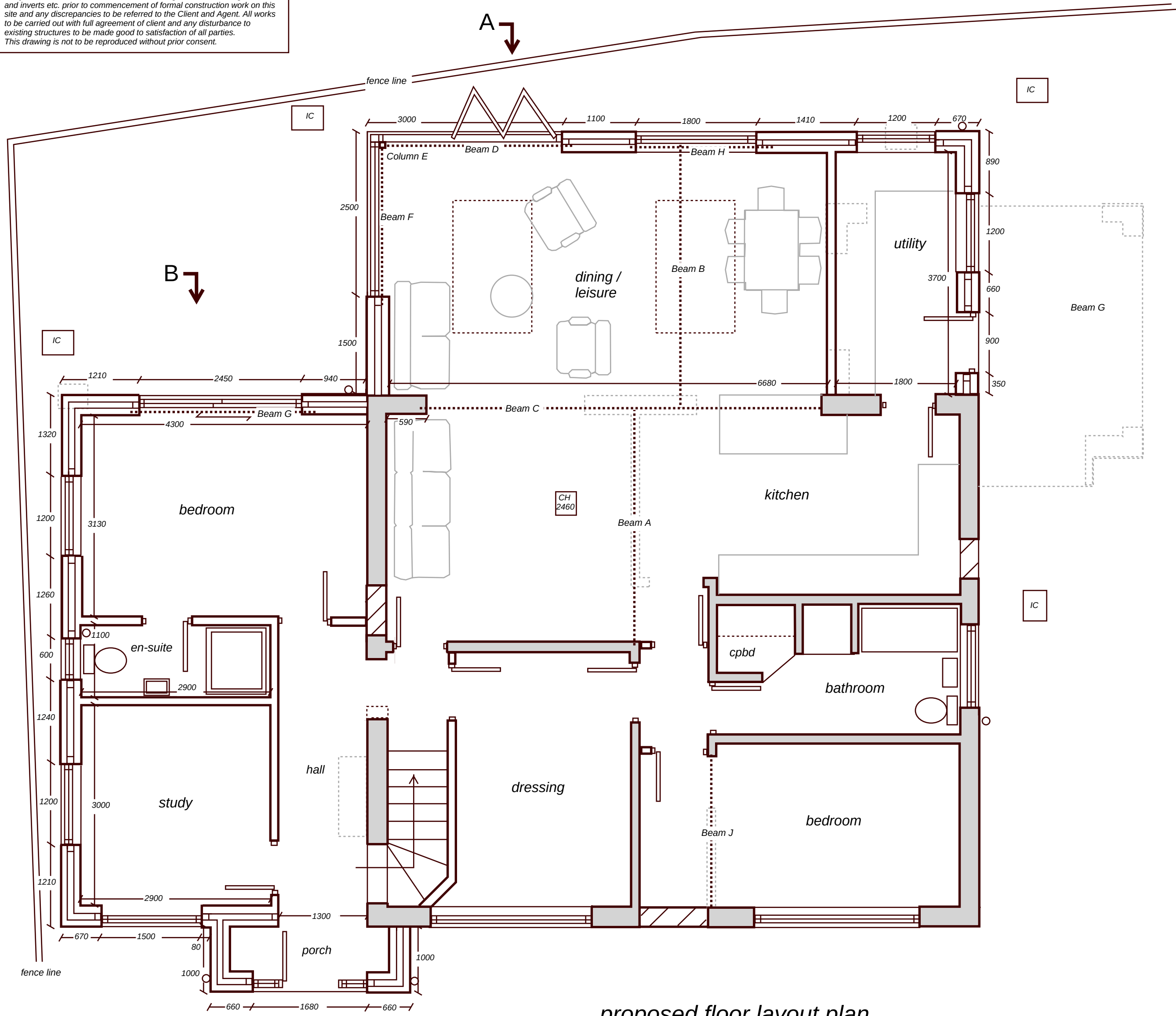
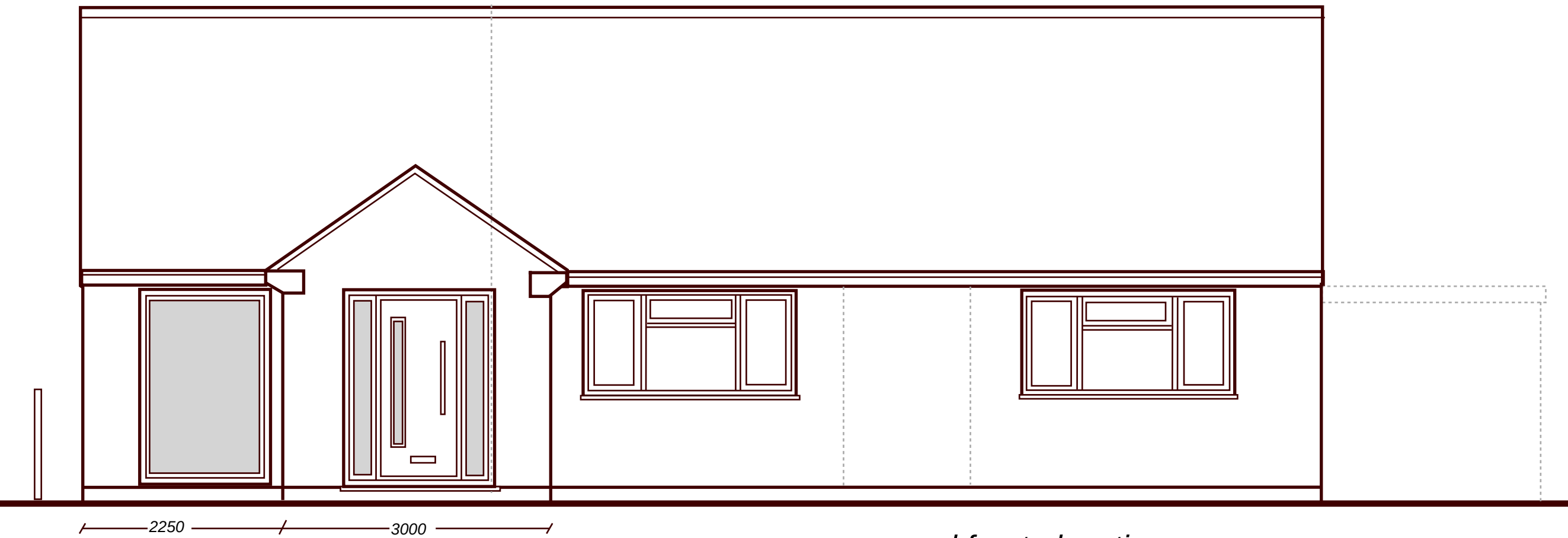


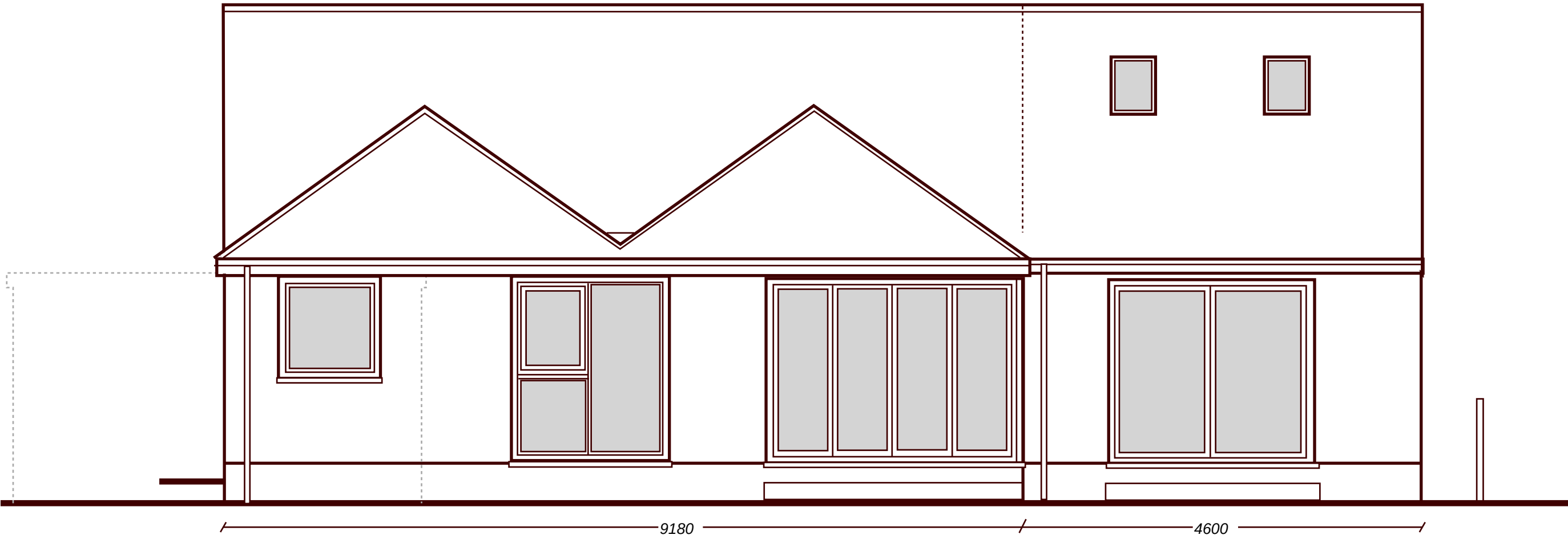
***Important Note:**
This drawing has been prepared for submission to the Inspecting Authorities for necessary Statutory Approvals. Nominated contractor to verify all dimensions either written or scaled together with drainage lines and inverts etc. prior to commencement of formal construction work on 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.



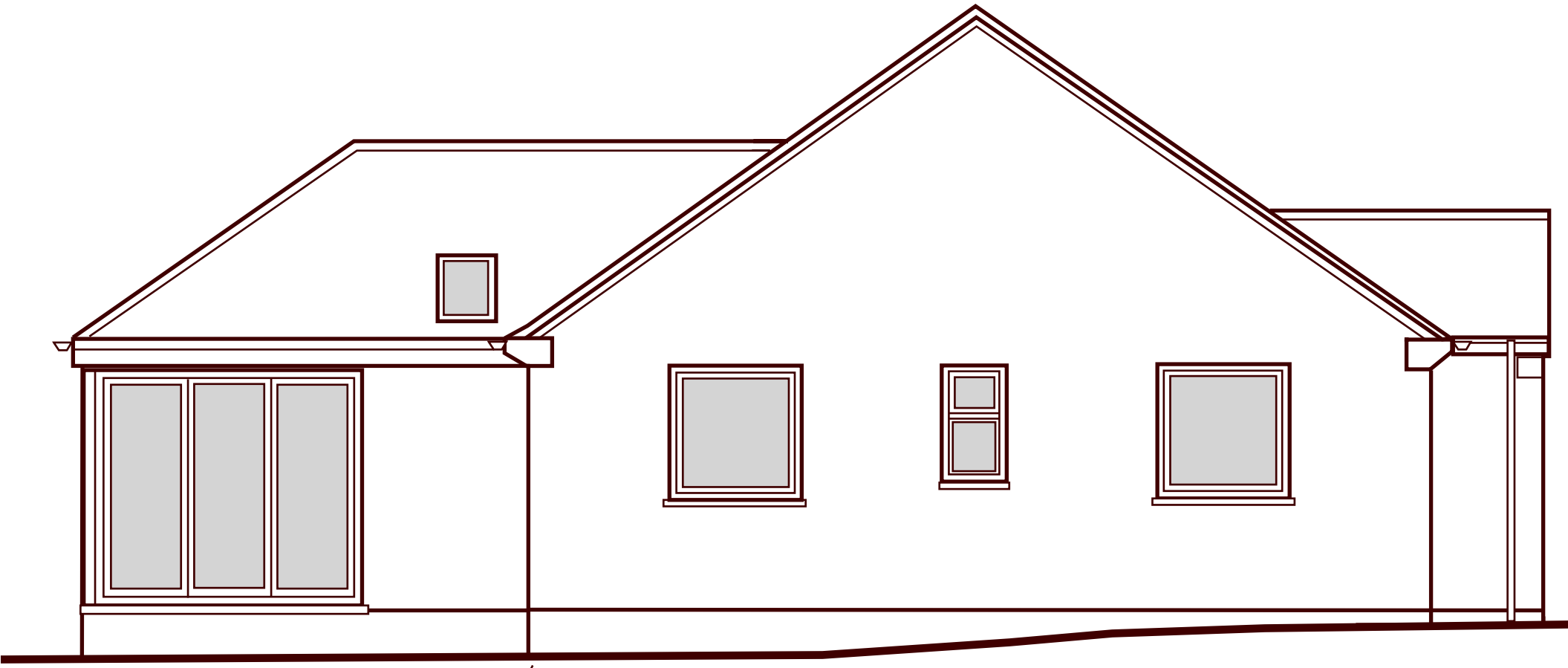
proposed floor layout plan



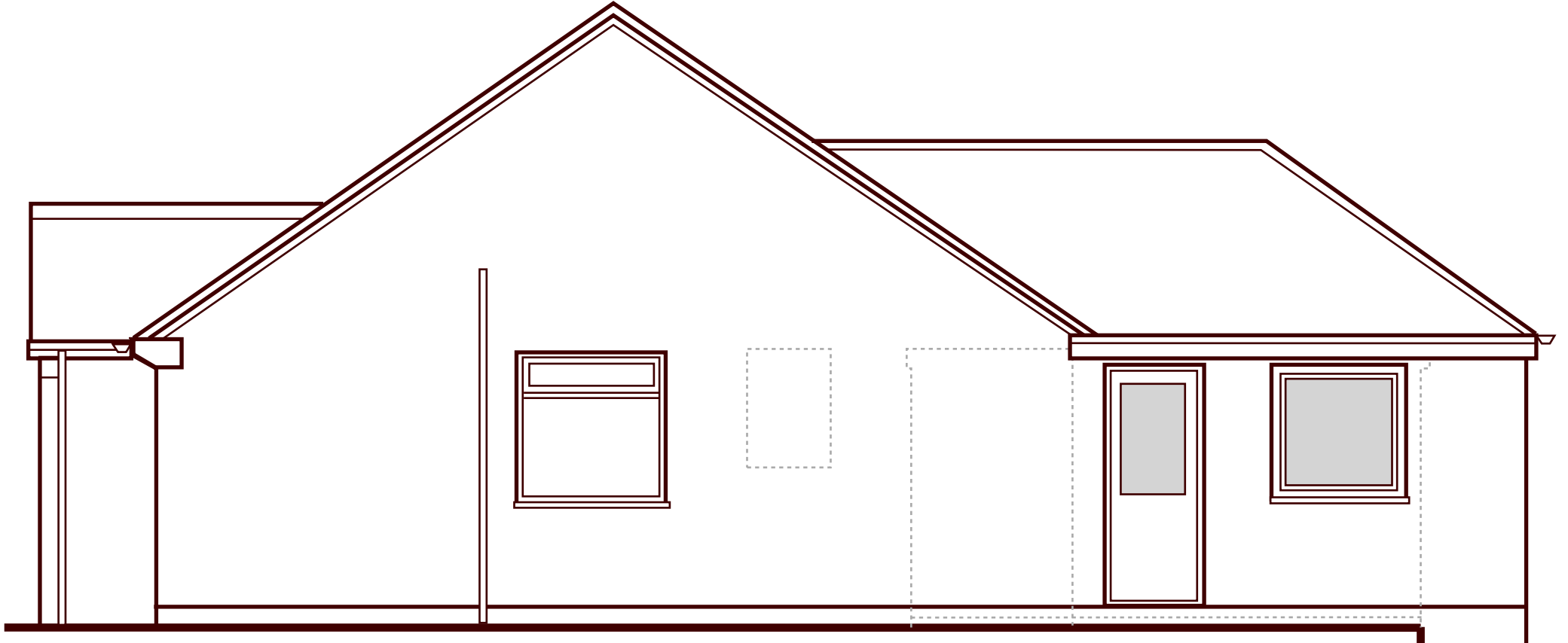
proposed front elevation



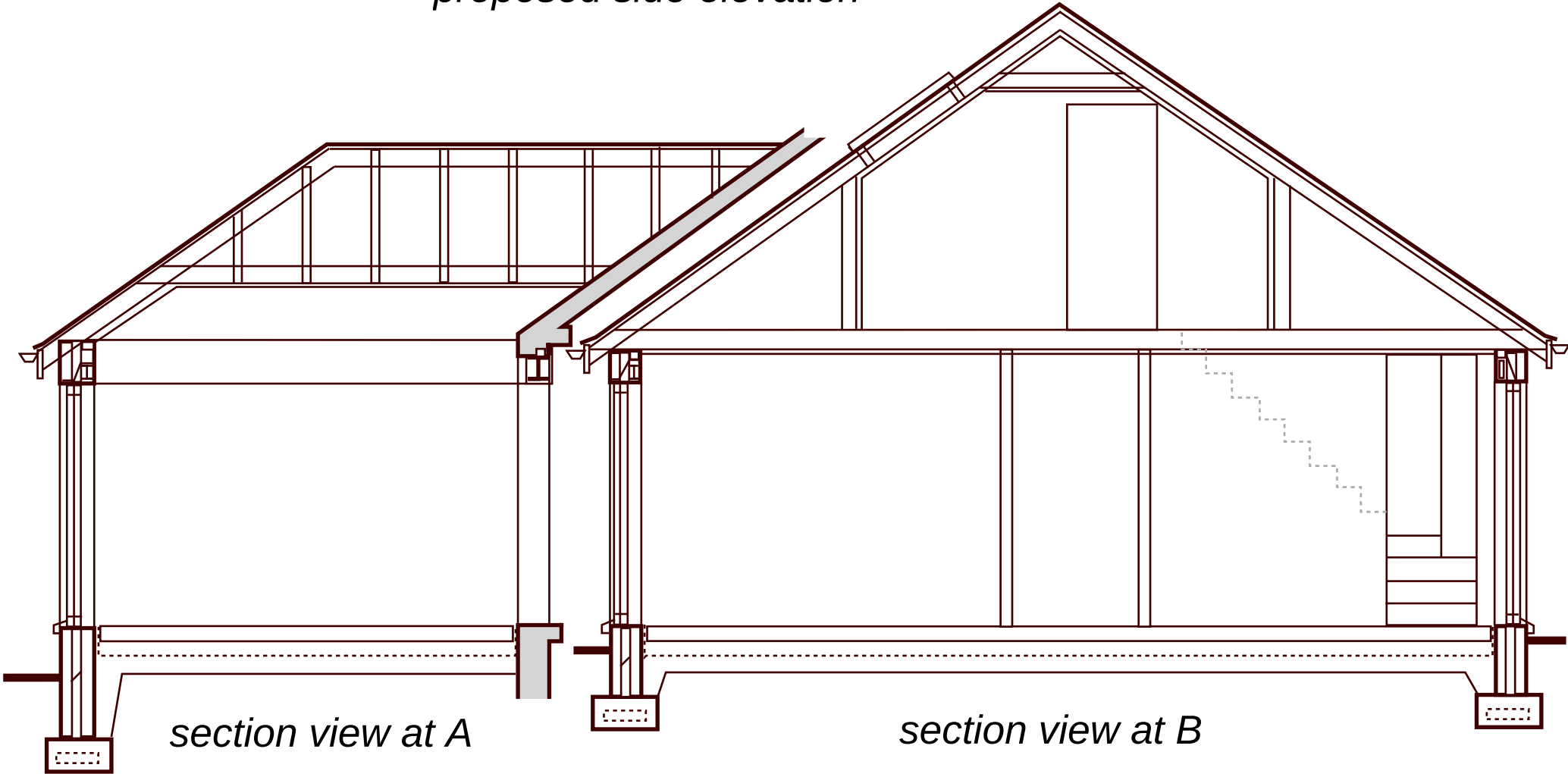
proposed rear elevation



proposed side elevation



proposed side elevation



section view at A

section view at B

***General Specification:**

***Preliminary Works:**
Examine existing drainage runs at site to assess falls and lines and verify new drainage layout.
Carefully demolish existing utility room and remove all rubble from site to an authorised and licensed tip facility.
Examine existing chimney structures to ensure that demolition will not compromise existing roof support etc.
Check existing foundations to assess ground bearing conditions etc. and assess soil type to verify new foundation type.

***Walls (External):**
Selected waterproofed render finish to match existing on 100mm load bearing concrete block (engineering quality brick work up to dpc), min 100mm cavity enclosing Diftren 32 insulation fill to manufacturer specification and internal leaf of approved 100mm load bearing thermal block work faced internally with plasterboard on treated battens or cement dabs. This or similar construction to achieve max 0.28 whm2 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 100mm cavity width and compliant with DD-140 set at 5 per m2 and at each block course at opening joints.
Install Thermabate or similar insulated cavity closures at all opening joints.

***Side Extension Roof:**
Concrete single lap profiled tiles to match existing fixed in place in accord with manufacturer specification and BSS534 on treated battens on approved breathable membrane over prefabricated attic type trussed rafter units by specialist design and supply compliant with BSS268 secured with purpose made steel clips to continuous 100x5mm sw wall plate anchored to supporting walls by approved galvanised m5 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 BSS268.
Horizontal Ceilings to have 160mm acoustic rock wool between joists and under drawn with fireline plasterboard to achieve 30 mins fire resistance
Note: This or similar construction to achieve max 0.16 whm2k U-Value.

***Rear Extension Roof:**
To match side roof specification using raised ceiling tie prefabricated trussed rafter units by specialist design.
*Form valley gutter between twin roof structures and at intersection with existing roof viz: Code 5 lead dressed over 18mm external grade ply laid to falls 1:50 over sw cradles between rafters. Ensure lead work is carried min 450mm behind adj. lies on ply base.

***Pitched Roof Insulation:**
Pitched ceilings to have Celotex XR4000 (120mm) or similar approved insulation board between rafters ensuring min 25mm air gap behind roof membrane and under-draw with Celotex PL 4050 insulation backed plasterboard (50mm+12.5mm plasterboard)incorporating vapour check membrane all to manufacturer specification - insulate to full length of rafters.
Note: This or similar construction to achieve max 0.16 whm2k U-Value.
Horizontal Ceilings over porch to have 100mm rock wool between joists and a further 200mm thickness laid across joists.
Note: This or similar construction to achieve max 0.16 whm2k U-Value.

***Lintels:**
Install Cantic or similar combined steel lintels over new openings with minimum 150mm end bearings to manufacturer spec. Carefully form new access doorway to extension as indicated and install precast concrete lintels over to manufacturer spec. Make good to all disturbed surfaces.

***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 A133 steel mesh on 1200g dpm over Celotex GA 4000 (70mm) 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.
Note - allow for underfloor heating to floor slab if required by client.
*U-Value max 0.22 whm2k

***Foundation Detail:**
Subject to prior exposure of existing house foundation lay 600x300mm 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 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 Inspecting Authority Surveyor 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 including replacement inspection chamber at rear to connect to existing system on site and new serving original bathroom shown.
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 or alternatively taken to approved garden soak away chamber sited clear of buildings and boundaries to satisfaction of the Inspecting Authority Surveyor including a preliminary ground assessment with a percolation test to assess ground strata.
New shower room wastes to discharge to 100mm stub stack fitted with Durgal or similar air admittance valve positioned above roof level of fittings to manufacturer specifications. Shower waste to discharge to 100mm accessible running trap with branch to new drain from vic.
Internal waste plumbing to satisfy BS5572 with 75mm deep seal traps as required and installed throughout to full satisfaction of inspecting authority surveyor.

***Fenestration:**
Install high performance double glazed aluminium or upvc window units to match existing style using Pilkington Low E 'K' glass and min 25mm cavity - max 1.60 whm2 k U-Value. Sliding bi fold units at rear by specialist supplier - see structural design sheets for support beam over etc.
Opening casements to represent minimum 5% of adjacent floor as natural vent plus min 1000mm2 trickle ventilators to head of frame.
*Install high performance velux type roof light over new lounge area to client requirements and to manufacturer spec. with double trimmer rafters etc. as required. (U-Value 1.2 whm2k).
*Escape Window: Where required provide opening casements to habitable rooms capable of safe egress in emergency (i.e. min 0.30m2 clear opening (sep 800x400mm) set within 1100mm of internal floor level).

***Stairs:**
Construct new purpose made sw flight as shown viz: equal risers (app 210mm) plus equal treads to achieve max. 42 degrees pitch.
*Note ensure equal going at centre line of tapered treads with min 50mm going at newel. No openings in flight or guarding to exceed 100mm diameter, handrail set at 900mm to pitch line. Ensure continuous 2000mm headroom throughout flight (min 1900mm to upper landing if restricted by ceiling etc.).

***Ventilation:**
Natural ventilation from opening casements plus install mechanical extract fan to new shower room set to achieve min 15 litres/sec extract rate.
Also install mechanical extract fan to kitchen area set to achieve min 60 litres/sec extract rate (30 litres/sec if over cooker hood) and provide mech vent to utility (30 litres/sec)

***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:**
Check roof support arrangement to ensure assumed loadings in steel work calculations to Beams A and B are verified.
*Install steel beams 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 - 1no 203 x 133 x 25 UB (bolted angle cleat connection to Beam B)
Beam B - 1no 203x102 x 23 UB
Beam C - 1no 203 x 203 x 71 UC (bolted angle cleat connection to Beam A)
Beam D - 1no 152 x 89 x 16 UB (+260x6mm steel plate welded to bottom flange)
Column E - 60 x 60 x 5 HF SHS S355 (8.40kg/m)
Beam F - 1no 152 x 89 x 16 UB (+260x6mm steel plate welded to bottom flange)
Beam G - 1no 152 x 89 x 16 UB (+260x6mm steel plate welded to bottom flange)
Beam H - 1no 203x102 x 23 UB
Beam J - 1no 152 x 89 x 16 UB

*Note Contractor to assess bearing capacity of existing retained masonry to receive ends of new Beams and if necessary rebuild in bonded 70mm2 engineering quality concrete block to required bearing capacity beneath spreader pad stones to full satisfaction of inspecting authority.

*Note - install cantic or similar combined steel lintels over new windows elsewhere.

Proposed Extension and Alterations at:
Common Winds, Caverswall Common Lane, Caverswall ST11 9EY

Scale 1-50 (A1) - proposed layout Dwg ref CW2c July 2021

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