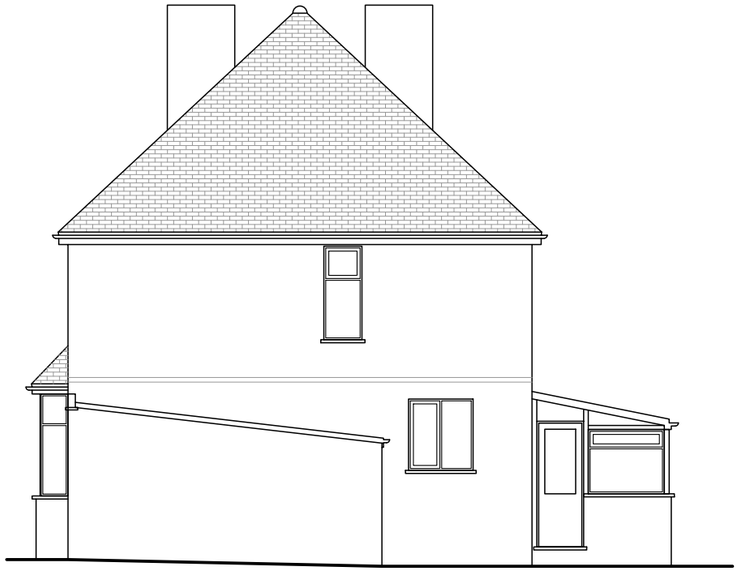
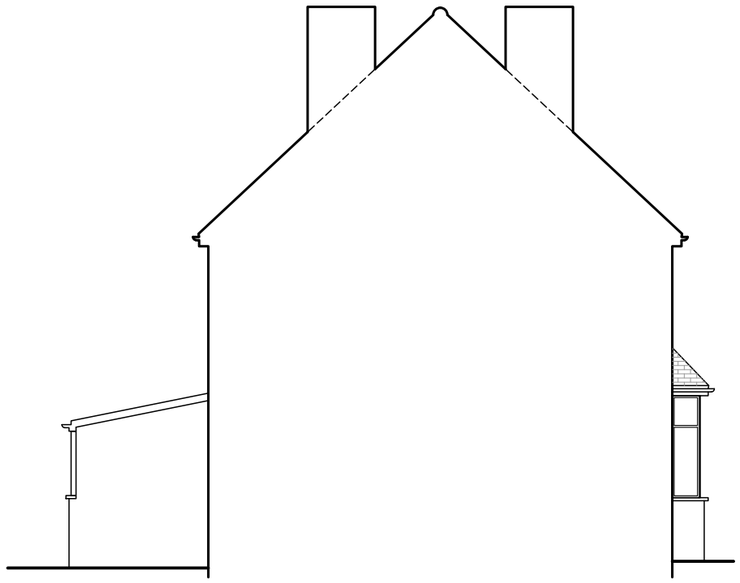
PRELIMINARY DESIGN. NOT FOR CONSTRUCTION

Existing Front Elevation
Scale 1/100@A3



Existing RHS Elevation
Scale 1/100@A3

Existing Rear Elevation
Scale 1/100@A3



Existing LHS Elevation
Scale 1/100@A3

0 1 2 3 4 5 6 7 8 9 10m 1:100
0 1 2 3 4 5m 1:50

General Notes:

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- EXISTING TIMBER WALL
- DEMOLITION
- AXIS LINE
- EXISTING FOUNDATIONS
- PROPOSED STEEL BEAMS
- PROPOSED CAVITY WALL
- PROPOSED STUD WALL
- BOUNDARY LINE
- PROPOSED FOUNDATIONS
- PROPOSED TIMBER JOISTS

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29.09.25	Client's amendments	A
23.09.25	Preliminary Drawings	Prelims

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Web site:
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Mob.: *07528 770 701*

Project 252 Hemdean Road, RG4 7QT
Ground floor single storey rear extension

Client Pirie

Title Existing Elevations

Scale 1/100 @ A3

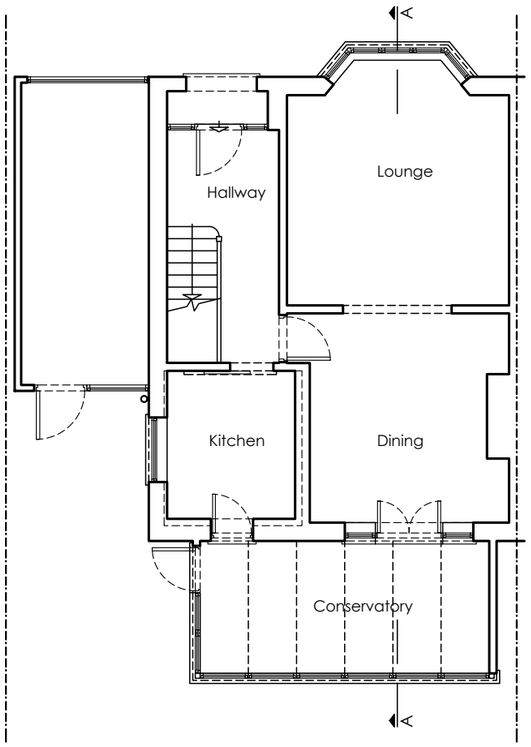
Drawn by S.K.

Checked by ASE

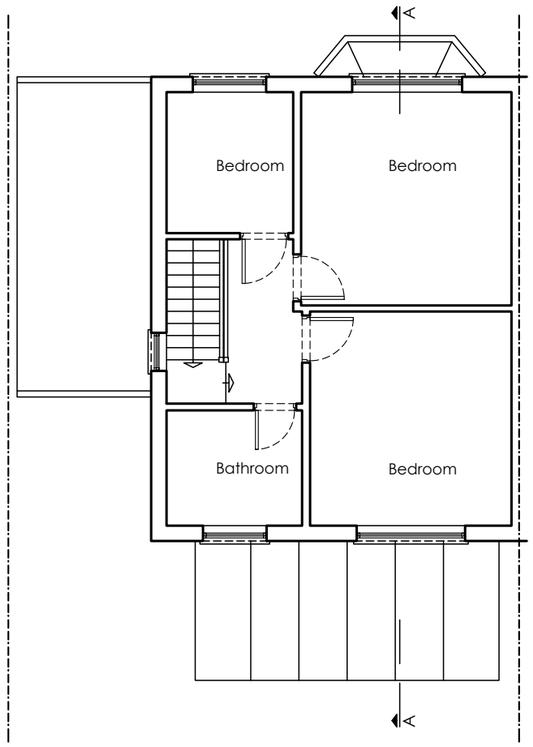
Job No.

Drawing E.01

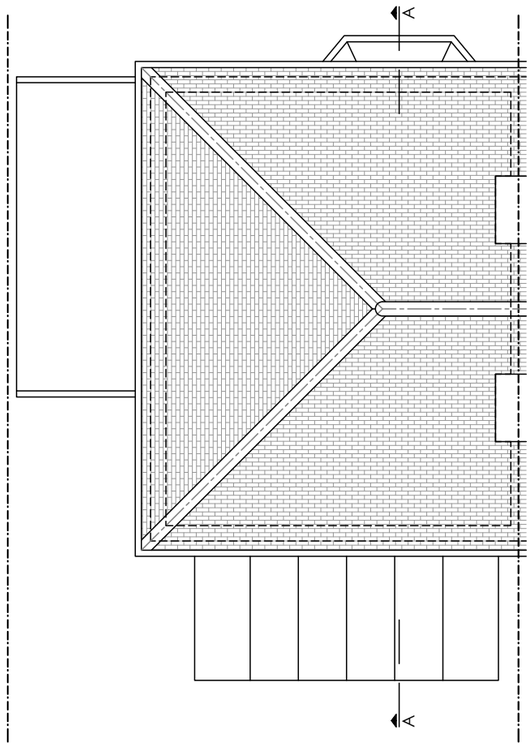
PRELIMINARY DESIGN. NOT FOR CONSTRUCTION



Existing Ground Floor Plan
Scale 1/100@A3



Existing First Floor Plan
Scale 1/100@A3



Existing Roof Plan
Scale 1/100@A3

0 1 2 3 4 5 6 7 8 9 10m 1:100
0 1 2 3 4 5m 1:50

General Notes:

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Project 252 Hemdean Road, RG4 7QT
Ground floor single storey rear extension

Client Pirie

Title Existing Floor Plans

Scale 1/100 @ A3

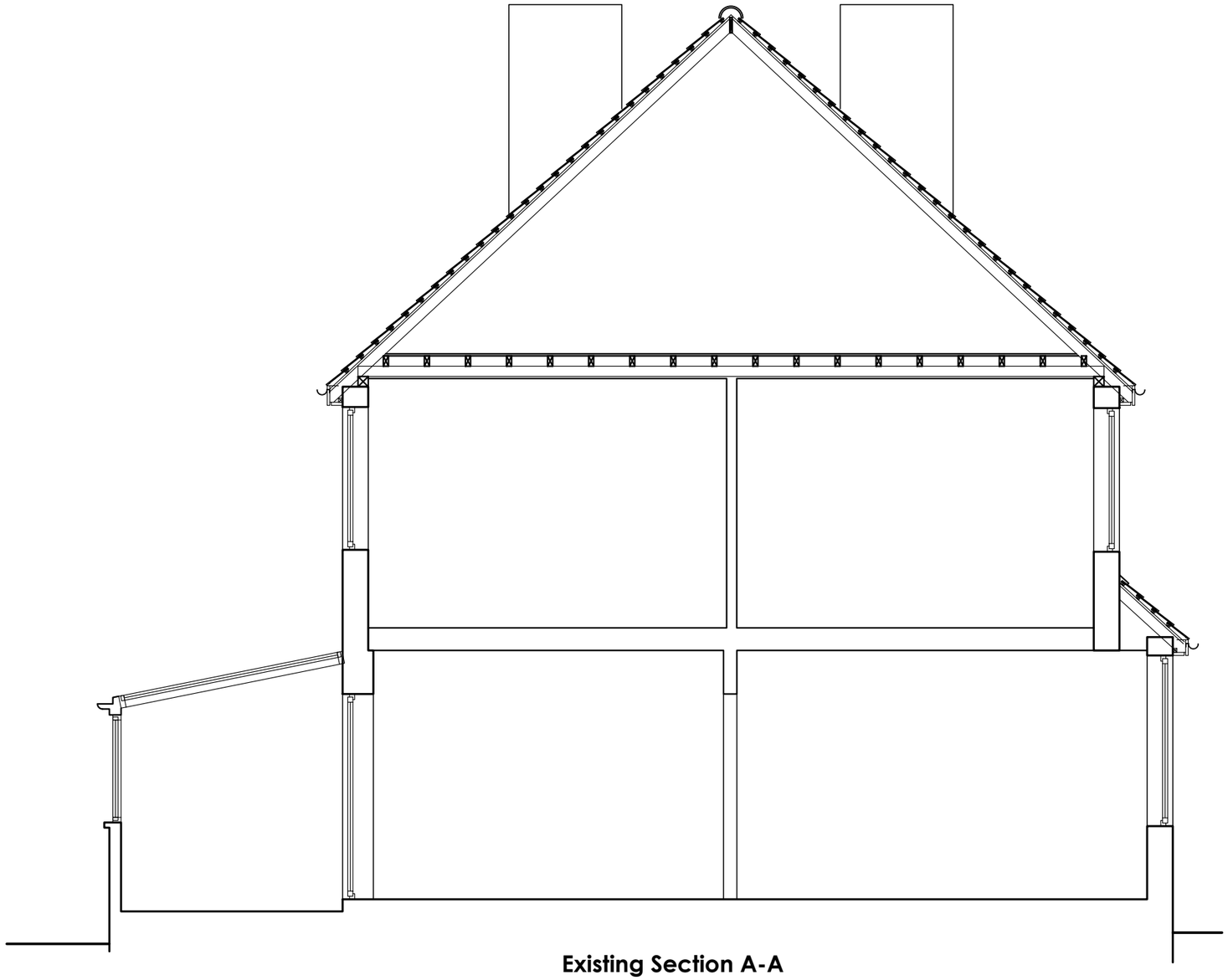
Drawing E.02

Drawn by S.K.

Checked by ASE

Job No.

PRELIMINARY DESIGN. NOT FOR CONSTRUCTION



Existing Section A-A
Scale 1/50@A3

0 1 2 3 4 5 6 7 8 9 10m 1:100
0 1 2 3 4 5m 1:50

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Ground floor single storey rear extension

Client Pirie

Title Existing Section

Scale 1/50 @ A3

Drawing E.03

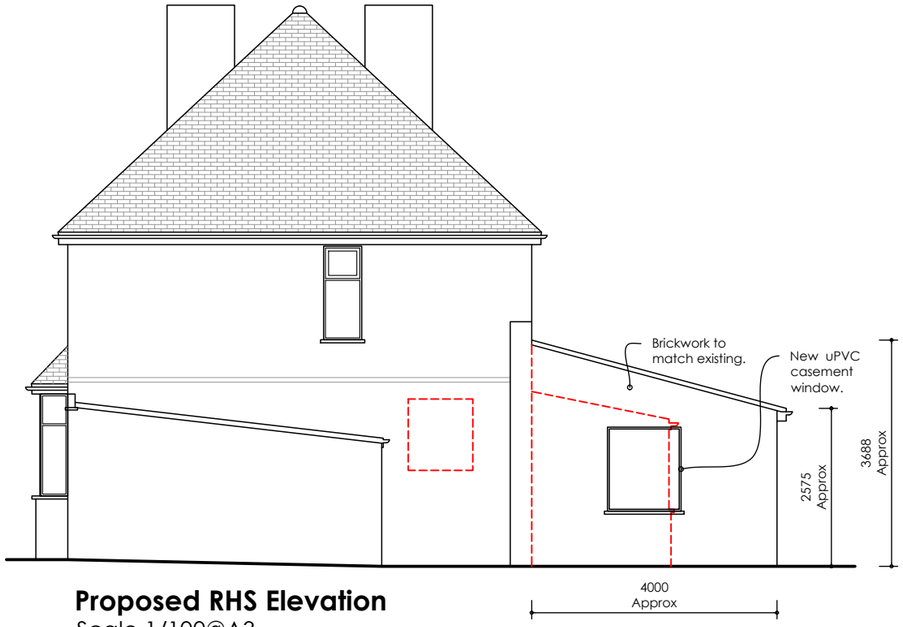
Drawn by S.K.

Checked by ASE

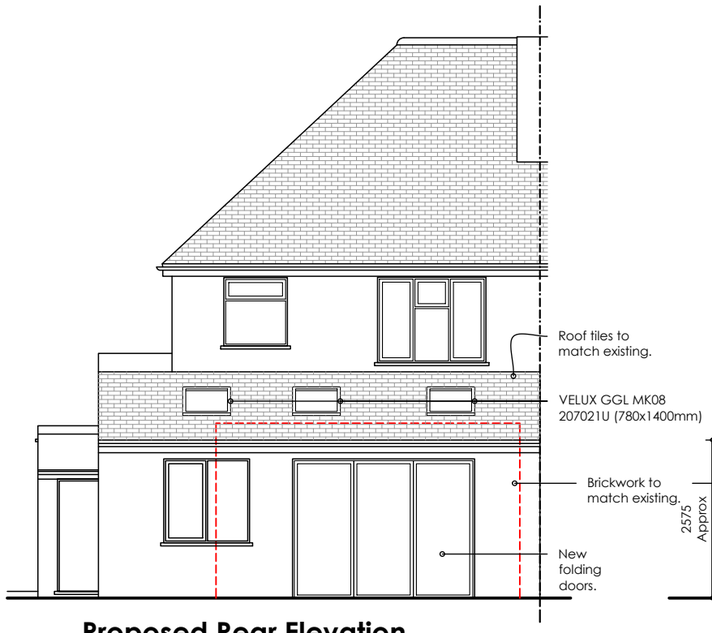
Job No.

PRELIMINARY DESIGN. NOT FOR CONSTRUCTION

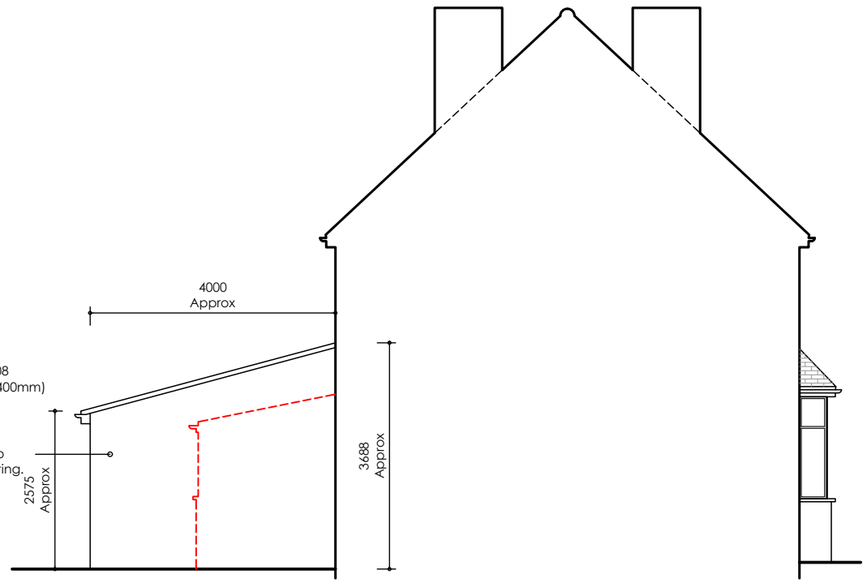
Proposed Front Elevation
Scale 1/100@A3



Proposed RHS Elevation
Scale 1/100@A3



Proposed Rear Elevation
Scale 1/100@A3



Proposed LHS Elevation
Scale 1/100@A3

0 1 2 3 4 5 6 7 8 9 10m 1:100
0 1 2 3 4 5m 1:50

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EXISTING TIMBER WALL	
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AXIS LINE	BOUNDARY LINE
EXISTING FOUNDATIONS	PROPOSED FOUNDATIONS
PROPOSED STEEL BEAMS	PROPOSED TIMBER JOISTS

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Ground floor single storey rear extension

Client Pirie

Title Proposed Elevations

Scale 1/100 @ A3

Drawn by S.K.

Checked by ASE

Job No.

Drawing P.01

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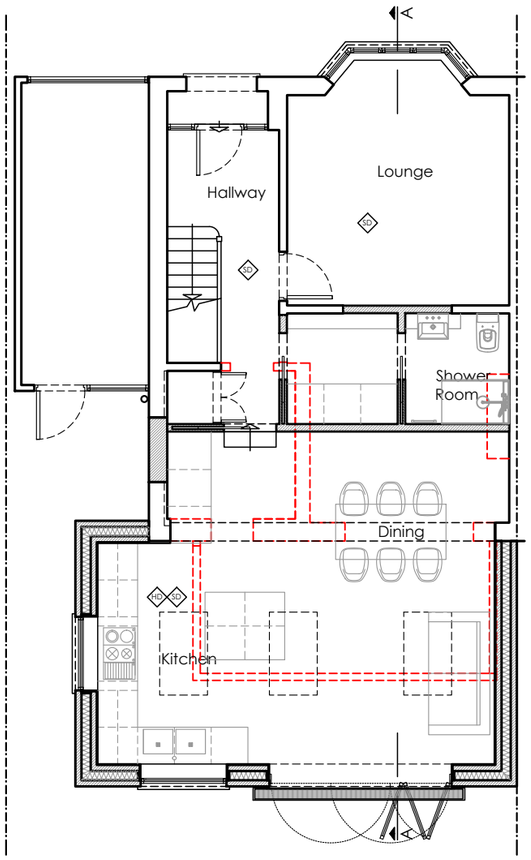
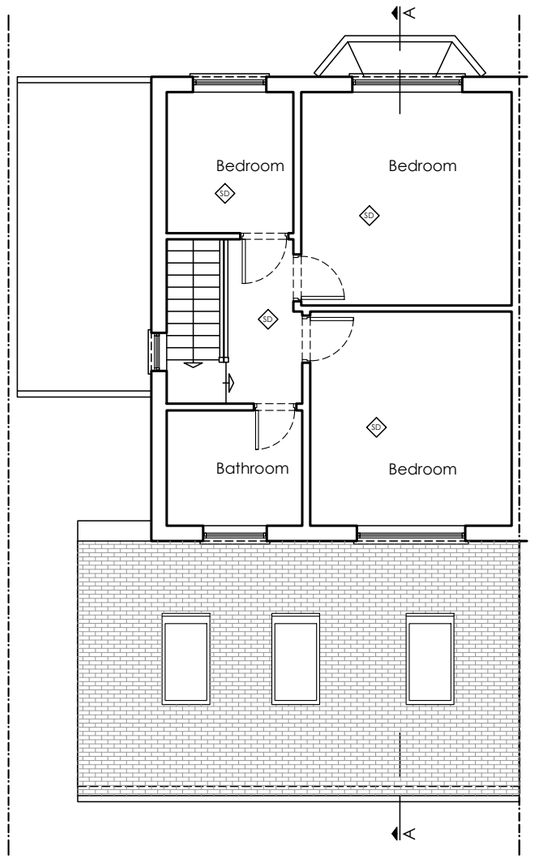
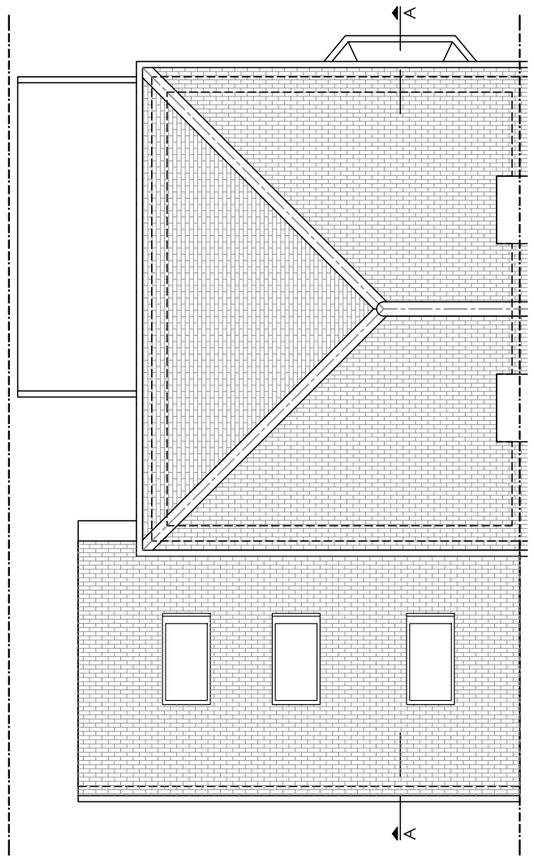


Proposed Ground Floor Plan
Scale 1/100@A3



Proposed First Floor Plan
Scale 1/100@A3



Proposed Roof Plan
Scale 1/100@A3

0 1 2 3 4 5 6 7 8 9 10m 1:100
0 1 2 3 4 5m 1:50

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Ground floor single storey rear extension

Client Pirie

Title Proposed Floor Plans

Scale 1/100 @ A3

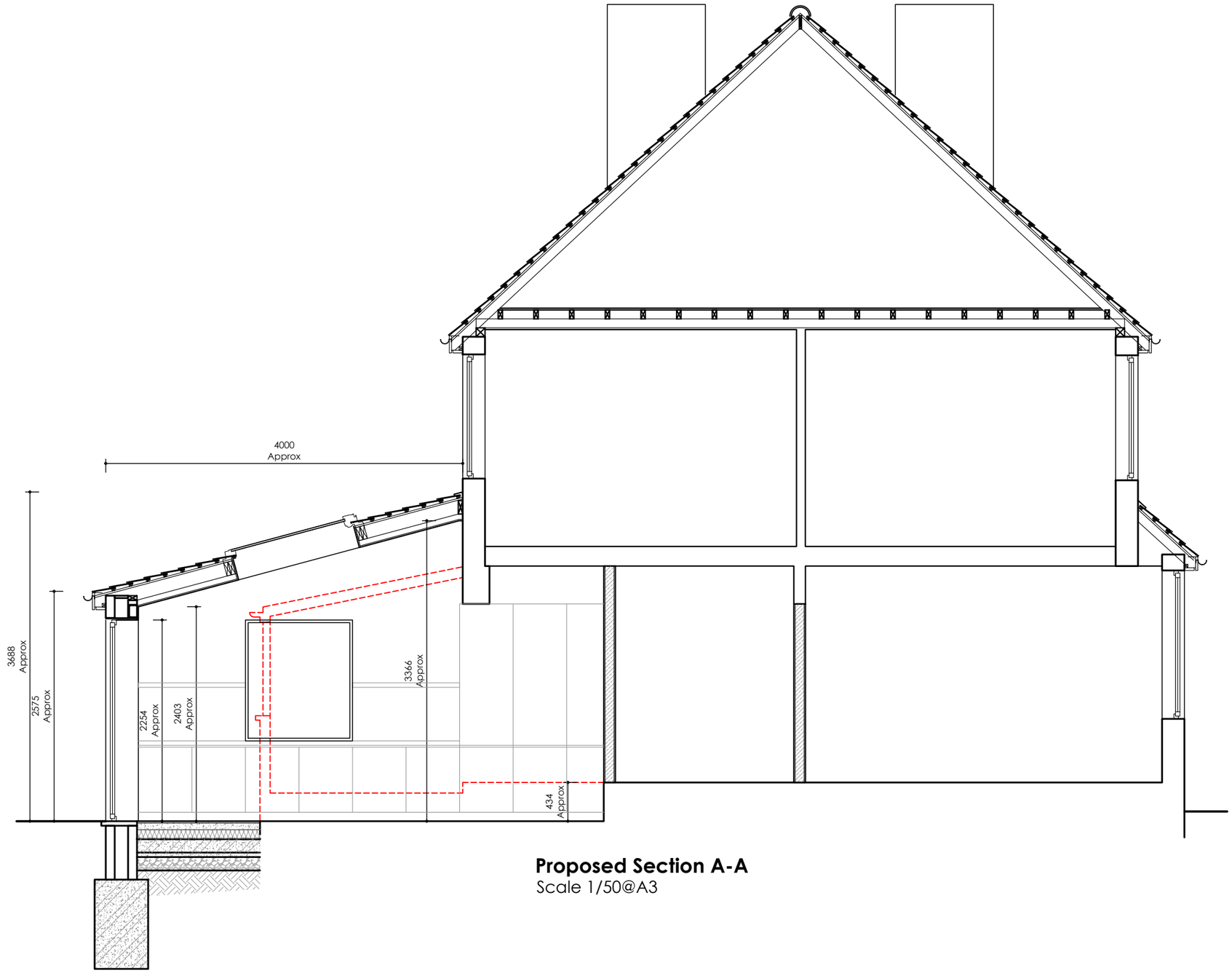
Drawing P.02

Drawn by S.K.

Checked by ASE

Job No.

PRELIMINARY DESIGN. NOT FOR CONSTRUCTION



Proposed Section A-A
Scale 1/50@A3

0 1 2 3 4 5 6 7 8 9 10m 1:100
0 1 2 3 4 5m 1:50

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Client Pirie

Title Proposed Section

Scale 1/50 @ A3

Drawn by S.K.

Checked by ASE

Job No.

Drawing P.03

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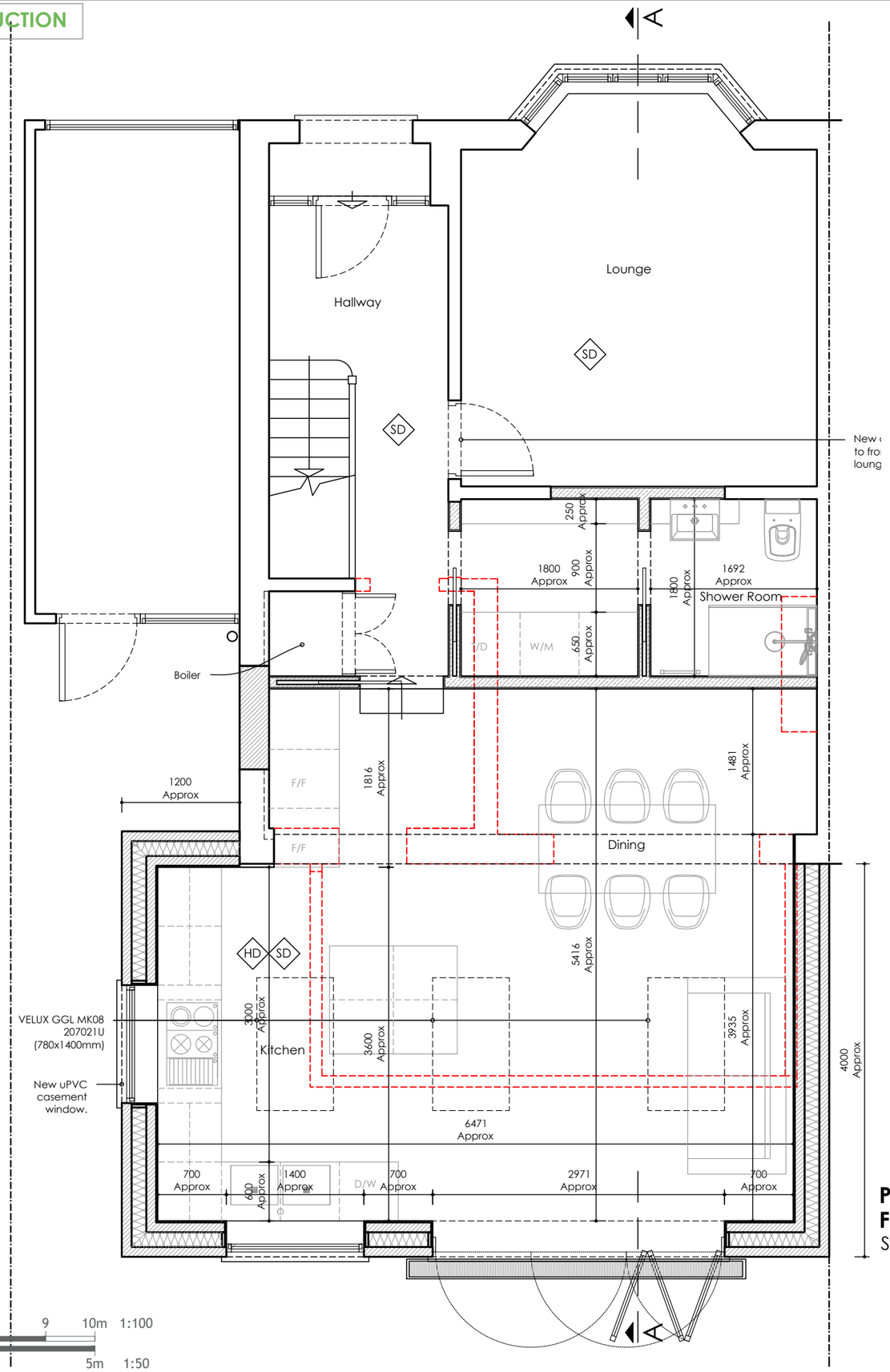

Proposed Ground Floor Plan
Scale 1/50@A3

0 1 2 3 4 5 6 7 8 9 10m 1:100
0 1 2 3 4 5m 1:50

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Client Pirie

Title Proposed Ground Floor Plan

Scale 1/50 @ A3

Drawn by S.K.

Checked by ASE

Job No.

Drawing P.04

PRELIMINARY DESIGN. NOT FOR CONSTRUCTION

CDM REGULATIONS 2015
The client must abide by the Construction Design and Management Regulations 2015. The client must appoint a contractor, if more than one contractor is to be involved, the client will need to appoint (in writing) a principal designer (to plan, manage and coordinate the planning and design work) and a principal contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project).
Domestic clients
The domestic client is to appoint a principal designer and a principal contractor when there is more than one contractor, if not your duties will automatically transferred to the contractor or principal contractor.
The designer can take on the duties, provided there is a written agreement between you and the designer to do so.
The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works:
(a) Last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project.
Or:
(b) Exceeds 500 person days.

PARTY WALL ACT
The owner, should they need to do so under the requirements of the Party Wall Act 1996, has a duty to serve a Party Structure Notice on any adjoining owner if building work on, to or near an existing Party Wall involves any of the following:
Support of beam
Insertion of DPC through wall
Raising a wall or cutting off projections
Demolition and rebuilding
Underpinning
Insertion of lead flashings
Excavations within 3 metres of an existing structure where the new foundations will go deeper than adjoining foundations, or within 6 metres of an existing structure where the new foundations are within a 45 degree line of the adjoining foundations.
A Party Wall Agreement is to be in place prior to start of works on site.

THERMAL BRIDGING
Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element, (i.e. around windows and door openings). Reasonable provision shall also be made to ensure the extension is constructed to minimise unwanted air leakage through the new building fabric.

MATERIALS AND WORKMANSHIP
All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.

FULL RADON PROTECTION: IN-SITU (GROUND-SUPPORTED) CONCRETE FLOOR
Floor slab to be reinforced concrete slab designed by structural engineer and supported on the inner leaf of the cavity wall on 150mm consolidated well-rammed hardcore.
Provide a 1200g (300 micrometre) continuous polythene DPM radon-proof barrier over the slab, lapped and sealed at all joints, around service penetrations with radon gas proof tape and linked to DPCs in the cavity wall.
Provide a radon sub floor sump, depressurization pipe with up stand beneath the floor slab as sump manufacturers' details. Radon test to be undertaken if required by building control after completion, and if unacceptably high levels of radon are found, provide an electrically powered fan to the pipework.
80mm PIR insulation over DPM and 75mm reinforced concrete slab. All in accordance with BRE GBG 73.

SITE PREPARATION
Ground to be prepared for new works by removing all unsuitable material, vegetable matter and tree or shrub roots to a suitable depth to prevent future growth. Seal up, cap off, disconnect and remove existing redundant services as necessary. Reasonable precautions must also be taken to avoid danger to health and safety caused by contaminants and ground gases e.g. landfill gases, radon, vapours etc. on or in the ground covered, or to be covered by the building.

EXISTING STRUCTURE
Existing structure including foundations, beams, walls and lintels carrying new and altered loads are to be exposed and checked for adequacy prior to commencement of work and as required by the Building Control Officer.

BEAMS
Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details. New steel beams to be encased in 12.5mm Gyproc FireLine board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

LINTELS
- For uniformly distributed loads and standard 2 storey domestic loadings only
Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1-1, with a concrete strength of 50 or 40 N/mm^2 and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.
For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacturer's standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

STRAPPING FOR PITCHED ROOF
Gable walls should be strapped to roofs at 2m centres. All external walls running parallel to roof rafters to be restrained at roof level using 1000mm x 30mm x 5mm galvanised mild steel horizontal straps or other approved to BSEN 845-1 built into walls at max 2000mm centres and to be taken across minimum 3 rafters and screw fixed. Provide solid noggins between rafters at strap positions. All wall plates to be 100 x 50mm fixed to inner skin of cavity wall using 30mm x 5mm x 1000mm galvanized metal straps or other approved to BSEN 845-1 at maximum 2m centres.

STRAPPING OF FLOORS
Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum of 3 joists. Straps to be built into walls. Provide 38mm wide x ¾ depth solid noggins between joists at strap positions.

FLAT ROOF RESTRAINT
100m x 50mm C16 grade timber wall plates to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres fixed to internal wall faces.

OPENINGS AND RETURNS
An opening or recess greater than 0.1m^2 shall be at least 550mm from the supported wall (measured internally).

TRENCH FOUNDATION
Provide 750mm x 600mm trench fill foundations, concrete mix to conform to BS EN 206 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions or difference in soil type be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

STEPPED FOUNDATION (trench)
Stepped foundations should overlap by twice the height of the step, or 1m whichever is the greater. The height of the step should not be greater than the thickness of the foundation.

SOLID FLOOR INSULATION OVER SLAB
To meet min U value required of 0.18 W/m^{2}K
Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 80mm thick Kingspan Kooltherm K103.
25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.
Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.
Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes with 100mm concrete cover laid under the extension. Pipes to terminate at new 65mm x 215mm air bricks with cavity tray over.

SOLID FLOOR INSULATION UNDER SLAB
To meet min U value required of 0.18 W/m^{2}K
Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide a 1200 gauge polythene DPM, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 80mm thick Kingspan Kooltherm K103.
25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed, provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over VCL. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.
Where drain runs pass under new floor, provide A142 mesh 1.0m wide within bottom of slab min 50mm concrete cover over length of drain.
Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes to terminate at new 65mm x 215mm air bricks built into new cavity wall with 100mm concrete cover laid under the extension. Ducts to be sleeved through cavity with cavity tray over.

TIMBER SUSPENDED FLOOR
Ground preparation -Remove top soil and vegetation, apply total weed killer and 150mm min thick sand blinded hardcore, then either -
(i) Provide concrete ground cover of at least 100mm thick or
(ii) Prepare the ground to an even surface and lay a ground cover of concrete at least 50mm thick, on a damp-proof membrane of at least 1200 gauge polyethylene, laid on a bed of fine blinding material.
Floor construction - min 20mm tongue and groove softwood boards or moisture resistant particle/chipboard grade type C4 to BS EN 312 as required. Lay with staggered joints on 47mm x 220mm C24 grade soft wood joists at maximum 400mm centres max span 4.83m. Joists to be supported off proprietary galvanized joist hangers built into new masonry walls or fixed to treated timber wall plates resin bolted to walls at 600mm centres. If required, floor joists also to be supported on 100mm x 50mm treated wall plates and DPC fixed to masonry honeycombed sleeper walls built on thickened oversite concrete. Joists to be infilled with 140mm Celotex XR4000 fixed with Celotex clips.
The top surface of the ground cover under the building shall be above the finished level of the adjoining ground.
The underside of the floor joists are not to be less than 150mm above the top of the ground cover. The underside of any wall plate is to be not less than 75mm above the top of the ground cover.
Ventilation of Floor
Provide cross-ventilation under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm^2 per metre run of perimeter wall or 500mm^2 per square metre of floor area whichever gives the greater opening area. All sleeper walls or similar under floor obstructions shall be of honeycombed construction or have similar provision for distribution of ventilation. The under floor space shall be free from debris. Ducts to be sealed using gas proof tap if they pass through the radon barrier.
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WALLS BELOW GROUND
All new walls below ground to be constructed using blockwork compliant with BS EN 771 and suitable for below ground level or semi engineering brickwork. Walls to be built using 1:4 masonry mortar mix or equal approved specification to BS EN 1996-1-1. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

SOLID EXTERNAL WALL
To achieve min U-value 0.18W/m^{2}K
Wall constructed using brickwork to match existing at least 348mm thick. Use 215mm Celcon Solar. Insulate wall on the inside using 90mm Celotex GA4000 insulated plasterboard and skim. Batten out to provide a nominal 25mm cavity between the masonry and insulation and fix a vapour control layer under the insulation, (50mm cavity to be provided if required by building control).

FULL FILL CAVITY WALL
To achieve minimum U Value of 0.18W/m^{2}K. New cavity wall to comprise of 105mm facing brick to match existing. Full fill cavity with 150mm Dritherm32 cavity insulation as manufacturer's details. Inner leaf to be 100mm block K value 1.13, e.g. (Armstrong dense, Masterblock Monacrete 100s). Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.

DPC
Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

CAVITIES
Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

EXISTING TO NEW WALL
Cavities in new wall to be made continuous with existing where possible to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abuts the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

CAVITY BARRIERS
30 minute fire resistant cavity barriers to be provided at at tops of walls, gable end walls and vertically at junctions with separating walls and horizontally at separating walls with cavity tray over installed according to manufacturer's details.

MOVEMENT JOINTS
Movement joints to be provided at the following maximum spacing:
Clay brickwork - 12m.
Calcium silicate brick - 7.5-9m.
Lightweight concrete block - density not exceeding 1,500kg/m3 - 6m.
Dense concrete block - density exceeding 1,500kg/m3 - 7.5-9m.
Any masonry in a parapet wall (length to height ratio greater than 3:1) - half the above spacings and 1.5m from corners.
Movement joint widths for clay bricks to be not less than 1.3mm/m i.e. 12m = 16mm and for other masonry not less than 10mm.
Additional movement joints may be required where the aspect ratio of the wall (length :height) is more than 3:1.
Considerations to be given to BS EN 1996-1-2:2005 Eurocode 6. Design of masonry structure.

WARM FLAT ROOF
(imposed load max 1.0 kN/m^2 - dead load max 0.75 kN/m^2)
To achieve U value 0.15 W/m^{2}K
12.5mm spa solar reflective chippings to achieve aa designated fire rating for surface spread of flame bedded in bitumen on three layer felt to BS 6229 on 22mm external quality ply (ply optional, see manufacturer's details) over 165mm Celotex XR4000 insulation.
Insulation bonded to VCL which is bonded to 22mm exterior grade plywood on firrings to give 1:60 fall on 47 x 195mm C24 timber joists at 400 centres max span 4.51m (see engineer's details for sizes). Ceilings of 12.5mm plasterboard over vapour barrier with skim plaster finish.
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

COLD FLAT ROOF
(imposed load max 1.0 kN/m^2 - dead load max 0.75 kN/m^2)
To achieve U value of 0.15 W/m^{2}K
To Structural Engineer's details. Ventilated flat roof construction comprising; 12.5mm spa solar reflective chippings to achieve aa designated fire rating for surface spread of flame bedded in bitumen on three layer felt to BS 6229 on 22mm exterior grade plywood, laid on firrings to give a 1:40 fall fixed to 47 x 175mm grade C24 joists at 400 centres max span 3.89m. Cross ventilation to be provided on opposing sides by a proprietary eaves ventilation strip equivalent to 25mm continuous with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a 50mm air gap above the insulation for ventilation. Insulation to be 120mm Celotex GA4000 between joists and 50mm under joists. Ceilings to be 12.5mm plasterboard over vapour barrier with skim plaster finish.
Provide restraint to flat roof by fixing using of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

PITCHED ROOF INSULATION AT CEILING LEVEL
Pitch 22-45° (imposed load max 0.75 kN/m^2 - dead load max 0.75 kN/m^2)
To achieve U value of 0.16 W/m^{2}K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on sarking felt supported on 47 x 150mm grade C24 rafters at max 400mm centres max span 3.47m. Rafters supported on 100 x 50mm sw wall plates. Roof construction - 47 x 150mm Grade C24 rafters at max 400mm centres max span 3.47m. Insulation to be 100mm Celotex GA4000 between rafters and 60mm under rafters. Fix 12.5mm foil backed plasterboard (joints staggered) to the underside of all ceilings using galvanized plasterboard nails. Finish with 5mm skim coat of finishing plaster.
(Cavity of 25mm provided by fixing battens between plasterboard and under rafter insulation recommended where insulation under rafters exceeds 50mm).
Maintain a 50mm air gap above insulation to ventilate roof. Provide opening at eaves level at least equal to continuous strip 25mm wide and opening at ridge equal to continuous strip 5mm wide to promote ventilation or provide equivalent high and low level tile vents in accordance with manufacturer's details.
Mono pitched roofs to have ridge/high level ventilation equivalent to a 5mm gap via proprietary tile vents spaced in accordance with manufacturer's details.
Restraint strapping - 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.

UNVENTED PITCHED ROOF
Pitch 22-45° (imposed load max 0.75 kN/m^2 - dead load max 0.75 kN/m^2)
To achieve U-value 0.18 W/m^{2}K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on minimum 25mm thick treated vertical counter battens with a proprietary eaves carrier system on breathable sarking felt to relevant BBA Certificate. Supported on 47 x 150mm grade C24 rafters at max 400mm centres max span 3.47m. Rafters supported on 100 x 50mm sw wall plates. Insulation to be 100mm Celotex GA4000 between rafters and 52mm Celotex PL4000 insulated plasterboard under rafters. Provide 5mm skim coat of finishing plaster to the underside of all ceilings.
Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.
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WARM PITCHED ROOF
Pitch 22-45° (imposed load max 0.75 kN/m^2 - dead load max 0.75 kN/m^2)
To achieve min U-value required of 0.18 W/m^{2}K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Roofing tiles to match existing fixed to tile battens secured over breathable sarking felt to relevant BBA Certificate allowing the breather felt to sag at least 10mm over preservative-treated counter battens (min 38mm x 50mm). Provide 75mm Celotex GA4000 insulation boards under the counter battens and 40mm Celotex TB4000 between 47 x 150mm timber rafters strength class C24 at 400 c/c - to give a max 3.47m span. A vapour control layer should be provided to the underside of the rafters. Finish with 12.5mm plasterboard and skim.
Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.
THIS IS A GENERAL GUIDE BASED ON NORMAL LOADING CONDITIONS FOUND IN DOMESTIC CONSTRUCTION. IT IS YOUR RESPONSIBILITY TO ASSESS YOUR DESIGN TO ASCERTAIN WHETHER ENGINEER'S DETAILS/CALCULATIONS ARE REQUIRED. PLEASE REFER TO THE TRADA DOCUMENT - "SPAN TABLES FOR SOLID TIMBER MEMBERS IN FLOORS, CEILINGS AND ROOFS FOR DWELLINGS" OR ASK YOUR BUILDING CONTROL OFFICER FOR ADVICE.

INTERNAL STUD PARTITIONS
100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m^3 density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

INTERNAL MASONRY PARTITIONS
Construct non load bearing internal masonry partitions using dense concrete blocks built off thickened floor slab and tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

INTERNAL LOADBEARING MASONRY PARTITIONS
Construct load bearing internal masonry partitions using dense concrete blocks built off concrete foundation. Concrete mix to conform to BS EN 206-1. Depth to engineer's details and dependent on ground conditions to be agreed with BCO. Wall tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

INTERMEDIATE FLOORS
Intermediate floor to be 25mm tandg flooring grade chipboard or floorboards laid on C24 joists at 400mm ctrs (see engineer's calculation for sizes and details). Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m^3 or equivalent between floor joists. Ceiling to be 12.5 FireLine plasterboard with skim plaster set and finish. Joist spans over 2.5m to be strutted at mid span using 38 x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). In areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade in accordance with BS EN 312. Identification marking must be laid upper most to allow easy identification. Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x ¾ depth solid noggins between joists at strap positions.

ELECTRICAL
All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a competent person registered under a competent person self certification scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.

INTERNAL LIGHTING
Install low energy light fittings that only take lamps having a luminous efficiency greater than 45 lumens per circuit watt and a total output greater than 400 lamp lumens. Not less than three energy efficient light fittings per four of all the light fittings in the main dwelling spaces to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

HEATING
Extend all heating and hot water services from existing and provide new TRVs to radiators. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.

WOOD BURNING STOVE
Ensure the wood burning stove is installed by an APHC, HETAS, NAPIT or NICEIC accredited specialist in compliance with Part J. Supply a suitable flue, hearth and CO / Carbon Monoxide alarm and provide ventilation to ensure the necessary combustion air and to prevent the depletion of oxygen in the room. There must not be an extractor fan fitted in the same room as the stove. A notice plate giving operating and maintenance instructions must be provided and fixed in an obvious place and the Part J installation checklist is to be completed and a copy given to Building Control.

NEW GAS BOILER
Heating and hot water will be supplied via a wall mounted condensing vertical balanced flue pressurised boiler with a min SEDBUK rating of 90%. No combustible materials within 50mm of the flue. System to be fitted with thermostatic radiator valves and all necessary zone controls and boiler control interlocks. The system will be installed, commissioned and tested by a GAS SAFE Registered Specialist and a certificate issued that the installation complies with the requirements of PART L. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.

SMOKE DETECTION
Mains operated linked smoke alarm detection system to BS EN 14604 and BS 5839-6:2019 to at least a Grade D category LD3 standard and to be mains powered with battery back up. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all levels/ storeys and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be an interlinked heat detector in the kitchen.

ESCAPE WINDOWS
Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. Windows to have an unobstructed openable area that complies with:
- minimum height of 450mm and minimum width of 450mm.
- minimum area 0.33m^2.
- the bottom of the openable area should be not more than 1100mm above the floor.
The window should enable the person to reach a place free from danger from fire.

any window or door openings to be in accordance with diagram 11.5 in Part B Volume 1 (small unprotected areas).

ROOF LIGHTS
Min U-value of 1.6 W/m^{2}K.
Roof-lights to be double glazed with16mm argon gap and soft low-E glass. Window Energy Rating to be Band C or better. Roof lights to be fitted in accordance with manufacturer's instructions with rafters doubled up to sides and suitable flashings etc.

SAFETY GLAZING
All glazing in critical locations to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1 and Part K (Part N in Wales) of the current Building Regulations, i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows.

NEW AND REPLACEMENT WINDOWS
New and replacement windows to be double glazed with 16mm argon gap and soft coat low-E glass. Window Energy Rating to be Band C or better and to achieve U-value of 1.6 W/m^{2}K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.

NEW AND REPLACEMENT DOORS
New and replacement doors to achieve a U-Value of 1.80W/m^{2}K. Glazed areas to be double glazed with 16mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1 and Part K (Part N in Wales) of the current Building Regulations.

BACKGROUND AND PURGE VENTILATION
Background ventilation - Controllable background ventilation via trickle vents in compliance with Approved Document F within the window frame to be provided to new habitable rooms at a rate of min 5000mm^2; and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm^2
Purge ventilation - New Windows/rooflights to have openable area in excess of 1/20th of their floor area, if the window opens more than 30° or 1/10th of their floor area if the window opens less than 30°
Internal doors should be provided with a 10mm gap below the door to aid air circulation.
Ventilation provision in accordance with the Domestic Ventilation Compliance Guide.

EXTRACT TO UTILITY ROOM
To utility room provide mechanical ventilation ducted to external air capable of extracting at a rate of 30 litres per second. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO W/C
W/C to have mechanical ventilation ducted to external air with an extract rating of 15l/s operated via the light switch. Vent to have a 15min overrun if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO KITCHEN
Kitchen to have mechanical ventilation with an extract rating of 60l/sec or 30l/sec if adjacent to hob to external air, sealed to prevent entry of moisture. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

VENTILATION OF TIMBER SUSPENDED FLOOR
Provide cross-ventilation under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm^2 per metre run of perimeter wall or 500mm^2 per square metre of floor area whichever gives the greater opening area. All sleeper walls or similar under floor obstructions shall be of honeycombed construction or have similar provision for distribution of ventilation. The under floor space shall be free from debris. Ducts to be sealed using gas proof tap if they pass through a radon barrier.

PITCHED ROOF VENTILATION
Maintain a 50mm air gap above insulation in the roof pitch to ventilate roof. Provide opening at eaves level at least equal to continuous strip 25mm wide and opening at ridge equal to continuous strip 5mm wide to promote ventilation.

FLAT ROOF VENTILATION
Cross-ventilation to be provided on opposing sides by a proprietary eaves ventilation strip equivalent to 25mm continuous with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a 50mm air gap above the insulation for ventilation.

RAINWATER DRAINAGE
New rainwater goods to be new 110mm UPVC half round gutters taken and connected into 68mm dia UPVC downpipes. Rainwater taken to new soakaway, situated a min distance of 5.0m away from any building, via 110mm dia UPVC pipes surrounded in 150mm granular fill.
SOAKAWAY USING CRATES
Trench of soakaway to be provided slightly largely than designed depth after porosity test (if required) but just over 1m3 min from invert level of pipe. Provide suitable geotextile over the base and up the sides of the trench over 100mm level and compact bed of coarse sand. Install AquaCell crate units or equivalent as manufacturer's details. Geotextile to be wrapped around crates. Provide 100mm of coarse sand between the trench walls and over the AquaCell structure. Backfill with suitable material.

UNDERGROUND FOUL DRAINAGE
Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1.

INSPECTION CHAMBERS
Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.

ABOVE GROUND DRAINAGE
All new above ground drainage and plumbing to comply with BS EN 12056-2 for sanitary pipework. All drainage to be in accordance with Part H of the Building Regulations. Wastes to have 75mm deep anti vac bottle traps and rodding eyes to be provided at changes of direction.

Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)
Wash basin - 1.7m for 32mm pipe 3m for 40mm pipe
Bath/shower - 3m for 40mm pipe 4m for 50mm pipe
W/c - 6m for 100mm pipe for single WC
All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m.
Or to 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting.
Waste pipes not to connect on to SVP within 200mm of the WC connection.
Supply hot and cold water to all fittings as appropriate.

SOIL AND VENT PIPE
Svp to be extended up in 110mm dia UPVC and to terminate min 900mm above any openings within 3m. Provide a long radius bend at foot of SVP.

AUTOMATIC AIR VALVE
Ground floor fittings from WC to be connected to new 110mm UPVC soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting and connected to underground quality drainage encased with pea gravel to a depth of 150mm.

PIPEWORK THROUGH WALLS
Where new pipework passes through external walls the pipe work is to be provided with 'rocker pipes' at a distance of 150mm either side of the wall face. The 'rocker pipes' must have flexible joints and be a maximum length of 600mm.l.
Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.

DOOR BETWEEN HOUSE AND GARAGE
Door between garage and house to be FD30 self closing with a 100mm step down into garage, fitted with 3 steel hinges, intumescent strips and smoke seals. Construction between house and garage to be 30 minutes fire resisting.

FIXED EXTERNAL LIGHTING
External light fittings to be fitted as calculated in the DER and in compliance with the Domestic Building Services Compliance Guide.
Light fitting to be either:
a. lamp capacity not greater than 100 lamp-watts per light fitting and provided with automatic movement detecting devices (PIR) and automatic daylight sensors ensuring lights shut off automatically when not required.
Or
b. lamp efficacy greater than 45 lumens per circuit-watt; fitted with manual controls and automatic day light cut-off sensors so that lights switch off when daylight is sufficient.

General Notes:

Note on Setting Out. The contractor shall ensure to confirm setting out as indicated by the proposals opposite is achievable prior to placing of any orders or commencement of works in part.

Use figure dimension only.

Existing foundations, lintels and walls to be exposed if required by Building Control for assessment upgrade if found inadequate.

The materials used in any exterior work will be of a similar appearance to those used in the construction of the exterior of the existing dwelling house

Proposed roof lights will protrude no more than 0.15m beyond the plane of the slope of the original roof when measured from the perpendicular

Furniture, sanitary ware & kitchen layouts shown are indicative. To be confirmed on site

All drainage to be confirmed on site

All materials, windows, doors etc used to be fitted as per manufacturers specifications

It's the home owners responsibility to obtain all permissions under the Party Wall etc. Act 1996

Key To Drawings:

EXISTING BRICK WALL	PROPOSED CAVITY WALL
EXISTING TIMBER WALL	
DEMOLITION	PROPOSED STUD WALL
AXIS LINE	BOUNDARY LINE
EXISTING FOUNDATIONS	PROPOSED FOUNDATIONS
PROPOSED STEEL BEAMS	PROPOSED TIMBER JOISTS

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Date	Description	Rev
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29.09.25	Client's amendments	A
23.09.25	Preliminary Drawings	Prelims

LIMETREE DESIGNS & PLANNING
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Project 252 Hemdean Road, RG4 7QT
Ground floor single storey rear extension

Client Pirie

Title Tech Spec

Scale n/a

Drawing N.01

Drawn by S.K.

Checked by ASE

Job No.

PRELIMINARY DESIGN. NOT FOR CONSTRUCTION

HOME OWNERS RESPONSIBILITIES UNDER THE PARTY WALL ACT 1996

Notifiable works will fall in to one of three categories.

1.Work which has a direct effect on a party wall (or other party structure)

2.Excavation close to an Adjoining Owner's Building

3.The construction of a new wall at the line of junction between two properties

1. Work which has a direct effect of a party wall (or other party structure).

The list of works which a Building Owner has the right to undertake which have a direct effect on a party wall are given under section 2(2). *Examples include*:

(a) 'To underpin, thicken or raise a party structure, a party fence wall, or an external wall which belongs to the building owner and is built against a party structure or party fence wall' - *This section allows a Building Owner to increase the height of a party wall,as part of a loft conversion or to add an extra floor to a building or to underpin the whole width of a party wall which has suffered from subsidence.*

(b) 'To make good, repair, or demolish and rebuild, a party structure or party fence wall in a case where such work is necessary on account of defect or want of repair of the structure or wall' - *Where a party wall has become defective either owner can take the initiative and serve notice to have it repaired or re-built. The costs of the work are split according to the use that the owners make of the wall and responsibility for the defect or lack of repair.*

Sub-sections (d) & (e) can be ignored for works to residential properties.

(f) 'To demolish a party structure which is of insufficient strength or height for the purposes of any intended building of the building owner and to rebuild it of sufficient strength or height for the said purposes (including rebuilding to a lesser height or thickness where the rebuilt structure is of sufficient strength and height for the purposes of any adjoining owner)' - *This right would only be exercised as a last resort as the costs would be considerable; including the payment of compensation to the Adjoining Owner for disturbance and inconvenience. Most designers/engineers would explore alternative options first.*

(f) 'To cut into a party structure for any purpose (which may be or include the purpose of inserting a damp proof course)' - *This right is most commonly exercised by a Building Owner cutting pockets in to a party wall to insert beams, either as part of loft conversion works or when internal walls are to be removed. It also covers the insertion of flashings and damp-proofing works which involve drilling or cutting in to the party wall.*

(g) 'To cut away from a party wall, party fence wall, external wall or boundary wall any footing or any projecting chimney breast, jamb or flue, or other projection on or over the land of the building owner in order to erect, raise or underpin any such wall or for any other purpose' - *This section covers the demolition of chimney breasts which are attached to a party wall but also gives the Building Owner the right to cut away other projections from the party wall, such as footings, if they are impeding his building work.*

(h) 'To cut away or demolish parts of any wall or building of an adjoining owner overhanging the land of the building owner or overhanging a party wall, to the extent that it is necessary to cut away or demolish the parts to enable a vertical wall to be erected or raised against the wall or building of the adjoining owner' -*In practice it will be items such as rainwater goods, soffits and fascia's or coping stones which will be in the way of a Building Owner raising wanting to raise his wall . The Building Owner has a duty to make good any damage.*

(j) 'To cut into the wall of an adjoining owner's building in order to insert a flashing or other weather-proofing of a wall erected against that wall' - *If a Building Owner constructs an extension alongside an Adjoining Owner's existing extension it is likely that a small gap will remain. It would normally be in the interests of both owners to waterproof the gap with a flashing, if that flashing has to be cut in to the Adjoining Owner's wall this section gives the Building Owner the right to do just that.*

(k) 'To execute any other necessary works incidental to the connection of a party structure with the premises adjoining it' - *In practical terms this section is only likely to be used in residential situations where a Building Owner wants to re-build his property but leave the party wall in place, it may then be necessary to form a more permanent connection between the party wall and the Adjoining Structure and to attach the new building to the existing party wall.*

(l) 'To raise a party fence wall, or to raise such a wall for use as a party wall, and to demolish a party fence wall and rebuild it as a party fence wall or as a party wall' - *A party fence wall is effectively a garden wall which is in shared ownership - they are commonly found between period properties; particularly those with back additions which have windows to the side. This section gives either owner the right to raise or re-built such a wall as part of their new building.*

(m) 'Subject to the provisions of section 11(7), to reduce, or to demolish and rebuild, a party wall or party fence wall to -

(i) A height of not less than two metres where the wall is not used by an adjoining owner

(ii) To any greater extent than a boundary wall; or a height currently enclosed upon by the building of an adjoining owner

This section allows a Building Owner to reduce the height of a party wall or a shared garden wall down to a height of no less than 2 metres so long as it doesn't compromise the Adjoining Owner's building. If both owners are in agreement a wall can be removed altogether.

(n) 'To expose a party wall or party structure hitherto enclosed subject to providing adequate weathering' -*The purpose of this section is really to protect an Adjoining Owner where a Building Owner plans to remove part or all of his structure and as a result expose the party wall. It may be necessary to protect the newly exposed wall with felt and battens if the exposure is temporary or if it is to be permanent exposed a more permanent solution, such as rendering or re-pointing may be required.*

The notice period for works under section 2 of the Act is 2 calendar months.

2. Excavation close to an Adjoining Owner's Building.

This type of work is covered by section 6 of the Act and can be divided in to two parts.

Section 6(1), where -

(a) a building owner proposes to excavate, or excavate for and erect a building or structure, within a distance of three metres measured horizontally from any part of a building or structure of an adjoining owner; and

(b) Any part of the proposed excavation, building or structure will within those three metres extend to a lower level than the level of the bottom of the foundations of the building or structure of the adjoining owner.

Section 6(2), where -

(a) a building owner proposes to excavate, or excavate for and erect a building or structure, within a distance of six metres measured horizontally from any part of a building or structure of an adjoining owner; and

(b) any part of the proposed excavation, building or structure will within those six metres meet a plane drawn downwards in the direction of the excavation, building or structure of the building owner at an angle of forty-five degrees to the horizontal from the line formed by the intersection of the plane of the level of the bottom of the foundations of the building or structure of the adjoining owner with the plane of the external face of the external wall of the building or structure of the adjoining owner.

The notice period for excavation work which comes within the scope of the Act is 1 calendar month.

3. The construction of a new wall at the line of junction between two properties.

This category covers the construction of new walls at the line of junction i.e. the boundary line between two properties in different ownership. The new wall may be built up to the boundary line but wholly on the land of the Building Owner or astride the boundary line i.e. with part of it on each owner's side. If the Adjoining Owner refuses consent then the wall must be built wholly on the Building Owner's side. The construction of new wall at the line of junction are covered under section 1 of the Act.

There are two practical reasons why a Building Owner might want to carry out work detailed under this section of the Act:

1. To maximize the width of a rear extension.

If the flank walls of a new extension can be built astride the boundary then a few extra square feet of internal floor space will be gained. It should be noted that new walls built astride the boundary under this section of the Act will be defined as party walls and may be enclosed upon by the Adjoining Owner at a later stage (subject to serving notice and contributing towards the cost of building the wall).

2. To replace an existing boundary wall, fence or hedge with a party wall or party fence wall.

The notice period for building a new wall at the line of junction is 1 calendar month. Procedures differ from works under sections 2 & 6 of the Act in that there is no automatic dissent to a notice after 14 days. If the wall which the Building Owner wishes to construct is wholly on his own land and he has had no response to his notice after 1 calendar month has passed he is free to proceed.

FOR FURTHER INFORMATION VISIT THE GOVERNMENT WEB SITE
https://www.gov.uk/party-wall-etc-act-1996-guidance

General Notes:

Note on Setting Out. The contractor shall ensure to confirm setting out as indicated by the proposals opposite is achievable prior to placing of any orders or commencement of works in part.

Use figure dimension only.

Existing foundations, lintels and walls to be exposed if required by Building Control for assessment upgrade if found inadequate.

The materials used in any exterior work will be of a similar appearance to those used in the construction of the exterior of the existing dwelling house

Proposed roof lights will protrude no more than 0.15m beyond the plane of the slope of the original roof when measured from the perpendicular

Furniture, sanitary ware & kitchen layouts shown are indicative. To be confirmed on site

All drainage to be confirmed on site

All materials, windows, doors etc used to be fitted as per manufacturers specifications

It's the home owners responsibility to obtain all permissions under the Party Wall etc. Act 1996

Key To Drawings:

EXISTING BRICK WALL
EXISTING TIMBER WALL
DEMOLITION
AXIS LINE
EXISTING FOUNDATIONS
PROPOSED STEEL BEAMS
PROPOSED CAVITY WALL
PROPOSED STUD WALL
BOUNDARY LINE
PROPOSED FOUNDATIONS
PROPOSED TIMBER JOISTS

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Date	Description	Rev
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29.09.25	Client's amendments	A
23.09.25	Preliminary Drawings	Prelims

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Project 252 Hemdean Road, RG4 7QT
Ground floor single storey rear extension

Client Pirie

Title Party Wall Notes

Scale n/a

Drawing N.02

Drawn by S.K.

Checked by ASE

Job No.