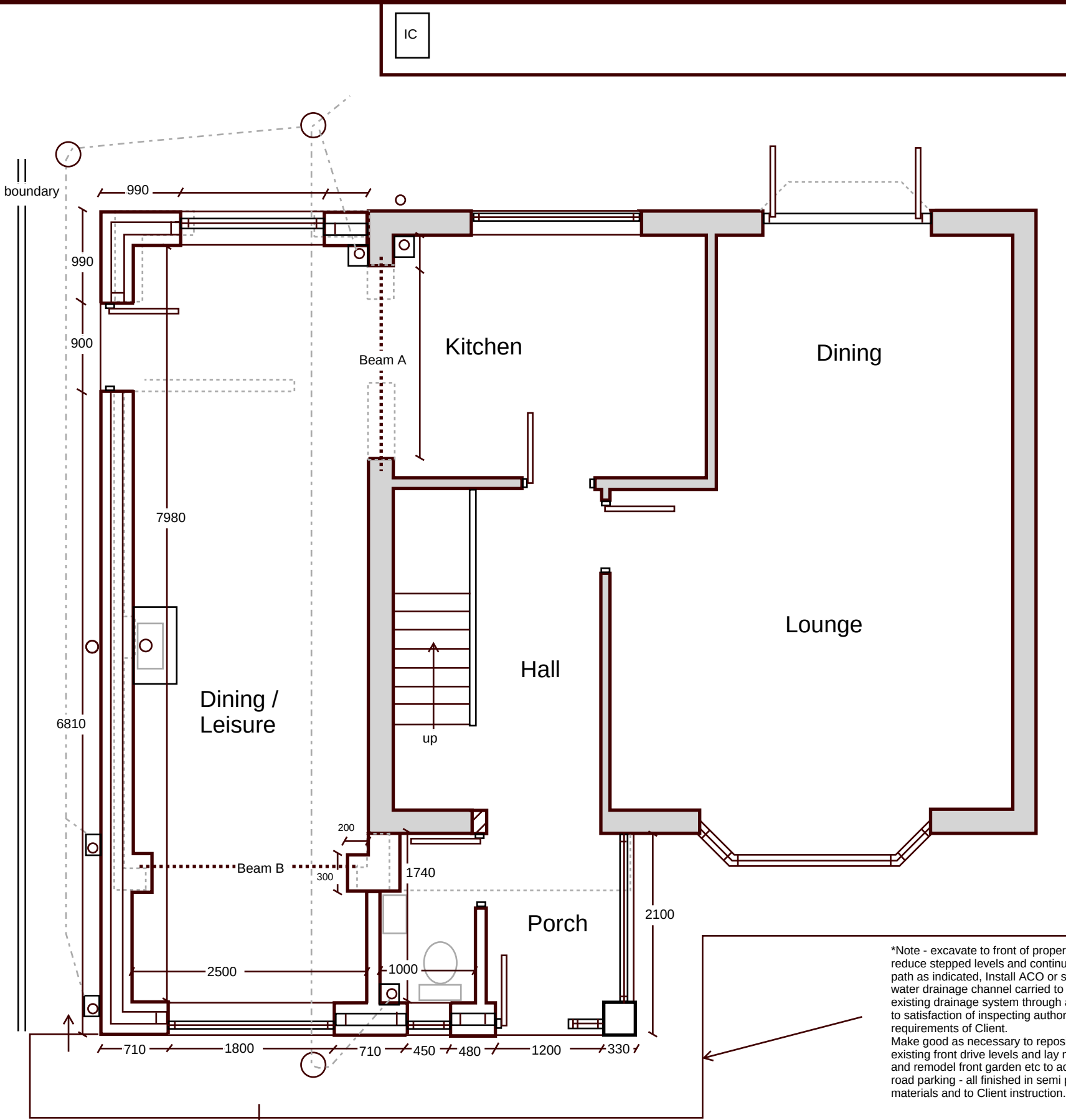
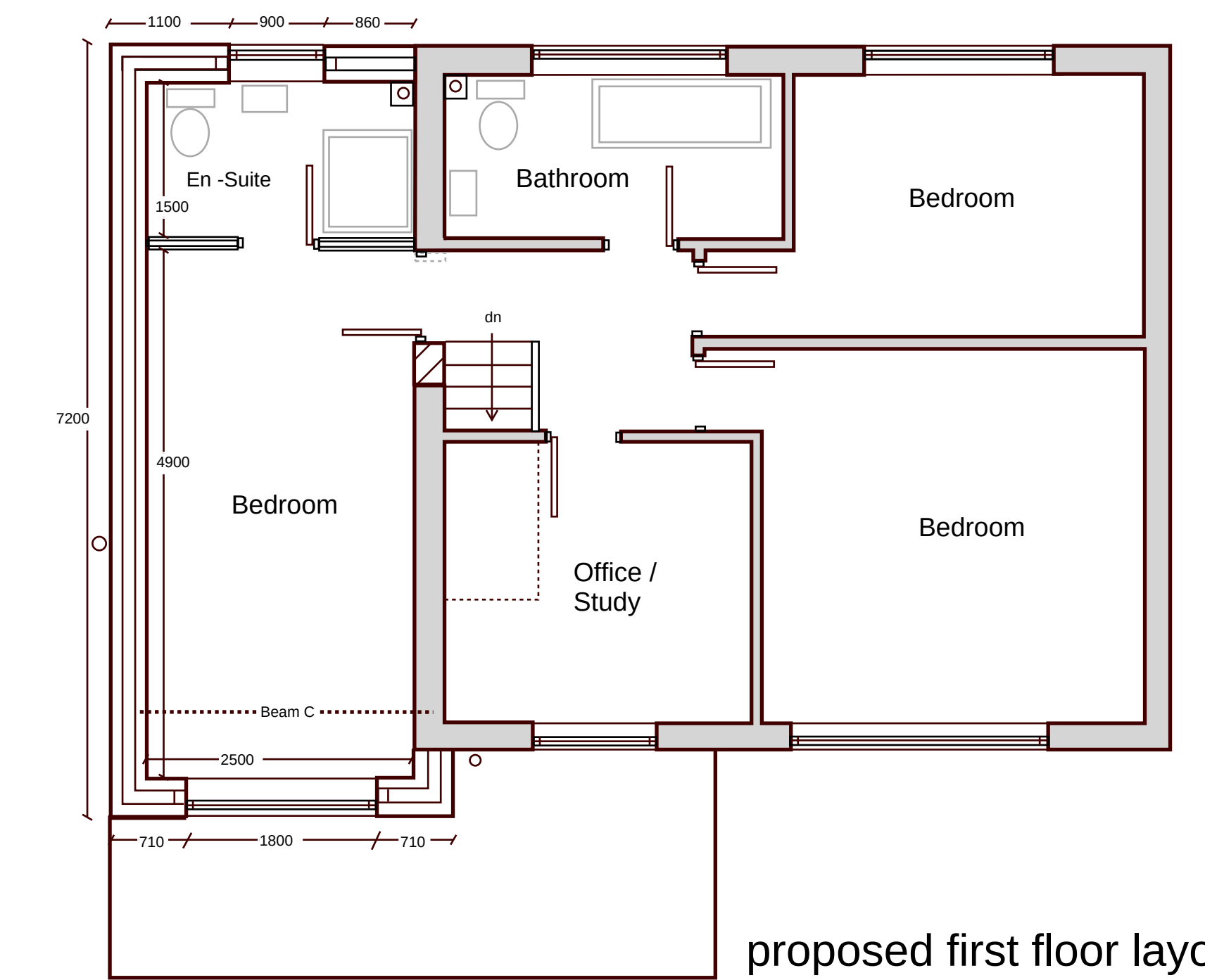




proposed ground floor layout



proposed first floor layout

***Important Note:**
The author of this drawing may be considered the Principal Designer only in so far as obtaining formal statutory approvals including Building Regulation consent. The Designer will not inspect, supervise or instruct the works on site and such responsibility must not be inferred, assumed or supposed from the drawings and any supporting documents. The Client and their Principal Contractor as Duty Holders have a responsibility to verify all dimensions either written or scaled from the drawings and identifying existing covered foundation and drainage lines on site and any discrepancies or changes in the design or specifications are to be referred to the Designer to check for compliance.
The construction of the development in accordance with this drawing does not constitute or imply any guarantee, latent defect assurance or warranty.
The Client and the Principal Contractor must understand and accept their responsibilities in their role as Duty Holders under The Building Regulations 2010 (as amended) and The Building Safety Act 2022.
Relevant requirements of CDM or Health and Safety Legislation are the responsibility of the Principal Contractor. All works are to be carried out with full agreement of the Client and any disturbance to existing structures or boundary features are to be made good to satisfaction of all parties.
This drawing is not to be reproduced without prior consent and where applicable should be read in conjunction with Consultants Drawings or Specifications.

Proposed Two Storey Side Extension
at 6 Marsh Close Werrington Staffs. ST9 0LP
Scale 1-50 (A1) - proposed layout Dwg ref MC2c Oct 2024

Geoff Rouane C.Build.E, MCABE, MRICS,
Chartered Surveyor Chartered Engineer
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proposed front elevation



proposed rear elevation

*Assess existing lintel over rear bay window as fit for purpose to retain in situ and if satisfactory carefully remove existing bay and brickwork below to accommodate new french door unit shown to satisfaction of Client and in compliance with fenestration details in General Specifications. Make good to all disturbance of existing structure and ensure vertical dpc to cavity closures at new reveals.

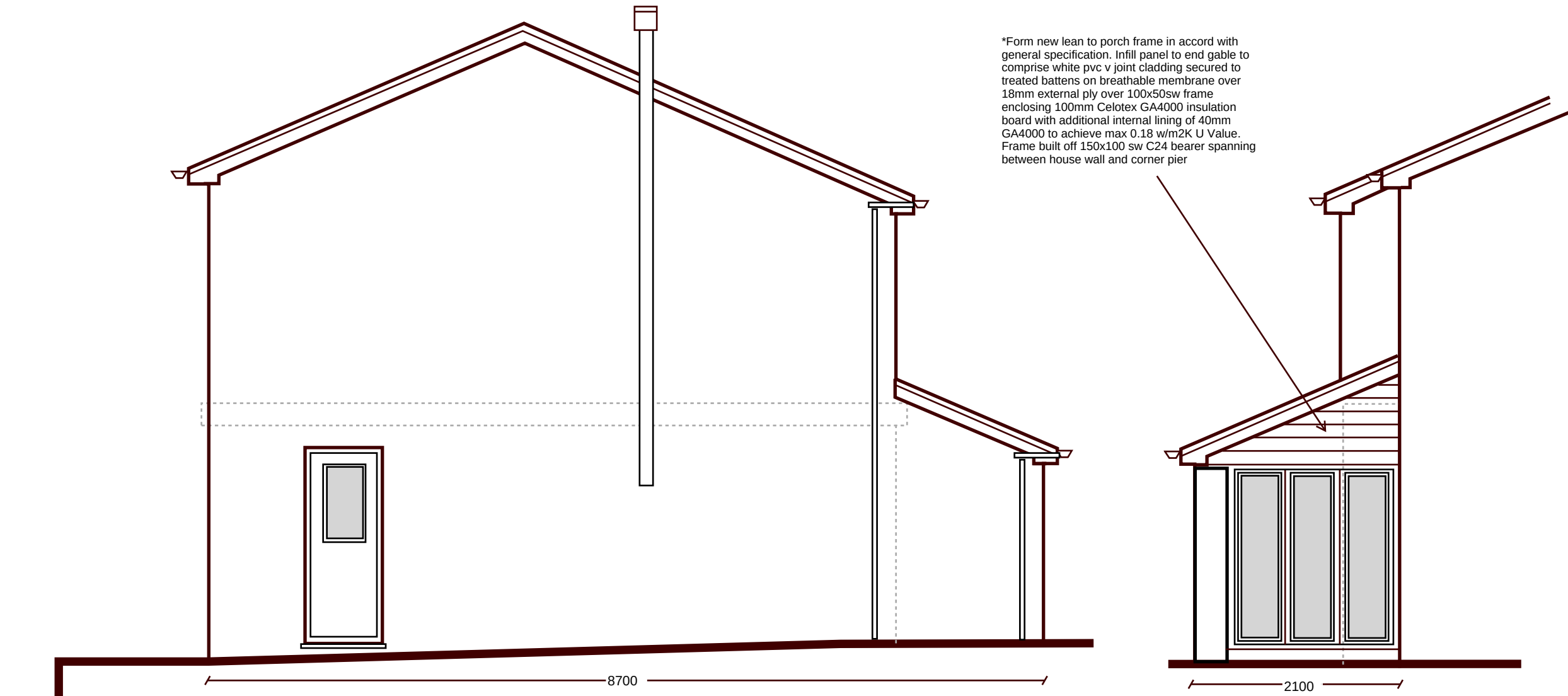
***Structural Works:**
Check direction of existing first floor joists and first floor walling to ensure assumed loadings in steel work calculations are verified.
*Note Contractor to assess bearing capacity of existing retained masonry to receive ends of new Beams and if necessary rebuild in bonded 7Nmm2 engineering quality concrete brick/ block to required bearing capacity beneath spreader pad stones to full satisfaction of inspecting authority.

***Beam Schedule (steel grade S355)**

Beam A - 2No 152 x 89 x 16 UB. (bolted together with tubular steel spacers at 1000mm max centres)

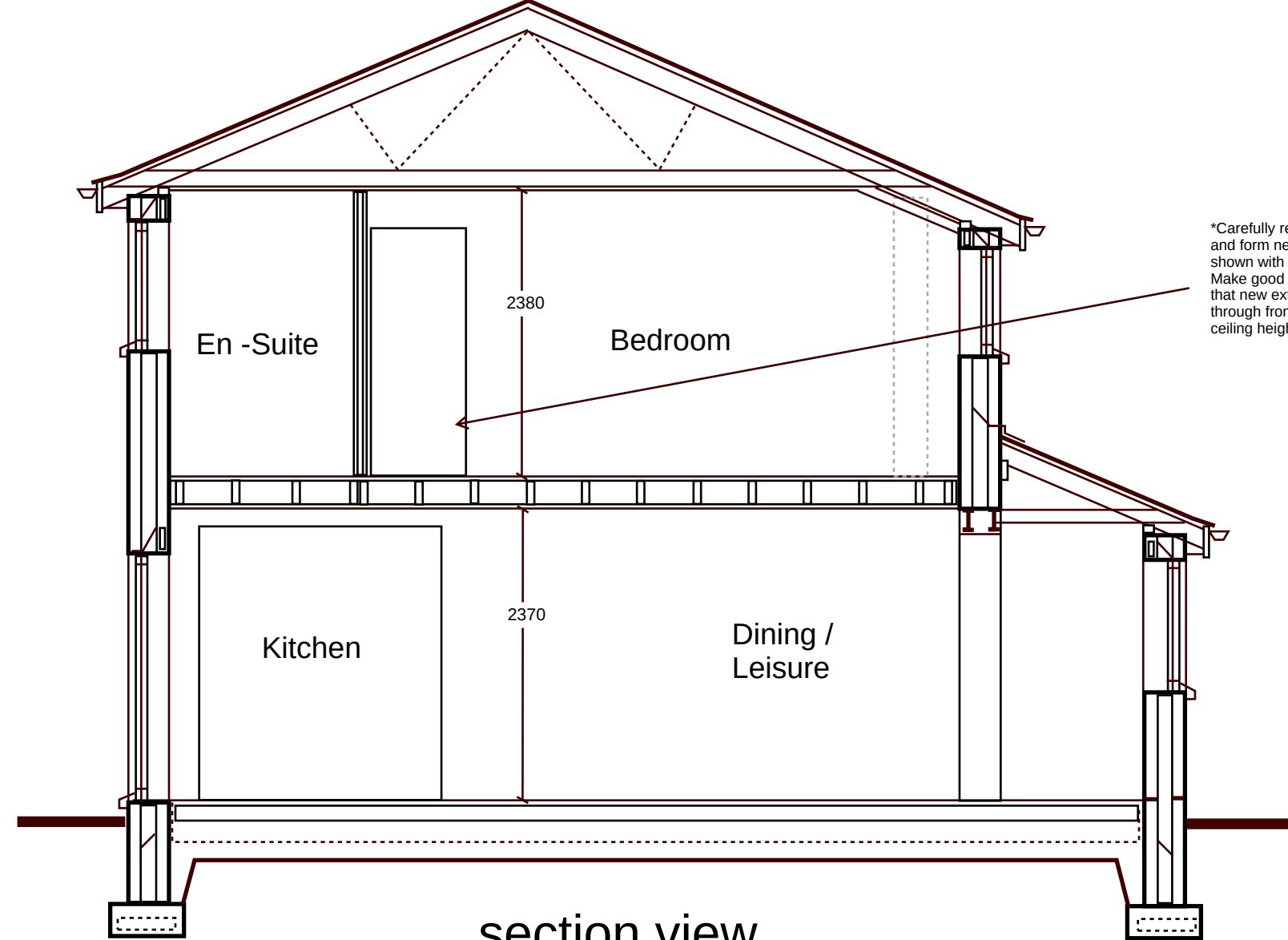
Beam B - 2No 127 x 76 x 13 UB. (bolted together with tubular steel spacers at 1000mm max centres)

Beam C - 152 x 89 x 16 UB. (NOTE bolt 100x75mm sw wall plate to top flange of Beam C to receive truss chords.)



proposed side elevation at drive

proposed side elevation at front



section view

***General Specification:**

***Preliminary Works:**
Examine existing drainage runs at site to assess falls and lines and verify new drainage layout.
Strip back existing single storey garage and porch and prepare walls etc for demolition and removal 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 with due reference to drainage lines etc.

***Walls (External):**
Selected facing brick outer leaf to match existing dwelling 150mm cavity filled with an approved insulation (max thermal conductivity 0.032 W/mK) and 100mm thermal block inner leaf max (thermal conductivity 0.15 W/mK) and 12.5mm plasterboard finish.
This or similar construction to achieve max 0.18W/m2 K U-Value.
*Note: new walling to be effectively bonded to existing structure to satisfaction of inspecting authority surveyor and wall ties to be stainless steel suitable for 150mm cavity width and compliant with DD140, set at 5 per m2 and at each block course at jambs. Install Thermabate or similar insulated cavity closures at all opening jambs and 2000g polythene horizontal dpc throughout.

***Internal Walls (non load bearing):**
100x47mm sw timber stud faced on 100x75mm sole plate and dpc faced with plasterboard incorporating vapour check and enclosing 100mm rockwool acoustic grade insulation. See separate note for structural buttress partitions at first floor to rear.

***Extension Roof:**
Single lap profiled concrete 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 BS5208 secured with purpose made steel clips to continuous 100x75mm sw wall plate anchored to supporting walls by approved galvanised ns 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.
If necessary the front extended rafters may be supported by beam C.
Horizontal ceilings to have 150mm rock wool between joists and a further 150mm thickness laid across joists.
Pitched ceilings to have Celotex GA400 (100mm) insulation board between rafters ensuring min 50mm air gap behind roof membrane and under-draw with Celotex PL 4000 insulation backed plasterboard (60mm+12.5mm plasterboard)incorporating vapour check membrane all to manufacturer specification.
*Note: That where the roof above new brickwork Code 4 stepped lead flashing and soakers are installed plus the flashing is linked to a continuous 2000g dpc cavity tray at abutment with new flat floor extension wall.

***New Lean To Roof over Porch etc:**
Ties to match main roof roof colour on treated battens on approved breathable membrane over 125x47mm rafters and ties at 400mm centres with head of rafters notched and screwed to 150x63mm pole plate raw-bolted to brickwork at max. 600mm centres. Install robust feature galloway bracket supports as required. 100x47mm sw C16 ceiling ties at 400mm centres screwed to rafter feet and 100x75mm sw wall plate.
*Ensure that where the roof above new brickwork Code 4 stepped lead flashing and soakers are installed plus the flashing is linked to a continuous 2000g dpc cavity tray at abutment with new flat floor extension wall.

***Ground Floor Slab:**
Examine existing ground floor construction to verify if suitable to retain in situ.
New floor slabs to comprise floor finish to client requirement on min 60mm screed or power float finish to 100mm concrete slab with work/movement joints as required reinforced throughout with A192 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 compacted natural stone sulphate free hardcore placed in max 150mm layers.
*U-Value max 0.18W/m2K.

***First Floor:**
21mm t&g boarding across 170x50mm sw C16 joists at max 450mm centres supported off heavy duty galvanised ms jist hangers fixed to comply with manufacturer specification or wall bearing (min 50mm) 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 Flex 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. *Install double joists beneath partition line.

***Form new lean to porch frame in accord with general specification. Infill panel to end gable to comprise white pvc v joint cladding secured to treated battens on breathable membrane over 18mm external ply over 100x50sw frame enclosing 100mm Celotex GA4000 insulation board with additional internal lining of 40mm GA4000 to achieve max 0.18 W/m2K U Value. Frame built off 100x100 sw C24 bearer spanning between house wall and corner pier.**

***Carefully remove existing landing window and form new opening through to extension shown with twin rc lintels over if required. Make good to all disturbance and ensure that new extension floor levels carry through from first floor and set ground floor ceiling heights accordingly.**

***Foundation Detail:**
Subject to prior exposure of existing house foundation lay 650x300mm deep concrete strip foundations to new walls at depth to suit site conditions and to satisfactory bearing strata to approval of inspecting authority. Reinforce throughout with 2 no layers BS503 steel mesh.
*New foundation to create no surcharge on drainage lines at any point and depth to have due regard to the presence of tree roots etc.
All works to be carried out with full agreement of client and adjoining neighbours and any disturbance to existing structures to be made good to satisfaction of all parties. All foundation work to be to the approval of the inspecting authority surveyor.

***Drainage:**
Contractor to verify existing drain falls on site and lay new 100mm pvc drains on granular bed at min 1:40 falls to connect to existing system on site as shown with approved access chambers at each change of direction. 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 satisfy BS5572 with 75mm deep seal traps as required. Wastes to discharge to 100mm slab stack fitted with Durgor or similar air admittance valve positioned above flood level of fittings to full satisfaction of inspecting authority surveyor.

***Fenestration:**
Install high performance double glazed upvc window units to match existing style using Pilkington Low E 'x' 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.
Note: Combined openings to represent minimum 5% of combined floor areas.
*Escape Window: Where required provide opening casements to habitable rooms capable of safe egress in emergency i.e. min 0.30m2 clear opening (say 900x450mm) 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-EN12150.

***Ventilation:**
Natural ventilation from opening casements as above plus install mechanical extract fan to new shower room set to achieve min 15 litres/sec extract rate.
Similarly install mechanical extract fan to kitchen area set to achieve min 60 litres/sec extract rate (30 litres/sec if over cooker hood) and also 6 litres/sec to wc.

***Heating:**
*Note install a new wood burner fire sealed appliance to client requirements to the new extension area shown with approved Class 1 specification flue pipe extension to external air carried above roof line to Heating Engineer's recommended height assessment in approved stainless steel insulated flue. *Note the full installation to be to the requirements of an approved Heating Engineer and compliant with Part J current Building Regulations.
*Note appliance to be sited on minimum 100mm non combustible hearth extending 300mm out from front access.
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.