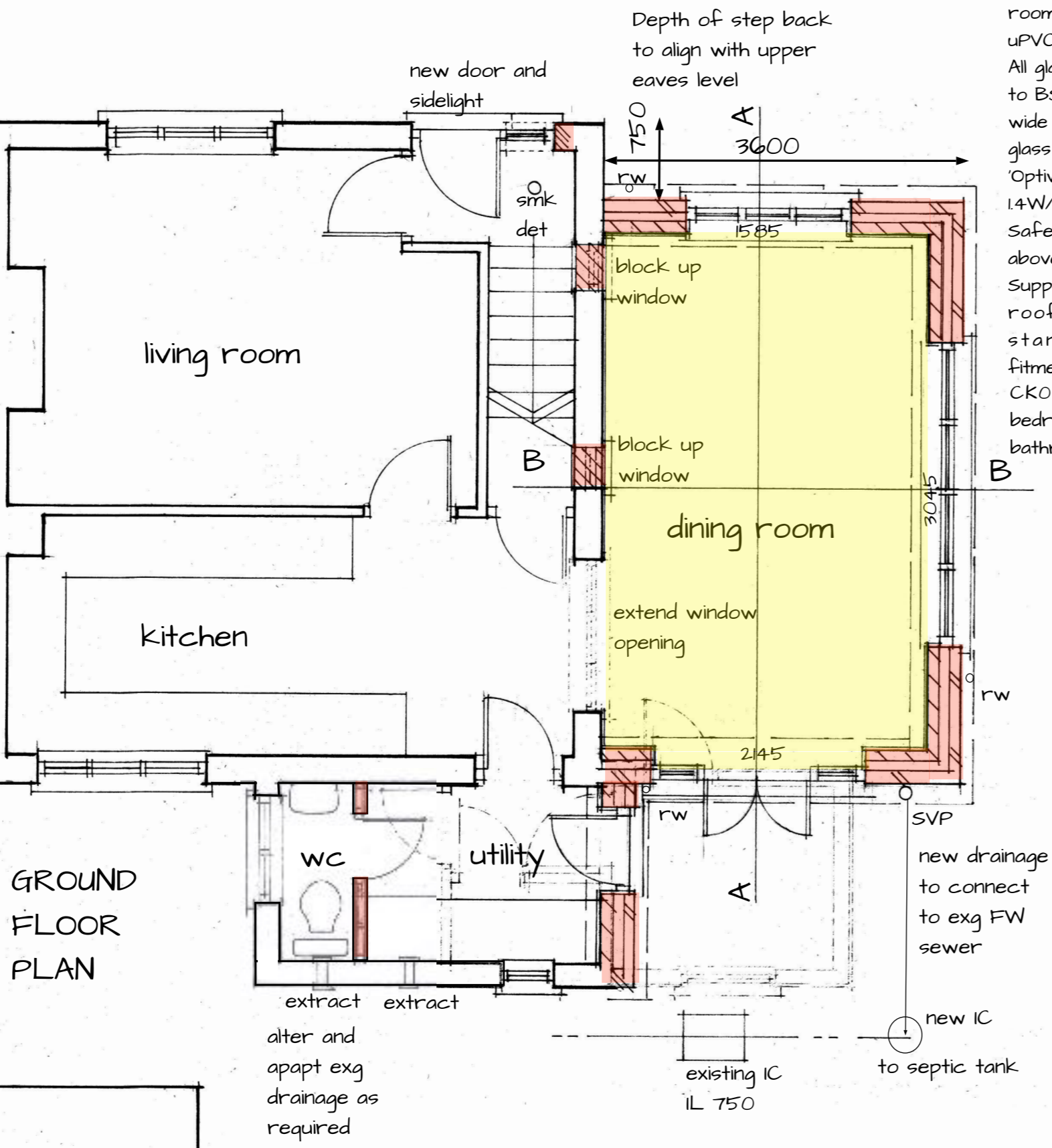
FIRE PROTECTION & MEANS OF ESCAPE
Install mains operated smoke detection system to BS 5446 Part 1. Install smoke detection units adjacent to bedroom door and heat detector within kitchen. All smoke and heat detectors to be provided with 24-hour battery back up facility. The system is to be tested, commissioned and certified by a Third Party inspector.

All new first floor windows to be suitable for means of escape, min 0.33sqm and min 450x450mm clear aperture with internal sill height not exceeding 1m.

Allow for flying mullions to casement windows where they are of narrow width.

ROBUST CONSTRUCTION
All methods of construction are to be robust to reasonable ensure that there are no gaps or voids in the insulation layers and that cold bridging is avoided by the use of insulated thermal barriers at abutments where practicable. Junctions should be suitably sealed to ensure that air leakage is minimised especially at window/door reveals. Robust construction details should be designed in accordance with TSO Robust Details Catalogue and executed on site with due diligence.

At abutments between different structural elements, ensure that opposing materials are properly joined and all butt joints sealed to the full depth of the structure. All unavoidable gaps and voids are to be filled with insulation material and sealed with an appropriate sealer such as polysulphide mastic sealant or caulking. Seal all gaps around the window aperture and fill all voids with insulation to limit air leakage.



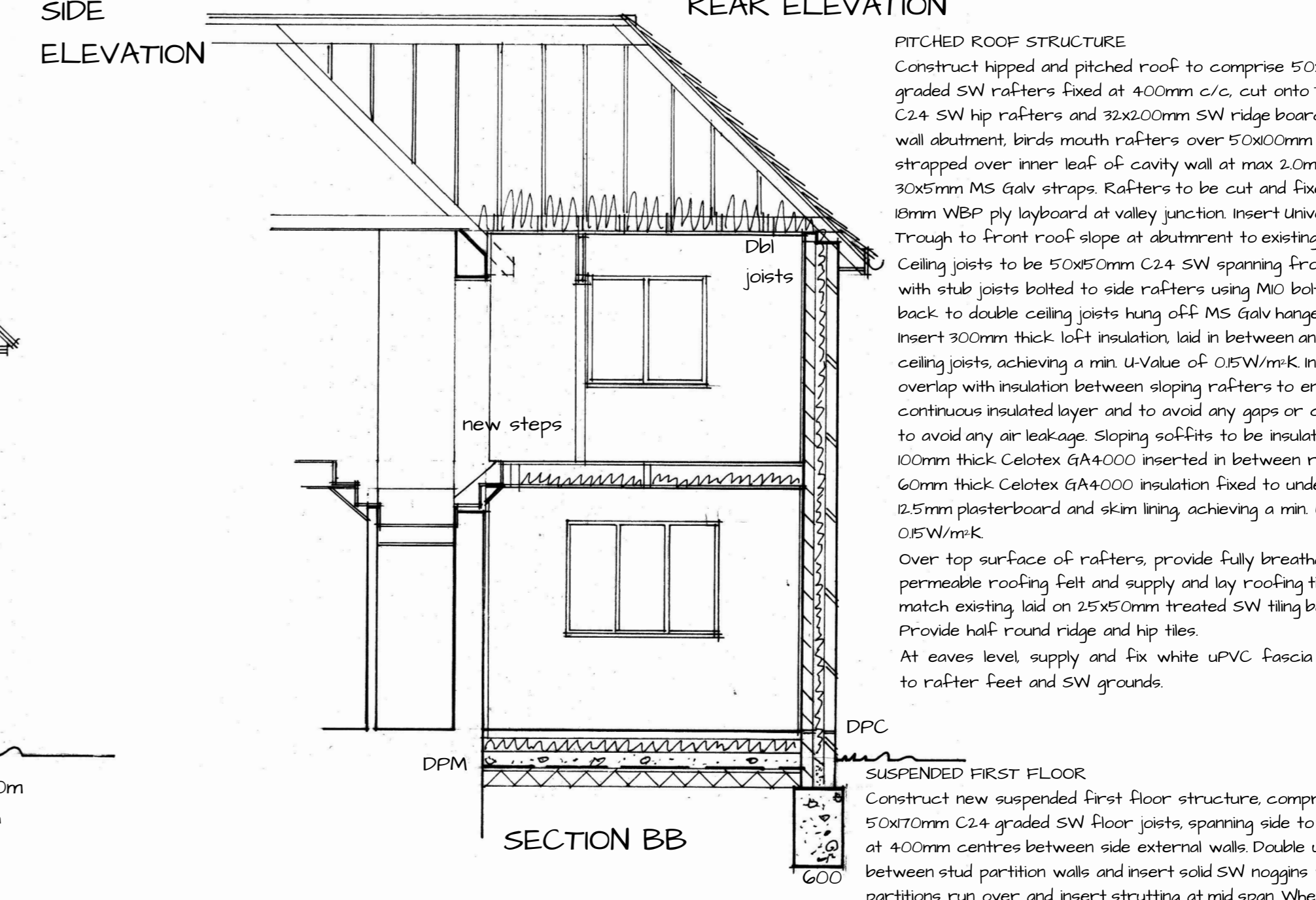
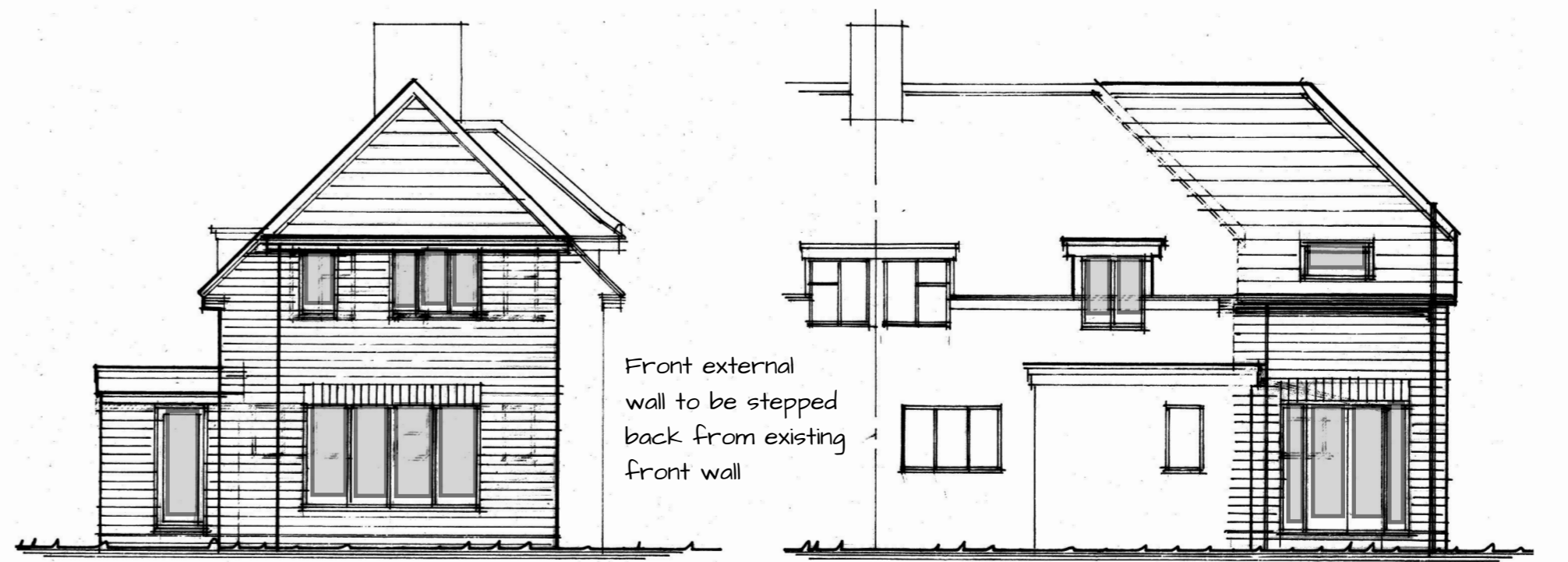
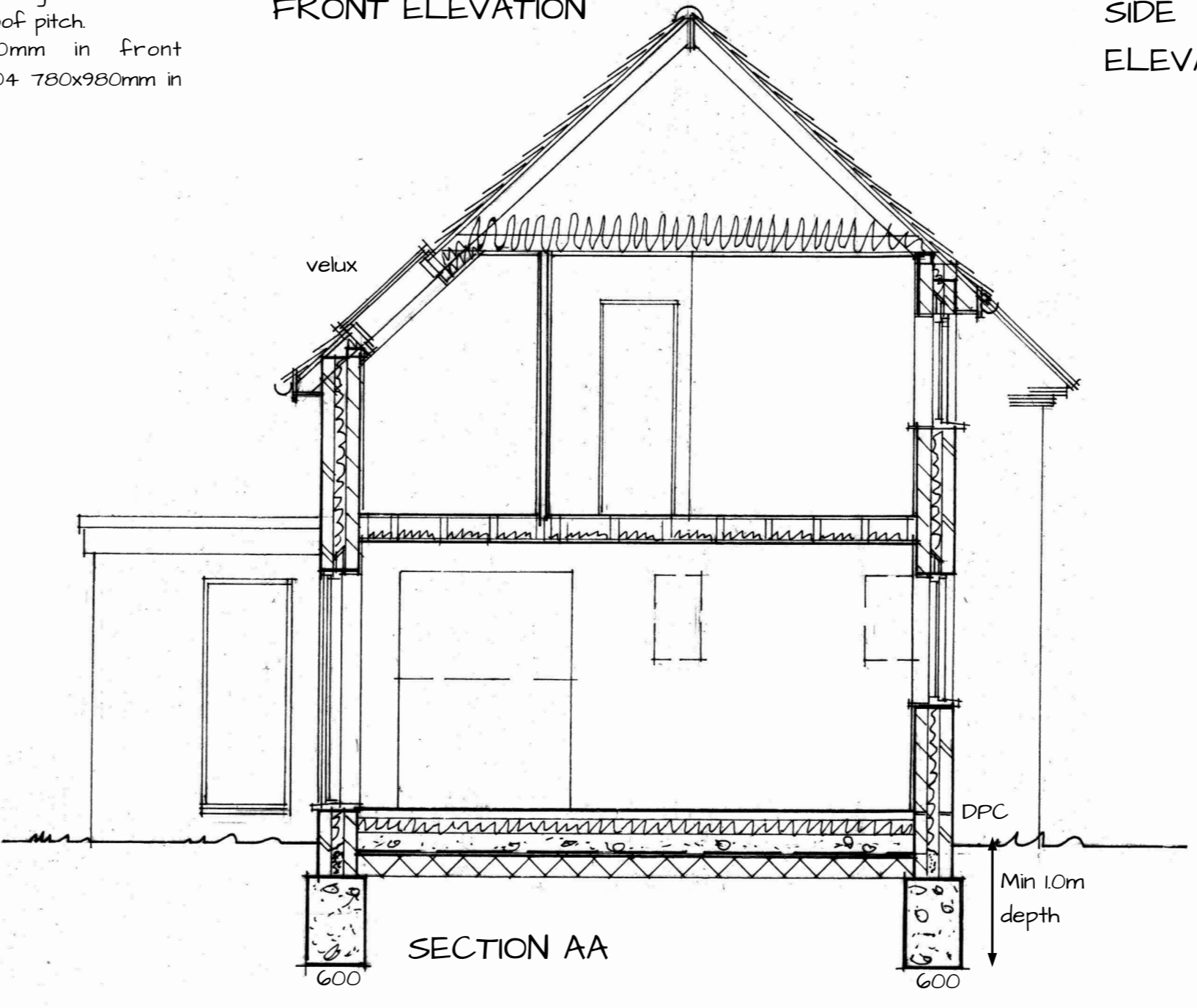
WINDOWS AND DOORS
New windows and doors to be white uPVC. Framed with clear double glazed sealed units and provided with factory fitted head ventilators providing min 8000mm² and to have operable casements to provide ventilation of min 1/20th floor area of room. Front door to be composite type in uPVC frame.

All glazing to be double glazed sealed units to BS EN 1279 Parts 2 and 3, with 6mm wide Argon Filled cavity, with one pane of glass to be Pilkington 'K' glass and one pane 'Optiwhite', to achieve a minimum U-value of 1.4W/m²K.

Safety glazing to all doors within 15m above floor level.

Supply and install 2 No. Velux rooflights, complete with standard flashings and fitments to suit roof pitch.

CK04 550x980mm in front bedroom and MK04 780x980mm in bathroom.



PITCHED ROOF STRUCTURE
Construct hipped and pitched roof to comprise 50x25mm C24 graded SW rafters fixed at 400mm c/c, cut onto 75x50mm C24 SW hp rafter and 32x200mm SW ridge board. At external wall abutment, birds mouth rafters over 50x200mm SW wall plate, strapped over inner leaf of cavity wall at max 2.0m c/c using 30x5mm MS Galv straps. Rafters to be cut and fixed down over 18mm WBP ply layboard at valley junction. Insert Universal Valley Trough to front roof slope at abutment to existing side roof.

Ceiling joists to be 50x75mm C24 SW spanning front to rear with stub joists bolted to side rafters using M10 bolts and fixed back to double ceiling joists hung off MS Galv hangers. Insert 300mm thick loft insulation laid in between and over ceiling joists, achieving a min U-Value of 0.15W/m²K. Insulation to overlap with insulation between sloping rafters to ensure continuous insulated layer and to avoid any gaps or cold bridging to avoid any air leakage. Sloping soffits to be insulated, insert 100mm thick Celotex GA4000 inserted in between rafters and 60mm thick Celotex GA4000 insulation fixed to underside with 2.5mm plasterboard and skim lining, achieving a min U-Value of 0.15W/m²K.

Over top surface of rafters, provide fully breathable, vapour permeable roofing felt and supply and lay roofing tiles, to match existing, laid on 25x50mm treated SWiling battens. Provide half round ridge and hip tiles.

At eaves level supply and fix white uPVC fascia board, fixed to rafter feet and SW grounds.

SUSPENDED FIRST FLOOR
Construct new suspended first floor structure, comprising 50x70mm C24 graded SW floor joists, spanning side to side and fixed at 400mm centres between side external walls. Double up joists between stud partition walls and insert solid SW noggins where partitions run over and insert strutting at mid span. Where joists run parallel to external walls, provide 30x55mm MS galv straps fixed over 3 No joists, built into wall at 2.0m c/c.

In between joists, insert 100mm thick Rockwool Flexi insulating quilt and provide 25mm thick flooring grade, moisture resistant T&G chipboard screw fixed over top of joists. To underside of floor joists, provide 1 layer 2.5mm thick Gyproc wallboard and apply plaster skim finish.

EXTERNAL WALLS
New external cavity walling to be formed in 102.5mm facing brickwork, outer leaf to match existing to be tied across 150mm wide cavity to 100mm thick thermal concrete blockwork inner leaf with a thermal conductivity of 0.015 W/mK, insert full fill insulation with a thermal conductivity of 0.032 W/mK, with 12.5mm plasterboard and skim internal finish, all to achieve 0.18W/m²K U-Value. Construct brick soldier course over openings.

Leaves of cavity wall to be tied together using stainless steel wall ties at 450mm vertical centres and 750mm horizontal centres, 300mm vertical centres adjacent to openings and abutments. Bond both leaves of new cavity wall to existing structure using stainless steel vertical wall starter ties by Fur-fix or similar.

Over window and doors, provide IG cavity lintel LV/S50. Heavy Duty lintel LV/HD150 over ground floor side window - 3m opening.

At reveals, insert proprietary insulated cavity closers by Thermabate.

INTERNAL WALLS
Internal non LB partitions to comprise 50x75mm SW studs at 400mm vertical centres and fixed with horizontal noggins at 600mm staggered centres. Insert 80mm Rockwool Soundpro sound insulation between studs and provide 12.5mm plasterboard and skim finish.

INTERNAL DRAINAGE
Internal drainage to be:
- 40mm diam plastic waste from 75mm deep seal trap below kitchen/utility sink, to connect into into external back inlet trapped gulley and into existing drainage - subject to kitchen layout - TBC by client
- 40mm diam plastic waste from 75mm deep seal trap below shower or bath, to connect to soil and vent pipe
- 32mm diam plastic waste from 75mm deep seal trap below wash basins, to connect to soil and vent pipe
- 100mm diam branch pipe from WC to connect to soil and vent pipe

At all connections and changes in direction, provide rodding access and run all waste pipes concealed behind studwork or within boxing.

All concealed pipework to have removable access panels to provide rodding facility on all bends or connections. No connections to be made within 200mm below the WC connection.

RAINWATER DISPOSAL
All rainwater goods to be white plastic, squareline gutters and downpipes, to discharge over RW gulley and into 100mm diameter plastic underground drainage system, laid in class B bedding to a fall of 1 in 80 in bedding and back-filled with granular material. To be laid to discharge into existing SW system to be identified on site, or to discharge into new soakaway, located min 5.0m from any building.

EXISTING STRUCTURES
Ground Floor
Take out side window to kitchen and extend down to floor to form opening.
Block up 2 No small side windows.
Demolish attached timber framed shed and build new enclosing wall to side.
Alter and adapt rear extension to form utility room and WC.
Renew existing flat roof coverings over single storey rear extension with 150mm insulation laid over VCL on existing deck if sound and overlay with single ply EPDM membrane and proprietary aluminium trims and profiles.
U value - 0.15 W/mK.
Enlarge front door opening and insert new front door and sidelight.
First floor
Form door opening in side external wall into new extension.
Construct 3 No steps up to new floor level - rise to match the existing and goings to be 230mm SW treads.
Block up 2 No side windows.
Cut aperture in front roof slope, trim aperture and double up rafters and insert CK02 Velux roof window. Make good internal plaster and external tiling.
Remove airing cupboard in small rear bedroom and make good.
Form new window opening in small rear bedroom. Cut and trim rafters and insert double rafters either side. 50x100mm SW flat roof and cheeks. Flat roof finish as described above. Cheeks to have 100mm Celotex GA4000 in between studs with 50mm GA4000 and 12.5mm plasterboard finish internally.
Externally, provide 18mm WBP plywood, breather paper and Code 5 lead.

FOUNDATIONS AND SUBSTRUCTURE
Excavate trenches for new trench fill foundations, 600mm wide below new external walls to a minimum depth of 1.0m below ground level extending to a final agreed depth, to be agreed on site, subject to inspection and approval by the Building Inspector.

Above foundations and up to DPC, construct 350mm wide cavity wall construction up to DPC level located a minimum 150mm above ground level.

Outer leaf to be 102.5mm thick FL Class brickwork and inner leaf 100mm dense concrete blockwork to BS 6073. Tarmac Topblock or similar approved. Fill cavity will lean mix concrete below ground level.

Ground floor structure to be insitu concrete floor, comprising of 150mm thick, layers of fully compacted and sand blinded type 1 overlaid with 1200 gauge polythene DPM turned up at wall abutments to link at DPC level. Over DPM, cast 150mm thick concrete slab with 100mm thick, Celotex GA4000 insulation board achieving a U-value of 0.18W/m²K. Provide 25mm thick insulation board at edge abutments, up to finished floor level. Over insulation provide building paper separating layer to BS 1521:1972 of 500 gauge DPM and overlay with 75mm thick, sand and cement screed.

Rev	Date	Revision

All dimensions to be checked on site

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Client
HB AND LJ LEAR

Project
**2 MANOR FARM COTTAGES
CRESLOW
BUCKS**

Drawing
**PROPOSED TWO STOREY
SIDE EXTENSION**

Scale
1:50, 1:100 @ A1

Date
APRIL 2024

Drawn by
DRR

Dwg No
24-LEAR-001

Rev.