

FOUNDATIONS
Foundations as per Structural Engineers drawings ref J160 / 01 Rev B

Foundations to be taken down to the invert level of any drains passing within 1m.

RC lintels to be provided over drains passing through walls.

Walls below ground level to be filled with lean mix concrete to a level of 225mm below lowest DPC level.

All existing foundations and structure that is to take new / additional structural loading to be exposed for the Building Control Officer to determine its suitability. Strengthen and underpin existing as necessary.

STRUCTURAL NOTES TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS DESIGNS AND SPECIFICATION WHICH SHALL TAKE PRECEDENCE:

The details are indicative and only for the general guidance of the builder.

The builder must check on site suitability and applicability and if the builder is not sure or has any doubt then the designer must be consulted for further guidance.

It is the responsibility of the builder/ contractor to ensure that all temporary and permanent construction works are carried out in a safe competent and professional manner.

The contractor is recommended to refer to guidance given in the following Building Research Establishments Good Building Guides :-

- No.15 "Providing temporary support during work openings in external walls" and
- No. 20 "Removing internal load-bearing walls in older dwellings"

Lintels / beams installed into new openings in existing masonry walls to be slate wadded and mortar packed (dry mix 1 cement :3 sand) between soffits of the opening and the top of the lintel / beam

All steelwork to be Grade S275 (43) to BS EN 10025 unless noted otherwise.

All internal steelwork to have one coat of zinc rich primer 75u, touched up where damaged.

Steel beam ends to be fully built into existing walls.

The contractor must use appropriate mechanical lifting aids to install beams.

There is always a possibility that some initial settlement may occur due to load re-distribution and the supporting ground strata slight consolidation. This is unavoidable in these situations but should not be a recurring problem. The client may need to carry out some re-decoration when the movement has ceased and this should be taken into consideration with respect to redecoration costs for the project.

SUPER STRUCTURE

All new brickwork to be bonded to existing and cavities to be maintained, alternatively use proprietary starter anchor system together with inserted insulated vertical d.p.c.

All return corners to be min. 550mm unless otherwise indicated.

Existing lintels to be exposed and checked for suitability where additional loads are to be imposed.

Proprietary stainless steel double triangle vertical twist wall ties to be provided to cavity walls at maximum 450mm vertical centres and 750mm horizontal centres staggered across wall elevation. 225mm vertical centres at reveals. Ties to be long enough to have min. 50mm embedment in to masonry. Proprietary insulation clips to be provided to suit cavity insulation system.

All lintels to have min. 150mm end bearing and all timbers to have min 100mm end bearing. All new steel beams to have >30 concrete padstones where bearing upon masonry, minimum padstone size 330x10x150mm dp or as per structural calculations whichever the greater.

Steel beams eg. RSJs / UBs etc. to be coated in zinc primer prior to building in and to be spaced and bolted together via M12 bolts and spacers at 1000mm c/c (unless specified by structural engineer which shall take precedence). Connections / base plates etc. to be designed by fabricator

Lintels over openings to be proprietary insulated steel lintels e.g. Catnic or IG etc., lintels to be suitable for loading configuration and spans. Install d.p.c. cavity tray over with stop ends and weep holes at max. 900mm c/c, min 2 per cavity tray.

All structural steel members to be encased with plasterboard and skim to achieve min. 30 minute fire protection using 2x9.5mm plasterboard.Cavities to heads of wall to be closed with mineral wool quilt and dressed over wallplate to prevent cold bridging.

CAVITY WALL CONSTRUCTION TO DOMESTIC EXTENSIONS

External skin of 103m facing brickwork to match existing. 85mm cavity filled with Knauf Eathwool Dntherm, inner leaf of 100mm Durux Supabloc 3.6N finished internally with 9.5mm plasterboard on dabs, all to achieve a min. U value of 0.33W/m2K.

Provide movement joints to walls at maximum 9m horizontal centres and within 3m of a return using Halfen HTS-C stainless steel ties with slip membranes at max 225mm vertical centres with 10mm wide expanded foam joint filler. Exact location of movement joints to be agreed with client on site, ideally concealed behind RWPs or inner corners of returns.

ACOUSTIC PARTITIONS WITHIN SAME DWELLING

Provide acoustic partitions to separate new bedrooms from other bedrooms / rooms containing wc's (unless en-suite to that bedroom) and other habitable rooms and staircases using 12.5mm British Gypsum Wallboard TEN to each side of 75x38mm studs at max 600mm centres. 25mm Isowool quilt suspended in cavity, all joints to be well sealed to achieve sound reduction of Rw dB 40.

DAMP PROOFING

Horizontal DPCs to be provided to walls min. 150mm above finished ground level.

DPMs to lap onto both new and existing DPCs.

Insulated half hour fire rated DPCs to be provided to all cavity closers around all openings to prevent cold bridging.

Minimum 150mm Code 4 lead upstand flashings and cavity trays over to be provided where roofs abutt walls, flashing to be dressed over tiles by a min. of 225mm.

Any air bricks covered by proposal to be ducted via 100mm dia ducts to new external walls and insert telescopic air bricks sleeved with cavity trays over to connect to outside air.

ACOUSTIC FLOORS WITHIN SAME DWELLING

Provide acoustic floors to separate new bedrooms from other bedrooms / rooms containing wc's and other habitable rooms and staircases using floor boarding with a min. mass of 18kg/m2 on timber joists with 100mm Isowool insulations (min density 10kg/m2) between joists supported on chicken mesh. Floor to be underdrawn with 12.5mm Gyproc wallboard TEN and skim.

SOLID GROUND FLOOR CONSTRUCTION

Excavate all topsoil and contaminated fill material from under floor slabs and back fill with MOT in 150mm max compacted layers. 50mm sand blinded to receive d.p.m. If filling exceeds 600mm under floor slab, slab design to be changed to suspended concrete mesh reinforced type - details to be agreed with Building Control Officer.

The contractor is to ascertain from the client if conditions have been placed on Local Authority approvals for a requirement to install a methane or radon protection barrier, should this be a requirement a specialist membrane manufacturer shall be consulted and the membrane detailed / installed and independently verified as necessary in accordance with BS 8485 and CIRIA C735.

Lay 1200 gauge d.p.m. onto sand blinding and fit perimeter insulation Celotex-T-Break TB4030 insulation around slab perimeter. Lay Celotex Tuff R GA40000 insulation (min 80mm thick + thickness to comply with P/A ratio and to achieve min. U value of 0.22) to insulate slab, additional vapour control layer 1000g d.p.m. laid directly over insulation. 100mm min. thick concrete slab cast over, level to match adjacent floors allowing for proposed finishes.

Floor d.p.m. to lap new and existing wall d.p.c.s, d.p.m. joints to be taped and sealed using proprietary jointing tape.

Any airbricks covered by the proposal are to be ducted via 100mm dia ducts to new external walls and insert telescopic airbricks sleeved with cavity trays over to connect to outside air.

WINDOWS, ROOFLIGHTS AND DOORS TO EXISTING DWELLINGS / EXTENSIONS

New windows and rooflights - fully draught-proofed and double glazed in Low emissivity "K" glass with 16mm Argon filled air gap to give a minimum U-value = 1.6W/m2K (or window energy rating -band D).

Replacement windows - as above to achieve a minimum U-value = 1.6W/m2K (or window energy rating -band E)

New or replacement glazed doors (less than 50% glazed and solid doors) - fully draught proofed and double glazed with Low emissivity "K" glass with 16mm Argon filled air gap to give minimum U-value = 1.9W/m2K.

Escape windows: All habitable room to have opening lights fitted with escape hinges / catches giving a clear minimum 0.33m2 open free area, with no dimension less than 450mmx450mm. Cill heights to first floor windows or where window is adjacent to a drop of more than 600mm to be a min of 800mm and max of 1100mm above finished floor level.

Provide natural ventilation to habitable rooms with opening lights equivalent to 1/20th floor area of respective rooms.

New windows and Doors to comply with Part Q: Security of the Building Regulations. Ground floor and basement windows, windows / roof lights that are within 2m measured vertically of a level surface / flat roof or sloping roof that is within 3.5m of ground level shall comply with PAS 24 : 2012, windows / doors to comply with BS 6206 part C safety glazing and manifestation.

All main entrance doorsets shall comply with PAS 24 : 2012 and be fitted with viewers and fitted with a chain / limiter.

NEW STEPS BETWEEN FAMILY ROOM AND KITCHEN

Form new full width steps between Family Room and Kitchen with max rise 220mm and min going 250mm

ROOFS - GENERAL

Joist sizes, centres and spans as indicated on structural engineers drawing Ref J160 / 01 Rev B, contractor to expose indicated load-bearing walls and ascertain suitability with Building Control Officer to carry additional loading. If found to be non-loadbearing / inadequate seek structural engineers advice before proceeding further.

Provide 100x50mm wallplates, strapped to walls at max 1200mm c/c's using 30x5mm m.s. straps 1200mm long screwed and plugged to masonry. Provide dragon tiles to wallplates at base of hip rafters.

Mono pitch rafters to be supported on masonry wall using 150x75mm pole plate secured to masonry using 12mm Rawl bolts at max 600mm c/c's.

Provide lateral restraint to masonry walls running parallel to ceiling joists and rafters at max 2000mm c/c's using 30x6mm m.s. straps spanning over a min of 3 No. ceiling joist / rafters with roggins and packers between.

Double timbers around roof lights and chimney stacks (min. 50mm clearance), bolted together using 50mm dia double sided dog toothed plate connections and M12 bolts at max 600mm c/c's.

Tiles not be laid below minimum recommended roof pitch, clipping and perimeter fixings to suit exposure and local conditions as stipulated by tile manufacturer.

Tiles to be laid on double vacuum preservative treated 38x25mm battens on Tyvek Supro Plus breathable roof felt.

WARM DECK PITCHED ROOF CONSTRUCTION

Forticrete Centurion roof tiles / each tile to be clipped, installed in accordance with manufacturers written specification) on 38x25mm treated timber battens on breathable sarking felt, min lap 225mm on treated timber counter battens on Kingspan Thermaplatch TP10 insulation, 60mm above rafters - 60mm between rafters to achieve u-value of 0.18W/m2K, on 50x160mm rafters at 400mm centres.

Underdraw rafters with 300 gauge vapour barrier, joints taped, finished internally with 12.5mm foil backed plasterboard and skim. Joists secured to 50x150mm pole plate bolted to masonry wall using M12 Rawibolts at max 600mm centres.

PITCHED ROOF VENTILATION (INSULATION AT CEILING LEVEL)

Min 25mm continuous gap to be provided along opposite eaves, fitted with insect grilles.

Proprietary eaves baffles to be provided at eaves to prevent roof void ventilation obstruction.

Provide additional tile vents to ventilate dead areas of roof - where adequate cross ventilation can not be achieved.

To head of mono pitch roofs - provide continuous 5mm gap ventilation, either via ventilating roof tiles to upper section to be equivalent to a 5mm continuous gap or proprietary under flashing ventilation strip.

THERMAL UPGRADE TO EXISTING VENTILATED PITCHED ROOFS

Lay 150mm Rockwool Mineral Wool Roll between joists with 150mm laid at right angles over (300mm total thickness) to achieve a minimum U value of 0.16 W/m2K

FLAT ROOF WARM DECK INSULATION TO RESIDENTIAL EXTENSIONS

Single ply membrane by Protan or similar approved, installed strictly in accordance with manufacturers written specifications on Kingspan Thermafloor TR31 (121mm) on fixings to give structural fall min 1:80), incorporate vapour control layer, to give a U value of 0.18W/m2K. On joists, size and centres as per drawing. Install a 300 gauge vapour barrier below roof / ceiling joists and finish with 12.5mm foil backed plasterboard and skim.

AIRTIGHT CONSTRUCTION AND CONTINUOUS INSULATION PRINCIPLES

The contractor shall adopt the accredited details for air tight construction and continuity of insulation as detailed in DCLG Construction Details Part L (Available on Planning Portal website)

PLUMBING

All above ground drainage to comply with BS 8000-13.

Bath, whb, shower and kitchen sinks wastes to be min. 38mm in dia fitted with resealing anti-vac traps. Waste pipes to be laid at min 1.80 falls. Combined waste pipe to be min 50mm dia. No opposing connections to SVPs within 200mm of a WC connection.

100mm dia. SVP provided as indicated - accessible rodding eye to base and to all changes in direction. SVP to terminate a min of 900mm above opening windows / rooflights within 3m and be fitted with bird cage.

Air relief valves (where specified) to be installed above the level of the highest appliance overflow that is also connected to the system.

Soil pipes passing through habitable rooms or ceilings above same are to be lagged with min. 50mm sound deadening quilt and with 2 No. layers of 12.5mm plasterboard on a 38x38mm timber framework. Provide access points to ceiling / floor voids etc. to ensure all plumbing is accessible as required.

HOT WATER TEMPERATURE TO BATHS

Mixer valves to be fitted to hot water supplies to baths to restrict temperature of hot water at the tap to a maximum of 48 degrees C

WATER EFFICIENCY

All water using appliances / fittings to comply with Building Regulations G2 and Regulation 36, to achieve an average water consumption not exceeding 125 litres per person per day. All appliances / fittings to comply with the EU Water Labeling Regulations, appliances maximum consumption 8 litres per minute, baths maximum capacity 170 litres, WCs dual flush maximum consumption 4.5 litres, whb taps maximum flow rate 4.7 litres per minute, showers maximum flow rate 8 litres per minute, kitchen sink taps maximum flow rate 8 litres per minute.

ELECTRICAL INSTALLATION

All electrical installations to be undertaken in accordance with BS7671 and with the latest edition of the IEE Wiring Regulations. All electrical works are to comply with Approved Document Part P of the Building Regulations. Electrical installations should be inspected / tested prior to the works commencing and upon completion of the project and appropriate certification eg. IEE, NICEIC, ECA issued to the occupier.

Light switches and socket outlets shall be located at appropriate heights between 450 and 1200mm above the finished floor.

Self contained mains powered smoke detectors to be installed in domestic situations with integral battery back up, provided at each level as indicated by SD on floor plans. All alarms to be interlinked and wired to separate sub-circuit on mains distribution board. Smoke alarms to be situated within 3.0m of bedroom doors.

Lighting (Energy Saving Provisions)

To any new wiring system or when rewiring an existing lighting system install energy efficient light fittings as follows:-

Fixed Internal Lighting - Fix light fitting that only take lamps having a luminous efficacy greater than 40 lumens per circuit watt (power consumed), either 1 per 25m2 of dwelling floor area (excluding garages) or part thereof OR 1 per 4 fixed light fittings.

Fixed External Lighting - Lamp capacity not to exceed 150 watts per light fitting and fitting to have automatic daylight / motion sensors fitted OR fitting to have sockets capable of only using lamps with efficacy greater than 40 lumens per circuit watt

ENERGY CONSERVATION

The client shall obtain Energy Performance Certificates for each dwelling prior to them being advertised for rent or sale, same to be made available to prospective tenants / purchasers. The client shall commission SAP ratings for the properties from the manufacturer of the insulation / qualified consultant to demonstrate compliance with the Building Regulations Part L

PRIMARY AND SECONDARY HEATING SYSTEMS (NEW AND REPLACEMENT SYSTEMS)

Primary refers to main heating and hot water system, eg main boiler.

Secondary refers to localised heating provisions, eg gas fire / solid fuel fire / stoves.

The efficiency and controls for both types of systems, whether as a new installation or replacement for an existing system must be designed, installed and commissioned in strict accordance with the "Domestic Heating Compliance Guide" published by the Department for Communities and Local Government. The contractor shall check with the boiler manufacturer as to the appropriate controls to be used to achieve Approved Document L1 compliance.

Any new gas boiler to be min 86% SEDBUK condensing wall mounted with balanced flue / stainless steel guard to outlet.

Liquid condensate to discharge to a suitable foul drain, condensate pipework as per manufacturers instructions, insulated where external and 75mm deep trap to prevent smells entering building.

Flues to discharge in accordance with manufacturers instructions and to meet Approved Document J of the Building Regulations.

Completion certificate - Copy of boiler Building Regulation Compliance Certificate from Gas Safe / OFTEC / HETAS registered installer to be provided to Building Control and Occupier.

All new radiators to be fitted with thermostatic valves and all new pipework to be fully insulated in accordance with "Domestic Heating Compliance Guide".

MECHANICAL VENTILATION

Kitchen to be mechanically extracted via fan capable of 60 litres per sec extract rate or via cooker hood capable of 50 litres per sec extract rate, ducted to external air.

Bathroom / WCs to be mechanically extracted via fan capable of 15 litres per sec extract ducted to external air, 15 min over run and linked to light switch to rooms with no windows.

Replacement air to be provided to rooms with extract fans by under cutting doors by 10mm.

Mechanical ventilation systems to be of an energy efficient type on compliance with Table 3 of the Approved Document of the Building Regulations. Provide heat recovery systems to achieve minimum 66% heat recovery.

Fans to be positioned so as to provide reasonable access for maintenance, fans to suit duct length, diameter and no. of bends. Ducts to be insulated / contain condensation traps as necessary and be fitted with back draught devices as necessary.

Mechanical extract rates in new dwellings to be measured on site and notice of compliance with Part F of the Building Regulations to be provided to Building Control.

Extract fan

BACKGROUND VENTILATION RATES

Provide trickle vents to all window heads in dwellings formed by refurbishment to give equivalent of 45000mm2 of background ventilation to each unit.

Provide trickle vents to window heads of new dwellings to give an equivalent of 65000mm2 of background ventilation to each unit.

DRAINAGE

All drainage runs shown on these drawings are assumed and should not be relied upon as being complete or correct and further verification works will be required prior to the commencement of the project and the finalisation of costings. The contractor / client must establish if the existing / proposed drainage system that run below or are within 3m of the proposal is / will be classified as a public sewer and allow for any necessary diversions / protection measures to comply with the requirements of the utility company / Building Control officer.

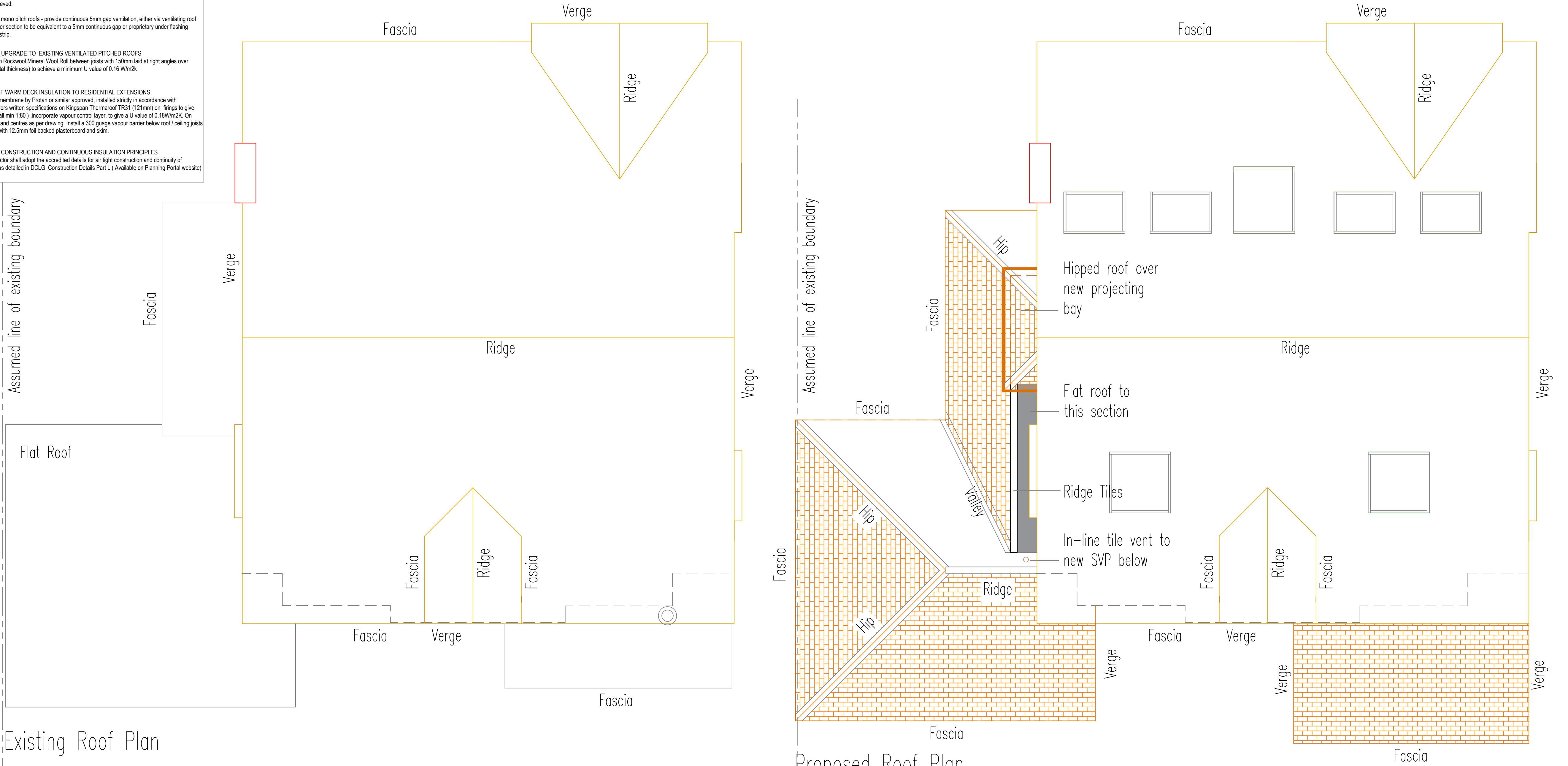
Below ground drainage to be approved 100mm dia plastic or clay drainage system laid to min 1 in 40 falls, bedded and installed in accordance with manufacturers written instructions, all in accordance with BS EN 12056.

Proprietary inspection chambers to be provided as indicated and as necessary to provide rodding access to drainage runs. Sizes to suit depth - as recommended by manufacturers, provide covers with duty rating appropriate to location, eg only pedestrian traffic light duty, motor vehicle traffic heavy duty.

Internal inspection chambers to have double seal bolt down covers All gullies to be back inlet and roddable, wastes to discharge below grating but above water line All redundant drainage to be capped and sealed.

All drains passing beneath proposal to be exposed and once inspected by the Building Control Officer to be encased in 150mm of concrete, drains passing through foundations to be limited over with flexible joints either side of wall.

Contractor to ascertain if drainage system is combined or separate, is separate contractor to allow for connecting foul waste to existing foul drain and surface water to existing surface water drain.



Existing Roof Plan

Proposed Roof Plan

Client	Location	C	Issued for Planning / B Regs	May 22	DAP
Liz Riding and Ritchie Irvine	27 Belfield Road Didsbury M20 6BJ	Rev.	Mod. Notes	Date	By
Drawing Title	Job Title	Scale 1:50	Sheet A1	Date Aug 21	Drawn by DAP
Existing and Proposed Roof Plans	Proposed extension and internal alterations	Dwg. No. 42/21-06			Rev. C