Proposed Two Storey Rear Extension at 7, Hollinscroft Court, Tean, Staffs. ST10 4SD

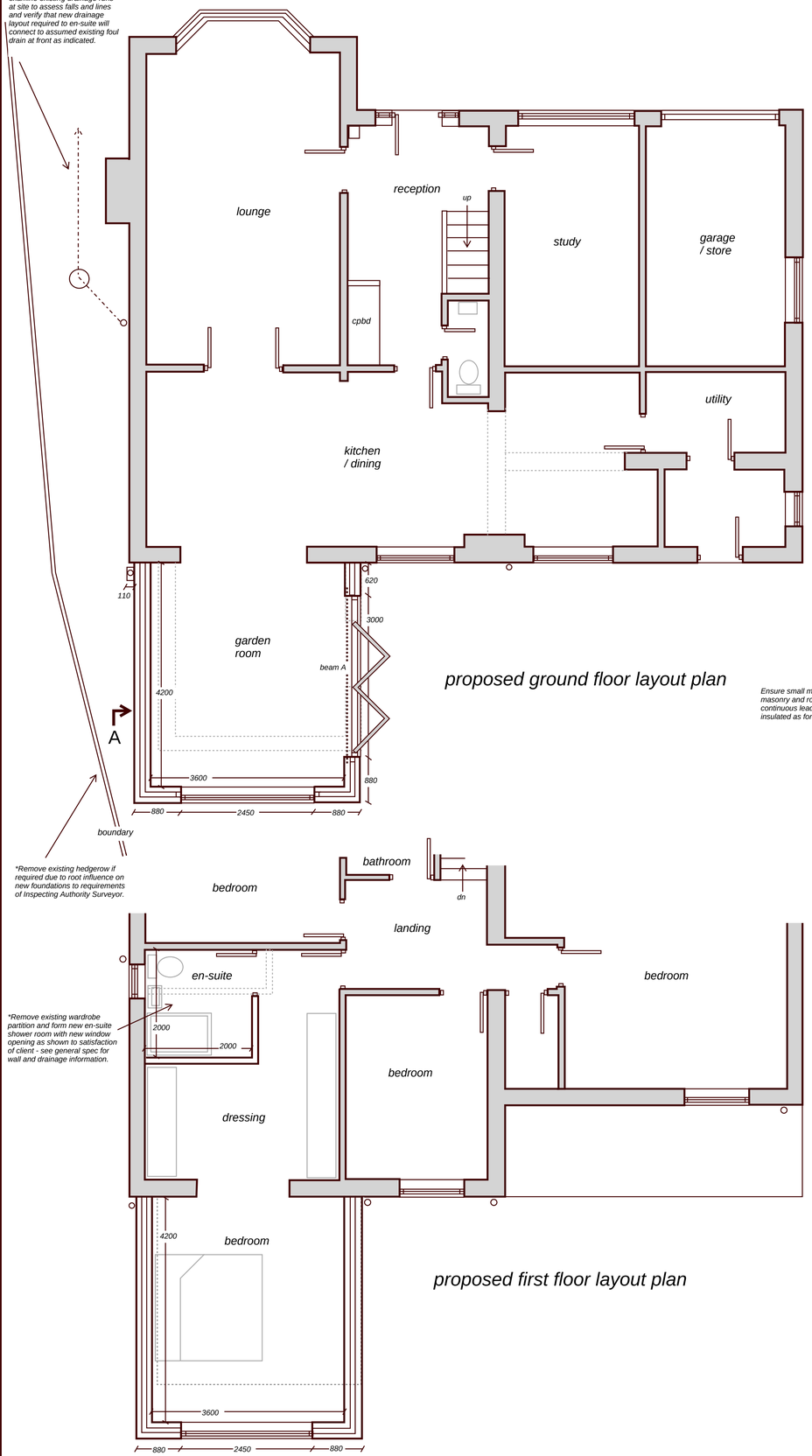
Scale 1-50 (A1) - proposed layout Dwg ref HC2b December 2022

Geoff Rouane C.Build.E, MCABE, MRICS.
Chartered Surveyor Chartered Engineer
Tel 07946517767
Email: geoffrouane@btinternet.com

RICS cabe chartered building engineer

***Important Note:**
This drawing has been prepared for submission to the Inspecting Authorities for necessary Statutory Approvals. Nominated contractor to verify all dimensions either written or scaled together with drainage lines and inverts etc. prior to commencement of formal construction work on this site and any discrepancies to be referred to the Client and Agent. All works to be carried out with full agreement of client and any disturbance to existing structures to be made good to satisfaction of all parties.
This drawing is not to be reproduced without prior consent.

*See preliminary work notes to examine existing drainage runs at site to assess falls and lines and verify that new drainage layout required to en-suite will connect to assumed existing foul drain at front as indicated.



*Remove existing hedgerow if required due to root influence on new foundations to requirements of Inspecting Authority Surveyor.

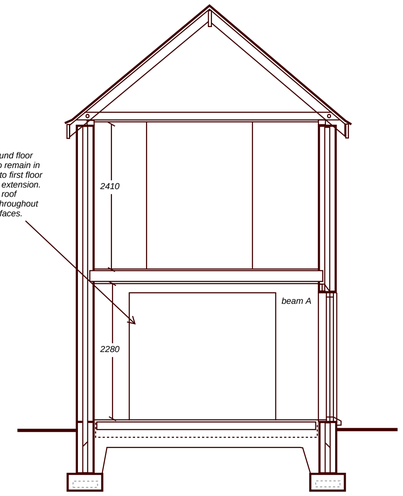
*Remove existing wardrobe partition and form new en-suite shower room with new window opening as shown to satisfaction of client - see general spec for wall and drainage information.

proposed ground floor layout plan

proposed first floor layout plan



proposed rear elevation

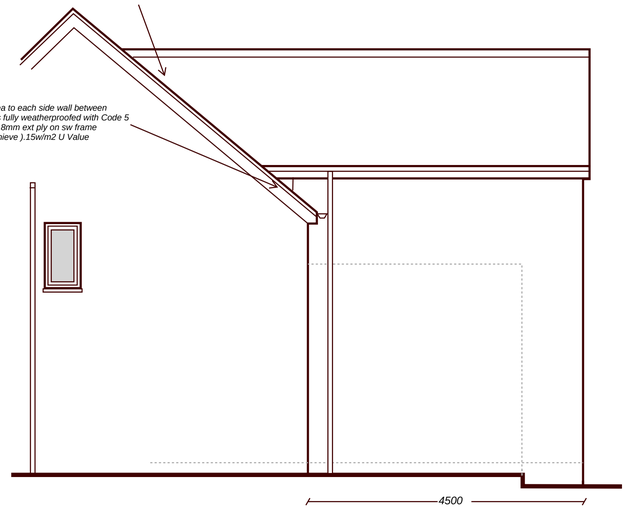


*check existing opening at ground floor has fit for purpose lintel over to remain in situ. Similarly remove window to first floor bedroom to form opening in to extension. Ensure all trimming to existing roof construction is fit for purpose throughout Make good to all disturbed surfaces.

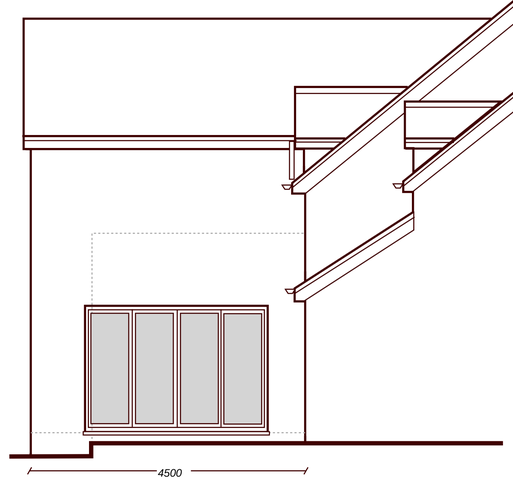
section view at A

Form preformed grp or similar valley gutter at intersection of new roof and existing dwelling roof to manufacturer spec. over 200x38mm lay board across existing spars.

Ensure small make up area to each side wall between masonry and roof frame is fully weatherproofed with Code 5 continuous lead flash on 18mm ext ply on sw frame insulated as for roof to achieve).15w/m2 U Value



proposed side elevation to rear



proposed side elevation to drive

***General Specification:**

***Preliminary Works:**
Examine existing drainage runs at site to assess falls and lines and verify that new drainage layout required to en-suite will connect to assumed existing foul drain as indicated.
Strip back existing conservatory structure for demolition and prepare walls etc for removal and disposal in accord with Health and Safety Legislation .
Remove all rubble from site to an authorised and licensed tip facility.
Check existing foundations to assess ground bearing conditions etc. and assess soil type to verify new foundation type.

***Walls (External):**
Selected faced brick to match existing including soldier course feature under first floor window, min 100mm cavity enclosing Dritherm 32 insulation till to manufacturer specification and internal leaf of approved 100mm load bearing thermal block work (maximum 0.15W/mK) faced internally with 52.2mm PIR plasterboard finish (40mm PIR+12.5mm plasterboard) on treated battens or cement dabs.This or similar construction to achieve max 0.18W/m2 k U-Value
Install Thermabate or similar insulated cavity closures at all opening jambs.
*Note: new walling to be effectively bonded to existing structure to satisfaction of local authority surveyor and wall ties to be stainless steel suitable for 100mm cavity width and compliant with DD140. set at 5 per m2 and at each block course at jambs.

***Internal Walls (non load bearing):**
100x47 sw timber stud faced on 100x75mm sole plate and dpc faced with plasterboard incorporating vapour check and enclosing 100mm rockwool acoustic grade insulation.

***Main New Roof:**
Profiled concrete single lap tiles to match existing fixed in place in accord with manufacturer specification and BS5534 on treated battens on approved breathable membrane over prefabricated trussed rafter units by specialist design and supply compliant with BS5268 secured with purpose made steel clips to continuous 100x75mm sw wall plate anchored to supporting walls by approved galvanised ms straps at maximum 1000mm centres.
Ensure all necessary handling, bracing and lateral restraint strapping to roof frame and adjacent structure is completed in accordance with manufacturer specification and compliant with BS5268.
**Alternatively to trusses use 170x47mm sw C16 grade rafters at maximum 400mm centres secured to wall plate with clips etc as above and 170x47mm sw C16 ceiling joists bolted to rafter feet with M18 bolts and dog toothed steel washers.
220x38mm ridge board.
Horizontal ceilings to have 150mm rock wool between joists and a further 150mm thickness laid across joists.
Note: This or similar construction to achieve max 0.15 w/m2k U-Value

***Lintels:**
Install Catnic or similar combined steel lintels over rear windows with minimum 150mm end bearings to manufacturer spec. See Engineers design sheet for steel beam over bi-fold door unit at side.

***Ground Floor Slab:**
Extension floor slab to comprise floor finish to client requirement on min 60mm screed or power float finish to 100mm concrete slab reinforced with A193 steel mesh on 1200g dpm over Celotex GA 4000 (100mm) or similar approved insulation board turned up in 25mm thickness at floor perimeter to avoid cold bridge. Lay further dpm over well blinded 150mm min. compacted natural stone sulphate free hardcore.
*U-Value max 0.18W/m2k

***Foundation Detail:**
Subject to prior exposure of existing house foundation lay 600x300mm deep concrete strip foundations to new walls at depth to to suit site conditions and to satisfactory bearing strata below influence of hedgerow tree growth to approval of inspecting authority. Reinforce throughout with 2 no layers B503 steel mesh.
*New foundation to create no surcharge on drainage lines at any point.
All works to be carried out with full agreement of client and any disturbance to existing structures to be made good to satisfaction of all parties.

***Drainage:**
Lay new 100mm pvc drains on granular bed at min 1:40 falls to connect to existing system on site - see preliminary work notes to verify existing drainage lines..
Ensure adequate support and protection to all drains passing through walls and building footprint.
Upvc rainwater goods to match existing carried to existing system as required.
Internal waste plumbing to new en-suite to satisfy BS5572 with 75mm deep seal traps as required. Wastes to discharge to new 100mm soil and vent pipe to replace existing and carried to minimum 900mm height above opening casements - all to full satisfaction of Inspecting Authority Surveyor.

***Fenestration:**
Install high performance double glazed upvc window units to match existing style using Pilkington Low E 'k' glass and min 25mm cavity – max 1.40 w/m2 k U-Value.
Opening casements to represent minimum 5% of adjacent floor as natural vent plus min 10000mm2 trickle ventilators to head of frame.
*Escape Window: Where required provide opening casements to habitable rooms capable of safe egress in emergency i.e. min 0.33m2 clear opening (say 800x450mm) set within 1100mm of internal floor level.
Ensure that all doors and critical window areas are fitted with laminated or toughened safety glazing compliant with current BS:EN:12150.

***Floor - First:**
21mm t&g boarding across 190x50mm sw C16 joists at max 450mm centres supported off heavy duty galvanised ms joist hangers fixed to comply with manufacturer specification. Provide suitable strutting at mid span with end wedges as necessary. Under draw joists with plasterboard to achieve min 30 minutes fire resistance incorporating vapour control membrane where required and enclosing 200mm Rockwool Flexi between joists to achieve maximum 0.18W/m2k.
*Note any notching of floor joists for services to be minimal and compliant with BS5268 part 2-1991.

***Ventilation:**
Natural ventilation from opening casements plus install mechanical extract fan to new shower room set to achieve min 15 litres/sec extract rate.

***Heating:**
All boiler alterations and flue discharge criteria plus any extended space heating to be to the full requirements of a suitably qualified heating engineer and assessment of existing heating system plus compliant with current Part J Building Regulations. Install thermostatic control valves as necessary throughout.

***Electrical Work:**
All notifiable electrical work to be carried out by a suitably qualified contractor registered with an approved national body. A formal completion certificate to be issued in compliance with current Part P building regulations and to satisfaction of inspecting authority surveyor
Note: all lighting to be low energy type to client spec.
*Install sockets to extension area to requirements of client and provide co-axial and satellite ports as needed.
*Install a mains operated inter-linked smoke alarm system with battery back up to circulation areas and critical locations in compliance with BS5839 and to satisfaction of inspecting authority surveyor

***Structural Works:**
Install steel beam over bi-fold doors encased in gyproc fire line board to achieve min. 30 minutes fire resistance. See Engineer's design sheets for all structural beam etc information.

*Beam schedule (All steel grade S355)

Beam A - 178 x 102 x 19 UB with 8x280mm steel plate welded to bottom flange suitably rust protected with 2000g dpc cavity tray over.