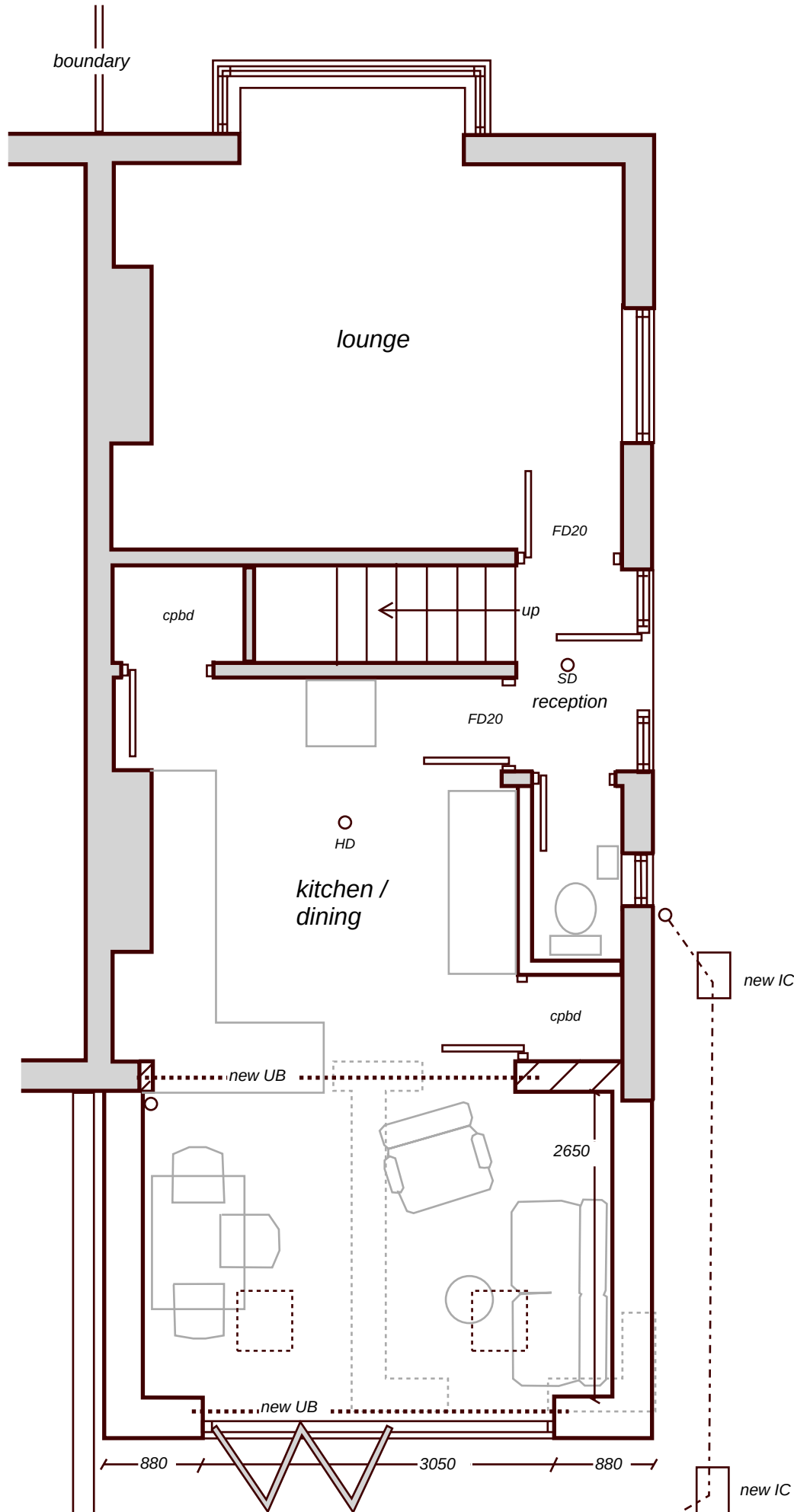
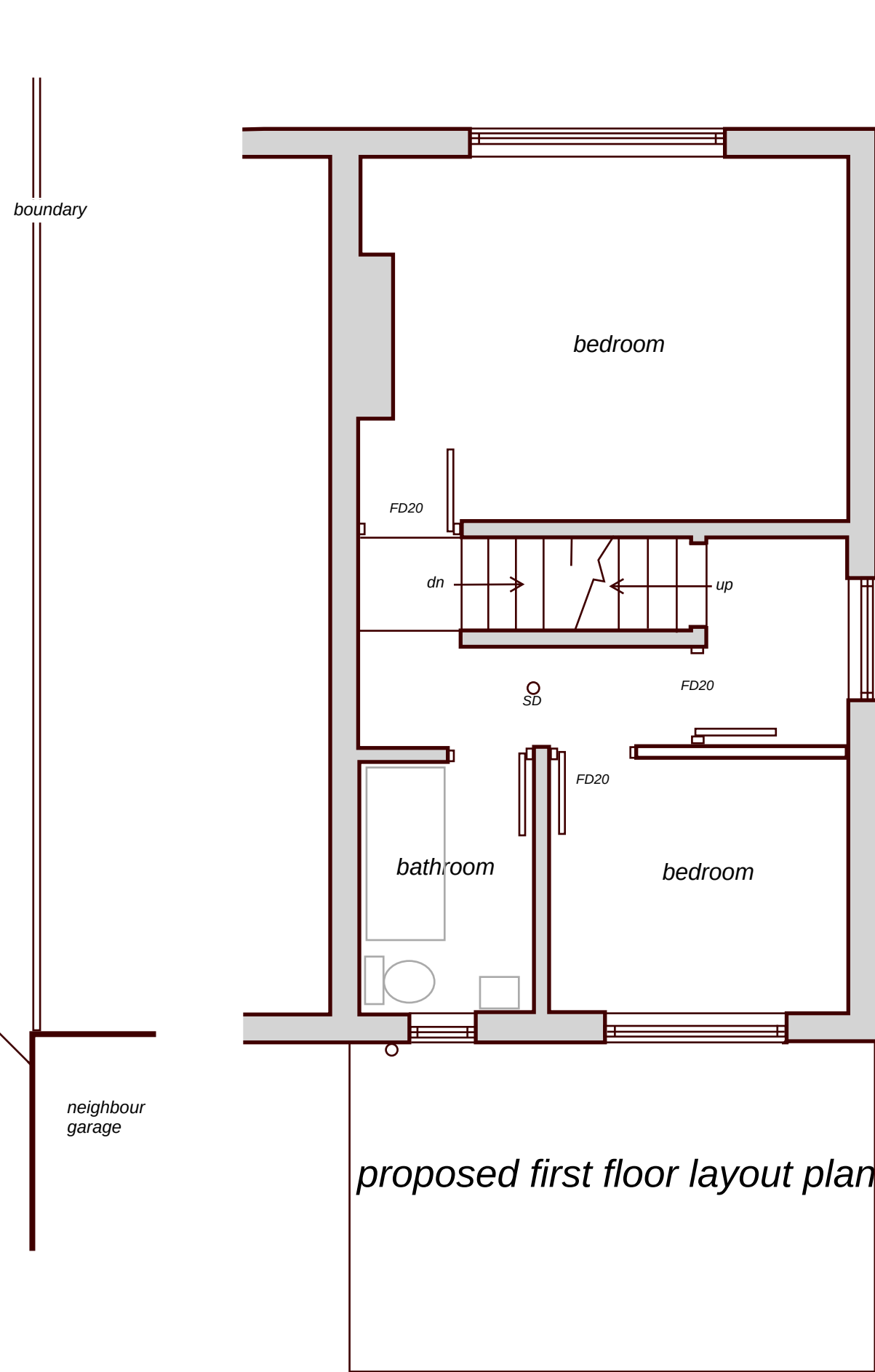
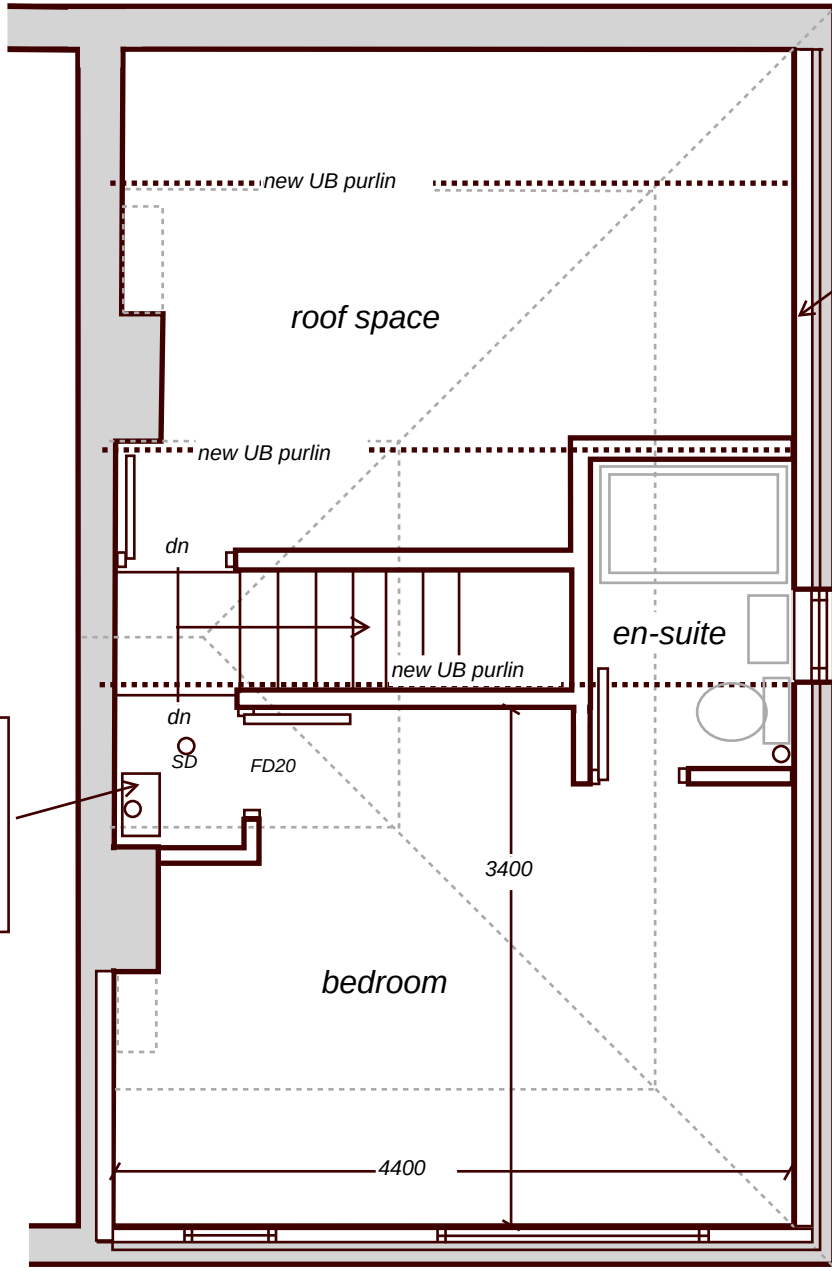




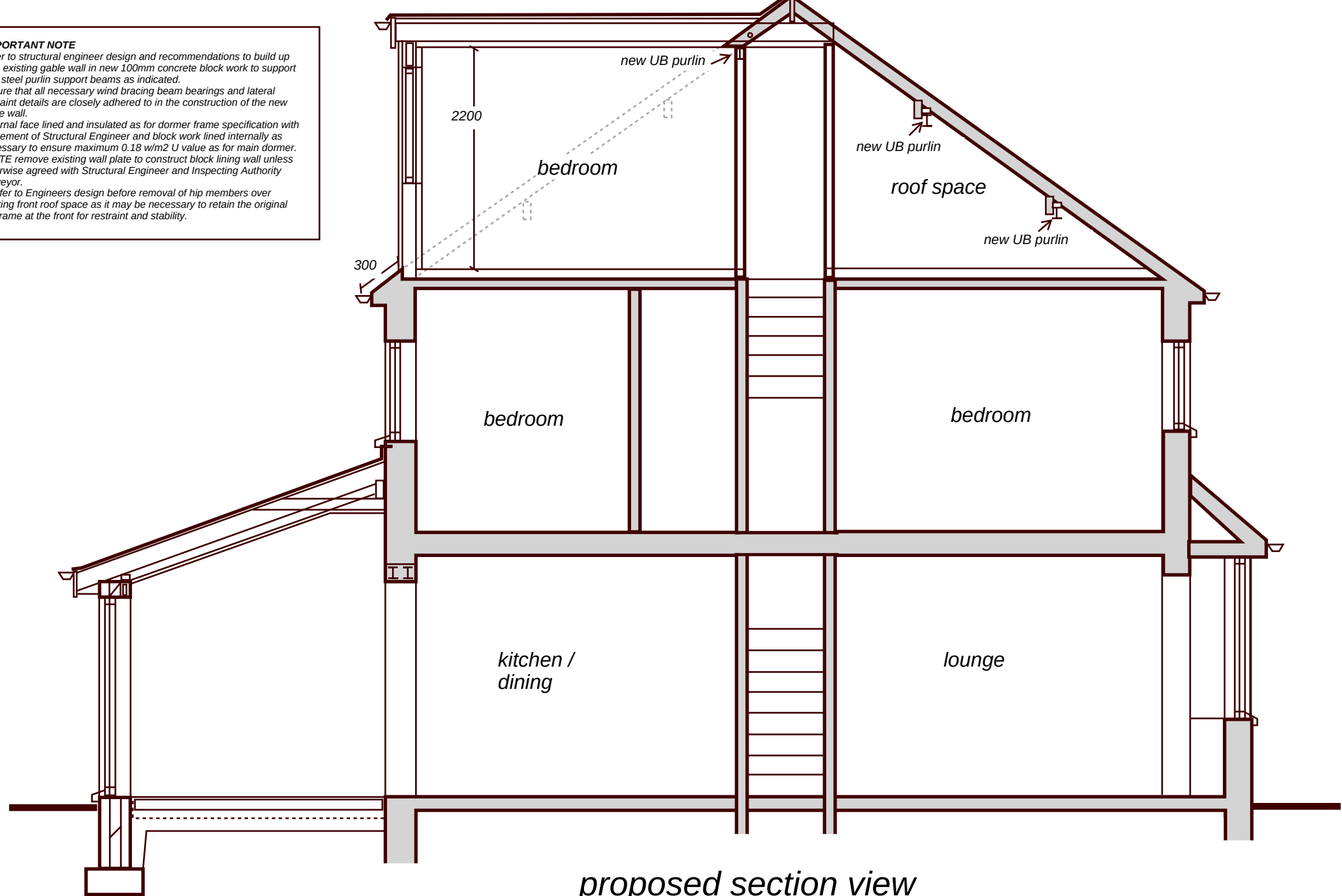
proposed ground floor layout plan



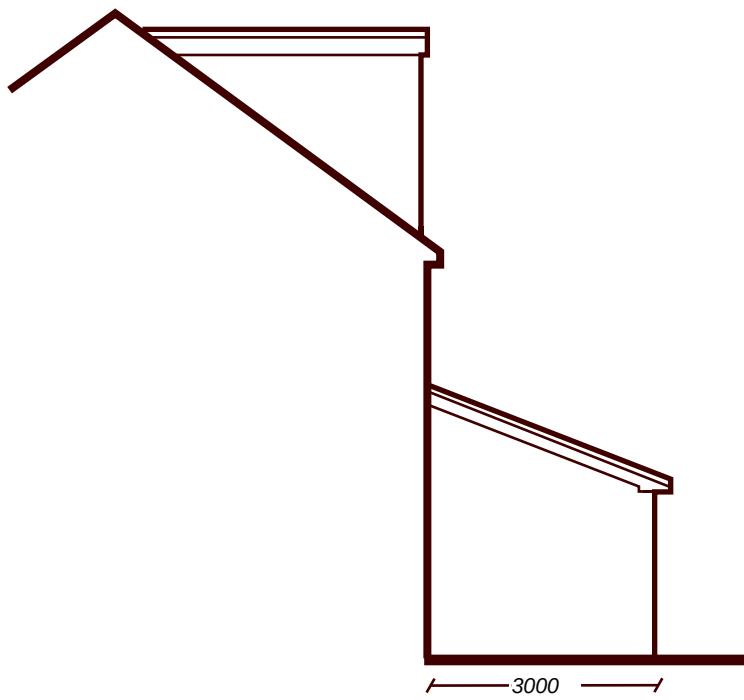
proposed first floor layout plan



proposed roof layout



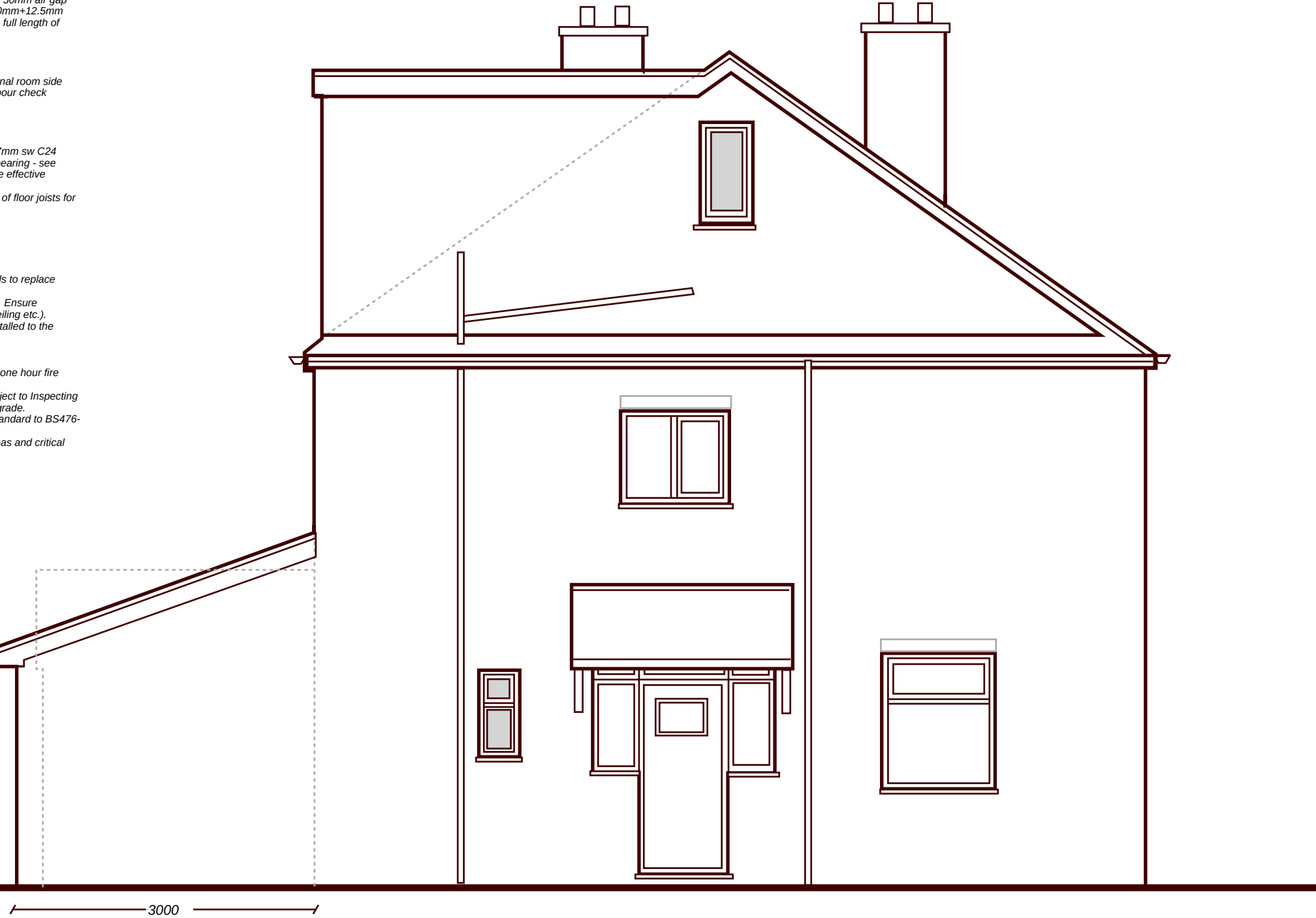
proposed section view



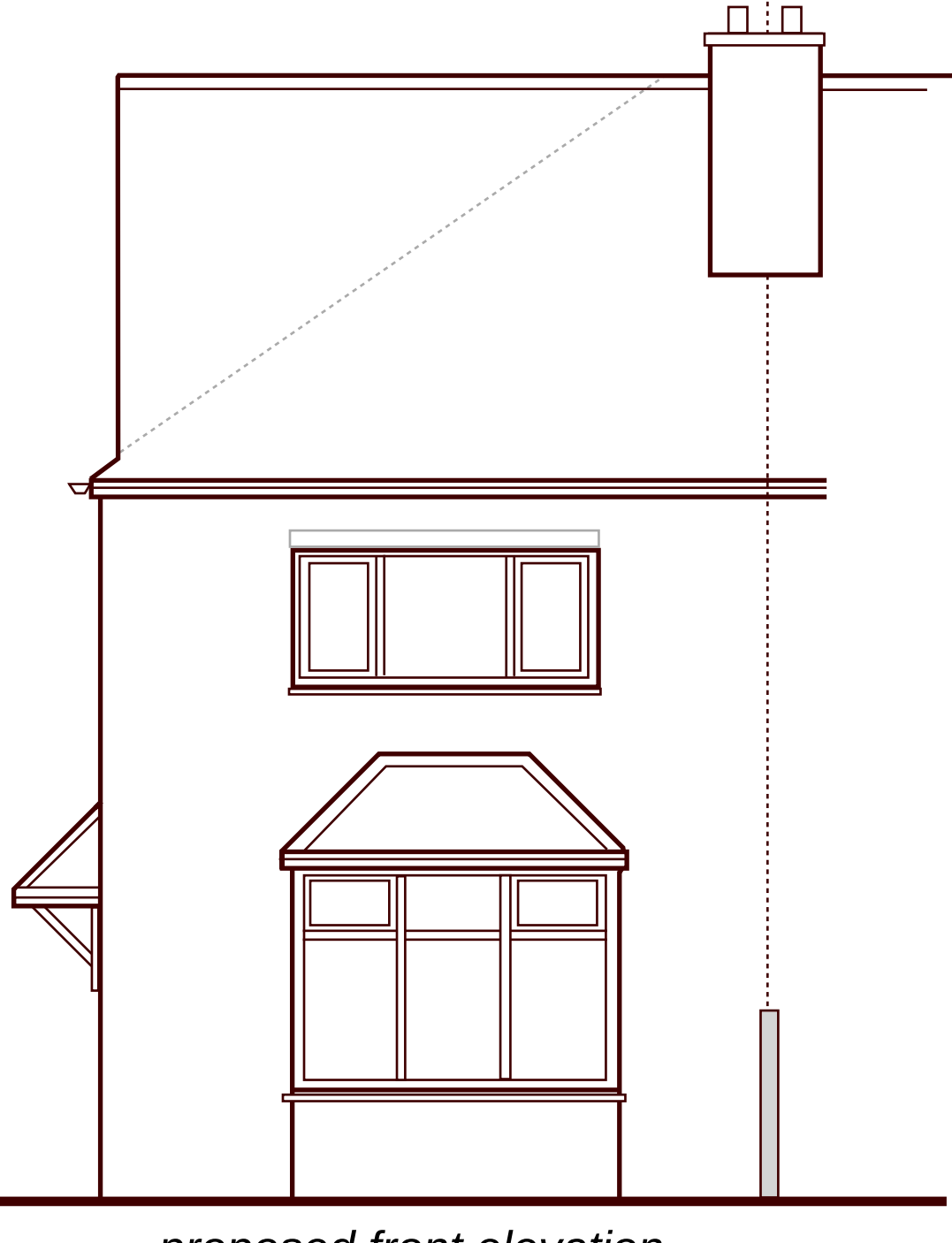
proposed side elevation to rear
1:100



proposed rear elevation



proposed side elevation to drive



proposed front elevation

***IMPORTANT NOTE**
Refer to qualified GasSafe registered engineer for recommendations to retain existing gas boiler in upper landing position together with the agreement of the Inspecting Authority Surveyor. Ensure that external flue discharge remains compliant with manufacturer standards and Part J current Building Regulations.

***IMPORTANT NOTE**
Refer to structural engineer design and recommendations to build up from existing gable wall in new 100mm concrete block work to support new steel purlin support beams as indicated. Ensure that all necessary wind bracing beam bearings and lateral restraint details are closely adhered to in the construction of the new gable wall.
External face lined and insulated as for dormer frame specification with agreement of Structural Engineer and block work lined internally as necessary to ensure maximum U8 whn U value as for main dormer.
NOTE remove existing wall plate to construct block lining wall unless otherwise agreed with Structural Engineer and Inspecting Authority Surveyor.
Refer to Engineers design before removal of hip members over existing front roof space as it may be necessary to retain the original hip frame at the front for restraint and stability.

***General Specification - Roof Conversion:**
***Preliminary Works:**
Carefully assess existing roof conversion to verify elements of structure can be adequately retained as part of structural upgrade and strengthening. As necessary refer to new steel beam specifications to support enlarged first floor footprints and replace existing purlins and top members at rear to accommodate dormer rooms.
Plan construction programme to ensure minimum disturbance and exposure to living space - verify position and loading of existing roof purlins and prop supporting structure as necessary prior to removal or structural change. Remove all rubble from site to approved fly facility. Assess existing first floor walls below as load bearing as assumed to support new floor etc.

***New Dormer Frame:**
See separate notes for building up gable wall from wall plate in load bearing block to support new steel purlins etc.
Strip back existing tiles and battens etc and prop roof to form new dormer frames at rear with new double rafters under dormer sides off end gable walls bolted together at 600mm max centres. Face dormer frame with selected 18c hanging or v joint pvc cladding to match existing roof colour on treated 25mm sw battens on to breasable membrane over 18mm external ply cladding to 1000x50mm sw stud frame (cuts at max 400mm centres) enclosing Celotex GA 4000 (100mm) or similar approved insulation board to manufacturer specification and internal lining of 18mm plywood to receive Celotex PL4000 (62.5mm) insulation board incorporating 12.5mm plasterboard laminate and vapour control layer (ensure vapour sealant at all joints and edges as required). Install 150x75mm bearer over dormer window frame. *This or similar construction to achieve min 0.18 whn2k U-Value. Ensure that new frame is fully tied to new flat roof with approved galv. ms straps at 1000mm centres around full perimeter.

***New Dormer Flat Roof:**
Cold deck with approved AA rated single ply membrane by specialist contractor on min 18mm ext ply deck laid over counter battens to ensure cross ventilation and lining strips laid to fall 1:60 across 170x47mm sw C24 joists at 400mm max centres with Celotex 100mm GA4000 between joists and 77.5mm PL4000 under drawing as ciling.
Ensure all insulation joints are tight with vapour sealant to manufacturer spec.
Ensure flat roof membrane carries above lies on ply deck minimum 40mm to maintain waterproofed break to complete satisfaction of inspecting authority. install Code 4 lead cover flash and soakers at side abutment with house roof.
*This or similar construction to achieve max 0.15 whn2k U-Value
*Note install built up fascia shown in pvc cladding.
Ensure that new frame is fully tied to new flat roof with approved galv. ms straps at 1000mm centres around full perimeter.

***Insulation to Roof Space:**
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 whn2k U-Value.
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 - insulate to full length of rafters.
Note: This or similar construction to achieve max 0.15 whn2k U-Value.

***Insulation in Timber Partitions (Roofspace)**
Install Celotex GA4000 (100mm) or similar approved insulation board between studs plus additional room side lining of Celotex PL4000 (77.5mm) insulation with laminated 12.5mm plasterboard finish with vapour check membrane.
*This or similar construction to achieve max 0.15 whn2k U-Value.

***Floor**
Examine existing ceiling members throughout and assess as fit for purpose to install new 170x47mm sw C24 grade joists at max 450mm centres with supported off existing walls at first floor (assumed load bearing - see preliminary work check). Examine any retained original ceiling joists either existing floor to ensure effective support throughout.
Lay 200mm Rockboard Flex between joists to achieve maximum 0.18whn2k. *Note any notching of floor joists for services to be minimal and compliant with BS5268 part 2-1991.

***Drainage:**
PVC rainwater goods discharging on to existing roof and eaves gutter and to system on site

***Stairs**
Strip out existing stairs up to roof space and construct new purpose made sw flight between levels to replace existing as shown viz: equal rises plus equal treads to achieve a maximum 42 degree pitch.
No openings in flight or guarding to exceed 100mm diameter. handrail set at 900mm to pitch line. Ensure continuous 200mm headroom throughout flight (min 1900mm in upper landing if retained by ceiling etc.)
The new stair should comply with requirements of current Part K Building Regulations and be installed to the satisfaction of the Inspecting Authority Surveyor.

***Fire Protection Measures:**
Ensure all areas of the roof space party wall are thoroughly checked for fire stopping to maintain one hour fire break.
Examine existing ceilings at first floor and minimum 30 minutes fire protection subject to inspecting Authority assessment. If necessary under draw existing ceilings with 12.5mm plasterboard to upgrade.
*All doors of stair well and ground floor reception to habitable rooms to be FD20 fire resistant standard to BS476-12 fitted with intumescent strips rebated around top and sides.
*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 local authority surveyor.
*All wall finishes to stairwell and entrance hall to achieve 30 minutes fire resistance standard.

***FIRE PROTECTION KEY -**
Smoke Detector - O Heat Detector - O Fire Door - FD20
SD HD

***General Specification - Single Storey Extension:**
***Preliminary Works:**
Examine existing drainage runs at site to assess falls and lines and verify new drainage layout.
Strip back existing single storey rear addition and prepare for demolition. Remove all rubble from site to an authorized and licensed tip facility.
Check existing foundations to assess ground bearing conditions etc. and assess soil type to verify new foundation type.
Existing boundary hedgerow to be removed around footprint of extension (subject to neighbour owner agreement if necessary) to the full satisfaction of the Inspecting Authority Surveyor

***Walls (External):**
Saturated faced brick to match existing min 100mm cavity enclosing Drifthem 32 insulation fill to manufacturer specification and internal leaf of approved 100mm load bearing thermal block work (maximum 0.15whn2k U-Value) faced internally with 62.5mm PRP plasterboard finish (down 18x12.5mm plasterboard) on retained battens or cement dabs. This or similar construction to achieve max 0.18whn2k U-Value
Install Thermablock or similar insulated cavity courses at all opening joints.
*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 with and compliant with DD140. set at 5 per m2 and at each block course at joints.

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

***Single Storey Extension Roof:**
Selected concrete single lap tiles to match existing and suitable for pitch (approx 22.5 degrees) fixed in place in accord with manufacturer specification and BS5534 on treated 25mm (deep) battens on approved breathable membrane over 170x47mm sw C16 rafters at 450mm centres birds-mounted and screwed through buss type steel clips to continuous 100x75mm sw wall plate anchored to supporting wall by galvanneal ms straps at max 1000mm centres.
Head of rafters screwed to 170x63mm sw pole plate rawl bolted to wall at maximum 600mm centres.
*Provide rafter ceiling ties hung from pole plate with 100x47mm sw C24 joists with M16 bolt and dog loop washer connections to each rafter.

*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 - insulate to full length of rafters.
Note: This or similar construction to achieve max 0.15 whn2k U-Value.
*Ensure that where the roof abuts 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 first floor extension wall.

***Linteis:**
Install Cantic or similar combined steel lintels over new openings with minimum 150mm end bearings to manufacturer spec. Make good to all disturbed surfaces.

***New Canopy Roof at Front Entrance:**
Plan double lap tiles to match main roof on treated battens on approved breathable membrane over 125x47mm rafters and ties at 450mm centres with head of rafters notched and screwed to 150x63mm pole plate rawl-bolted to brickwork at max. 600mm centres.
100x47mm sw C16 ceiling ties at 600mm centres screwed to rafter feet and 150x75mm sw bearer supported off gablework at max. 600mm centres.
Ensure that where the roof abuts 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 first floor extension wall.

***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 landed 150mm min. compacted natural stone sub-base free hardcore.
*U-Value max 0.18whn2k

***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 bars B500 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 adjoining neighbours and any disturbance to existing structures to be made good to satisfaction of all parties.

***Drainage:**
Lay new 120mm pvc drain on granular bed at min 1:40 falls to connect to existing system on site with new access chambers at change of pipe direction.
Ensure adequate support and protection to all drains passing through walls and building footprint.
UPVC rainwater goods to match existing canted to existing system as required.
Internal waste plumbing to satisfy BS5512 with 75mm deep steel traps as required. Wastes to WC to discharge to 100mm stack pipe fitted with surge or similar air admittance valve positioned above floor level of fittings to full satisfaction of inspecting authority surveyor.
Replace existing soil and vent pipe and provide lead cold weathering at roof penetration. Encase pipe within dwelling with plasterboard frame and acoustic rockwool fill. wall.

***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 whn2k U-Value.
Opening casements to represent minimum 5% of adjacent floor as natural vent plus min 10000mm2 trickle ventilators to head of frame.
*Install high performance velux type roof light to new single storey roof (550x780mm) or to client requirements and to manufacturer spec, with double timber rafters etc. as required. (U-Value 1.2 whn2k)
*Escape Window. Where required provide opening casements to habitable rooms capable of safe egress in emergency i.e. min 0.33m2 clear opening (ay 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 EN12150.
*Note new windows to side boundary to be minimum Level 3 obscured glazing to satisfaction of Planning Authority.

***Ventilation:**
Natural ventilation from opening casements plus install mechanical extract fan to kitchen area set to achieve min 60 litres/sec extract rate (30 litres/sec if over cooker hood) and new wchshower room set to achieve min 15 litres/sec extract rate. Similarly 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 P Building Regulations. Install thermostatic control valves as necessary throughout.

***Electrical Work:**
All install 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 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.

***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 restrict 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 Principle 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 Roof Alterations + Single Storey Rear Extension
at 97, Park Lane, Knypersley ST8 7BG

Scale 1-50 (A1) - proposed layout Dwg ref PA2e April 2024

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