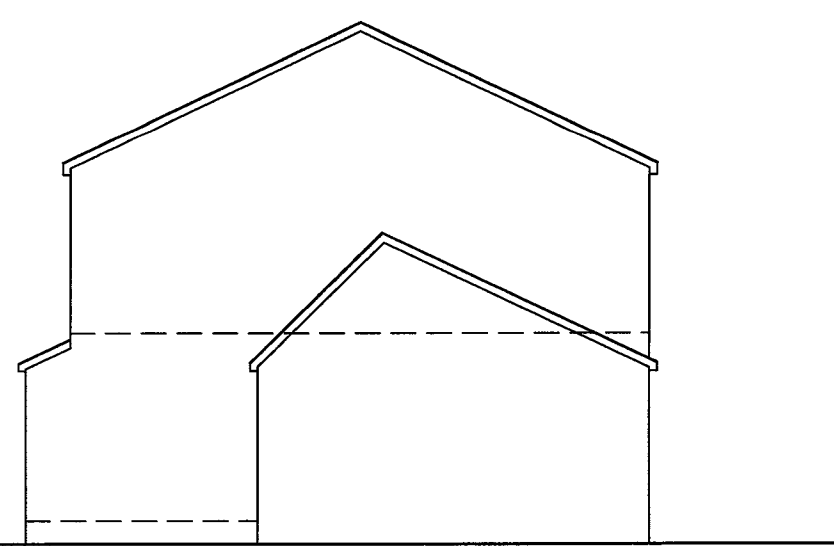




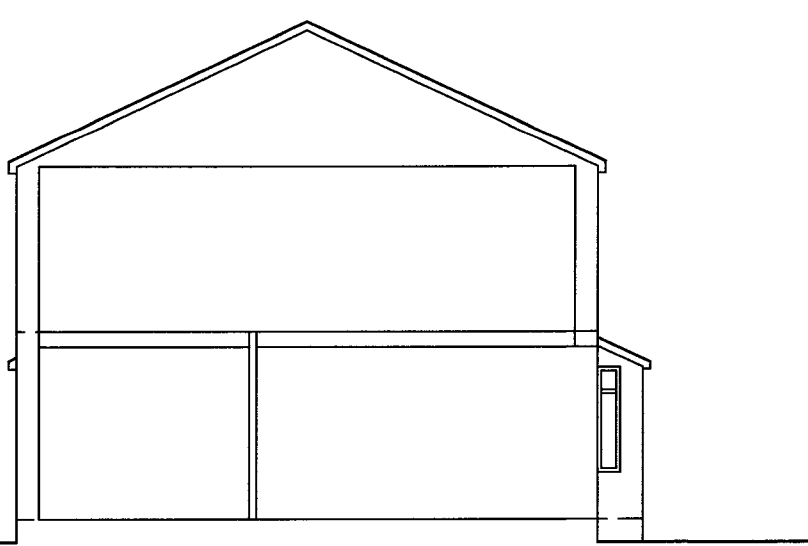
Existing Front Elevation



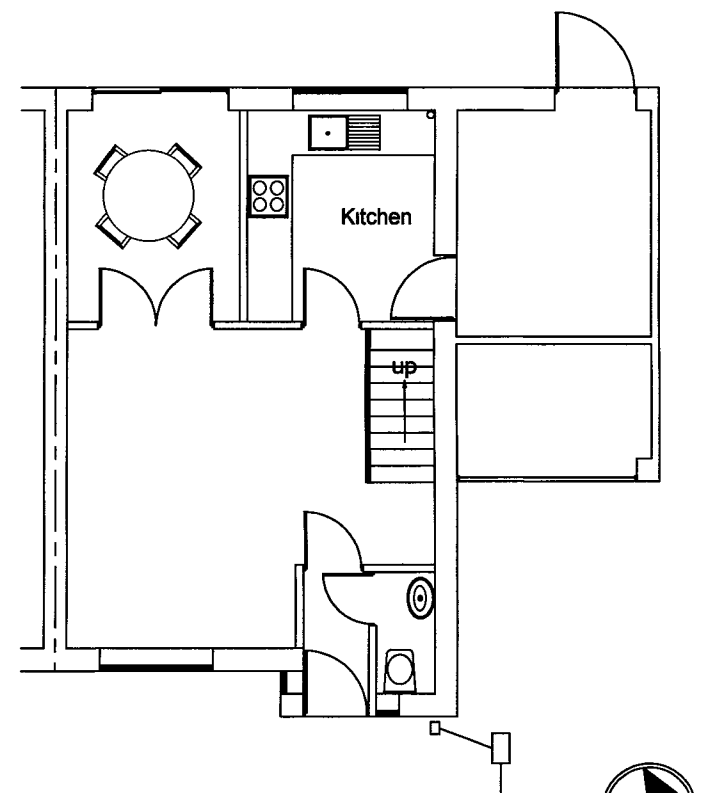
Existing Side Elevation



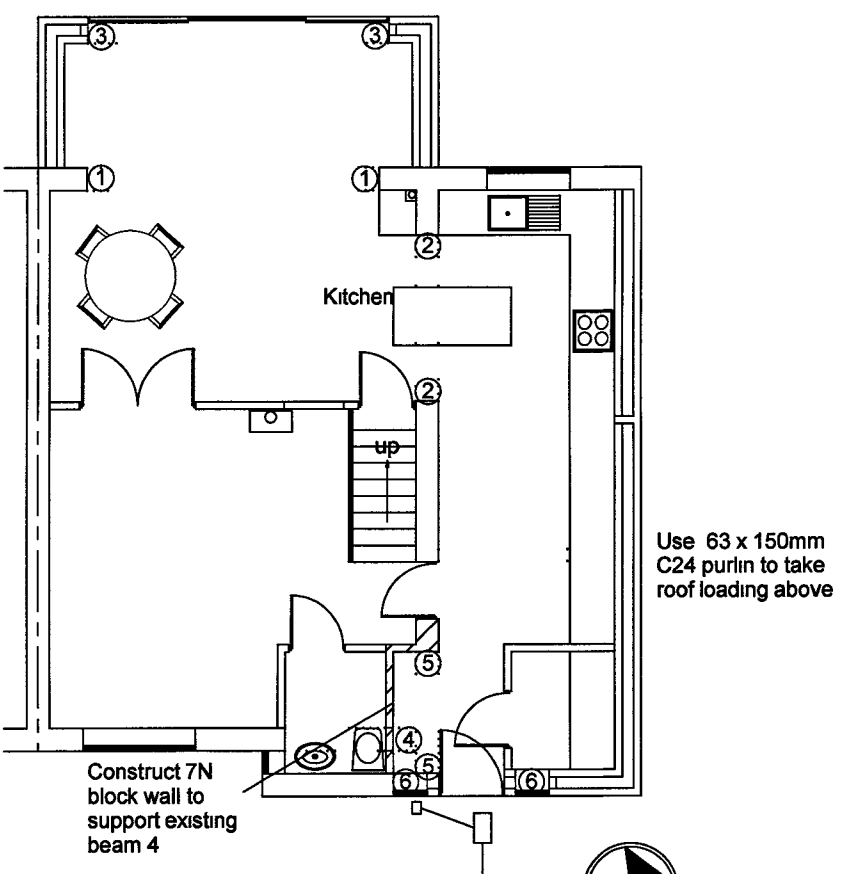
Existing Rear Elevation



Existing Side Elevation



Existing Ground Floor



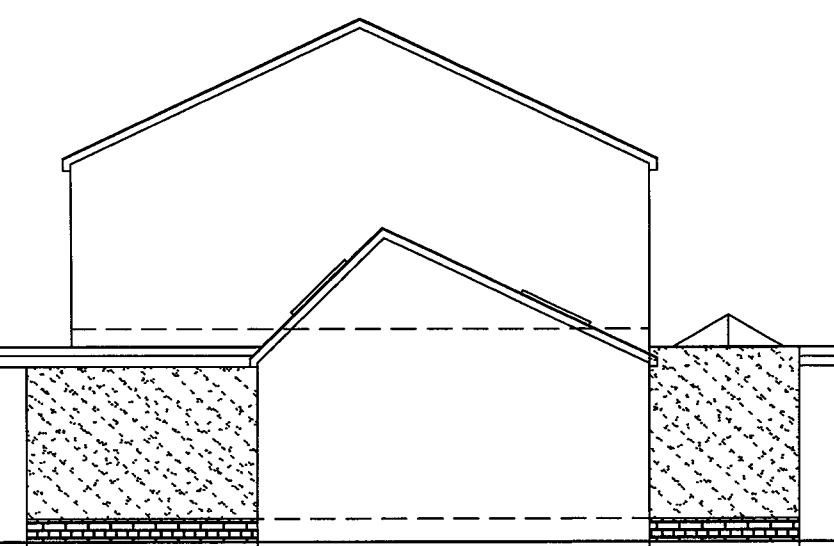
Proposed Ground Floor

Install wood burner with suitable hearth twin wall insulated flue by HETAS engineer

Use 63 x 150mm C24 purlin to take roof loading above



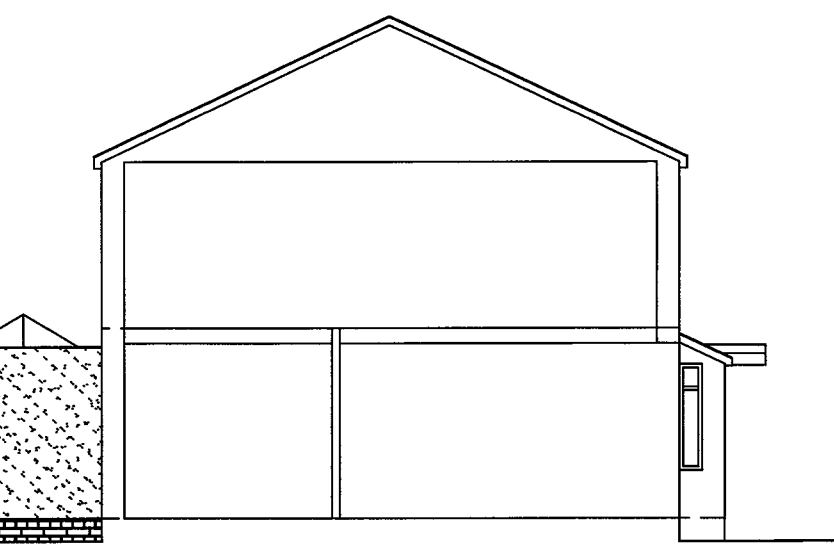
Proposed Front Elevation



Proposed Side Elevation



Proposed Rear Elevation

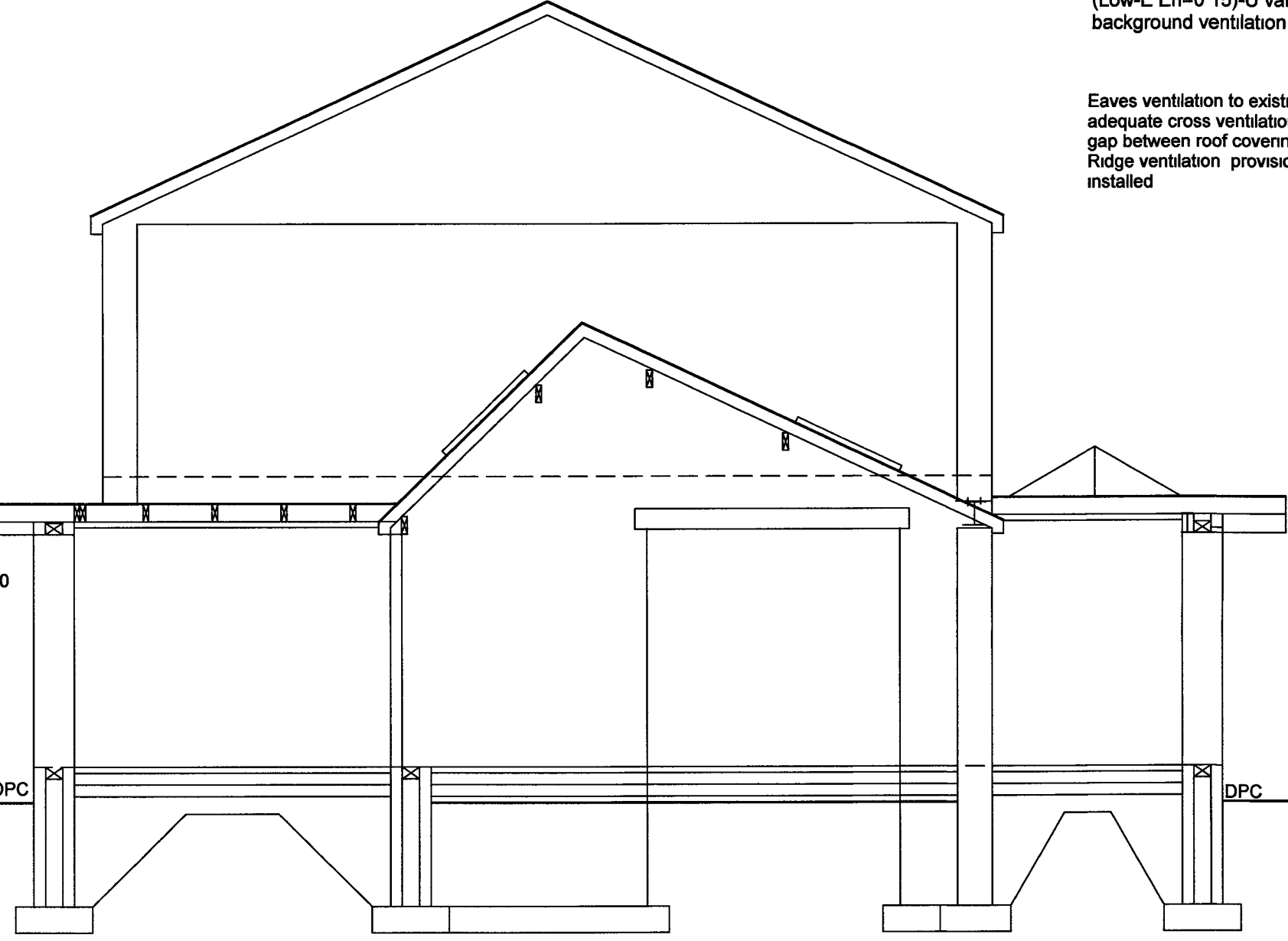


Proposed Side Elevation

**ITEMS**  
 Span 3.9 m  
 Reactions (unfactored/factored) R1 45 97/73 31 kN R2 45 97/73 31 kN  
 Use 203 x 203 x 52 UC S355  
 Bearing R1 350 x 300 mm padstone  
 Bearing R2 As R1  
 Use 300mm wide 8mm steel plate fixed to top of steel FW to take wall loading above  
 Flange plate splices at 1.40 and 2.80 m from R1  
 2 Beam Beam 2  
 Span 2.2 m  
 Reactions (unfactored/factored) R1 16 39/26 14 kN R2 16 39/26 14 kN  
 Use 2No 178 x 102 x 19 UB S355  
 Bearing R1 203 x 300 mm padstone  
 Bearing R2 As R1  
 Sections to be bolted together with tube spacers or suitable alternative connection at max 0.5m c/c  
 3 Beam Beam 3  
 Span 4.1 m  
 Reactions (unfactored/factored) R1 12 07/19 20 kN R2 12 07/19 20 kN  
 Use 178 x 102 x 19 UB S355  
 Bearing R1 350 x 100 mm padstone  
 Bearing R2 As R1  
 Use 8mm thick bearing plate fixed to bottom flange FW to take overleaf wall  
 4 Beam Beam 4 (Existing Beam) at front  
 Span 0.3 m  
 Reactions (unfactored/factored) R1 2 94/4 71 kN R2 2 94/4 71 kN  
 Use 127 x 76 x 13 UB S355  
 5 Beam Beam 5  
 Span 1.6 m  
 Reactions (unfactored/factored) R1 20 03/31 96 kN R2 21 53/34 36 kN  
 Use 203 x 203 x 46 UC S355  
 Bearing R1 204 x 300 mm padstone  
 Bearing R2 Not specified  
 6 Beam Beam 6 at Front door  
 Span 2.1 m  
 Reactions (unfactored/factored) R1 31 48/50 31 kN R2 8 17/13 02 kN  
 Use 203 x 102 x 23 UB S355  
 Bearing R1 750 x 100 mm padstone  
 Bearing R2 200 x 100 mm padstone  
 Use 300mm wide 8mm thick bearing plate welded to bottom of steel to take overleaf loading  
 7 End plate connection  
 Beam [Item 5] 203x203x46 UC connects to web of beam [Item 6] 203x102x23 UB  
 Unfactored/factored load carried by connection = 20 03/31 96 kN  
 Use 160mm long 8mm S275 end plate with 2 pairs of M20 bolts at 70 c/c  
 Connection capacity 200 kN OK

**Flat Roof:-**  
 Use Fibreglass finish to newly formed flat roof on 100mm thick Kingspan between joist with 50mm thick capping layer fixed to 18mm plywood on joists 44 x 150 mm C24 @ 600c/c, double up at Sun Lantern with 50.0 mm firings 12.5mm plasterboard and skim.  
 Vertical strapping at least 1m length to be provided at eaves level at intervals not exceeding 2m.

Cavity Tray system linked to lead code 4 flashings  
 Use Catnic Lintels TH100/150 to all openings.  
 Use Cavity trays where appropriate and cavity closures to all openings



Proposed Side Elevation

**MAIN SPECIFICATION**

**ROOF**  
 Tiles to match existing on 25mm x 50mm sw  
 Tile battens on Tyvek Supro Plus or similar breather underlay  
 To BS 5534, Part 1, 2014 on rafters 150 x 50mm @ 600 c/c  
 Standard Wallboard Plasterboard (12.5 mm)  
 100mm thick Kingspan between joists, 45mm thick underlayment, Clay tile (200 mm thick U value 0.15W/m2 K  
 BS 5268 Part 3 2006 And 20c pitch and 12.5mm plasterboard and skim ceiling  
 Provide 97 x 22mm longitudinal and diagonal wind bracing to all node points  
 Fix roof joist to wallplate with clips  
 Provide 100 x 50mm sw wall plate and 19mm sw fascia, 12.5mm exterior ply soffit.  
 100mm hr gutters, 62mm dia rwp  
 Provide Redland or similar vents at eaves for roof space ventilation  
 Code 4 lead and stepped dpc to all abutments  
 All Rafters to be fixed to manufacturers detailed specification  
 Roofing to be in accordance with BS 5534 Part 1, 2014 and BS 8000 Part 6 2013

**WALLS**  
 100mm blockwork rendered outer leaf with 150mm cavity with Dritherm 32 cavity batts fixed in accordance with manufacturers instructions 100mm thermalite SHEILD block (or similar approved) inner leaf and 12.5mm lightweight plaster (U value 0.19w/m2odeg C) Cavity fill to terminate 225mm below lowest dpc  
 100mm 'cavity closures' at all openings  
 Blocks to be laid in stretcher bond in 1:1:6 cement mortar  
 Patent cavity trays to be inserted above flashings at all abutments and above openings  
 Stainless steel vertical twist type wall ties to DD140, every 750 horizontally and 450 vertically and staggered Vertical centres of ties to be 225mm at all jamps.  
 Brckwork to be tied to existing and all cavities to be maintained Cavity closed at top of wall with slate or similar non-combustible material  
 Horizontal dpc 150 minimum above ground level and provide Butthene tanking lapped into the dpc  
 All materials below gl. Are to be frost resistant Fill cavity to ground level with weak mix.  
**GROUND FLOOR**  
 As plan  
**PARTITION WALLS**  
 Use 100 x 50mm timber struts at 600 c/c built of 100mm x 50 mm wall plate For partition walls in bedrooms use 50mm mineral wool to provide sound proofing  
**FOUNDATIONS**  
 650mm x 225mm deep strip foundation 900mm below ground level incorporating C385 reinforced mesh. Foundations at boundary walls to be trench fill type 450mm thick BS8004 2015  
**DRAINS**  
 100mm dia upvc drains surrounded in pea gravel (150mm) All gullies to be back inlet types and roddable  
 All drains running under building to be encased in 150mm concrete with 12mm flexcell joints @ 1500mm c/c  
 Foundations to be stepped below drains with reinforced concrete lintels over to support b/wk  
 Drain trenches within 1m of foundation to be backfilled with concrete up to underside of foundation  
 Manholes to be built in 225mm 2nd class engineering b/wk on 150mm thick concrete base  
 Provide medium covers to all manholes  
**ABOVE GROUND DRAINAGE**  
 100mm dia Upvc half-round gutters and 100mm dia rwp  
 38mm dia waste pipes and 75mm deep seal traps to all sanitary appliances when connected to 100mm dia. upvc svp  
**WINDOWS**  
 Double-glazed UPVC windows with 4/16/4 glazed units with PILKINGTON K glass with 20mm air gap  
 (Low-E n=0.15)-U values=1.4W/m2 degC-ventilation openings equal to 1/20th floor areas, + 8000mm2 background ventilation to comply with PAS 24

Eaves ventilation to existing roof equiv to 25 000mm2/m run adequate cross ventilation to be introduced 50mm ventilation gap between roof covering and insulation to implemented  
 Ridge ventilation provisions equiv to 6,000mm2/m run to be installed

Floor :- 50mm of sand cement screed on 100mm thick concrete on 110mm thick Celotex GA4000 insulation on grade 1200 damp proof membrane on sand blinding on 225mm thick concrete pad foundation, 25mm of perimeter insulation to be used around the concrete floor to prevent cold bridging. Cavity insulation is to extend 150mm below level of floor insulation to protect against cold bridging. Cavity fill is to stop a minimum of 225mm below lowest DPC level.

**MECHANICAL EXTRACT:-**  
 Provide mechanical extract direct to open air in the following rooms -  
 • Bathrooms 15 Litres/sec  
 • Bathrooms without windows 15 Litres/sec The extract fan is to be connected to the light switch and have a 30 min overrun, provide 10mm gap under door for ventilation  
 • Wcs separate from bathroom 6 Litres/sec  
 • Kitchens 30 Litres/sec adjacent to the hob or 60 Litres/sec elsewhere.  
 • Utility room 30 Litres/sec

Where the sanitary accommodation is internal provide a 10mm gap under door for ventilation

**LINTELS:-**  
 Lintels are to be Catnic CG90/100 or similar unless stated on plan Lintels are to have 150mm end bearing and be rendered to give 1/2 hour fire resistance All lintels to external walls are to be insulated and have the ends closed with dpc.

**SAFETY GLAZING:-**  
 All glazing in critical areas to be laminated or toughened in accordance with BS 6206  
 Manifestation to be provided where appropriate

**ELECTRICALS:-**  
 13 amp rmg main and lighting circuit to comply with latest edition of IEE regulations Number and position of sockets to Client's instructions All new electrical work is to be designed, installed, inspected and tested in accordance with BS 7671 2001 or an equivalent standard These installation works are to be undertaken by a person registered with an electrical self certification scheme, or alternatively by a suitably qualified person, with a certificate of compliance produced by that person to Building Control upon completion of the works

**SERVICES:-**  
 Note existing boiler to be checked by GAS SAFE registered installer to assess capability for additional radiators to the new rooms Provide thermostatic radiator valves

**MEANS OF ESCAPE:-**  
**DWELLINGS**- Provide mans-operated self-contained smoke detectors to BS 5446 PART1 The alarms may be wholly mains operated with a secondary power supply such as batteries. All smoke alarms to be interlinked and permanently wired to a separately fused circuit on the distribution board  
**INNER ROOMS**-to have escape windows with unobstructed openable area that is at least 0.33m2 and at least 450 high and 450 wide at 800mm min and 1100mm max from the floor

**GENERAL**  
 All electrical work is to conform to BS 7671 2018 and current IEE Regulations Sockets and light fittings to be the client's choice and design please refer to guidance stipulated in section 4.24 of A D L1B section 12 & table 40 of Domestic Building Services Compliance Guide 2010 edition  
 Sockets and light switches are to be positioned between 450mm and 1200mm from finished floor level  
 Before any construction commences the adjoining owners consent must be obtained for any work on the boundary  
 Architraves and skirting to match existing  
 Internal and external doors are to be client's choice and design  
 Insulate all heating and hot water pipes under the floor

**INTERNAL**  
 Any new radiators are to be fitted with thermostatic radiator valves to control room temperature  
 Refuse collection to be maintained  
 Provide mains operated interlinked smoke detectors to BS 5446 2000 PART 1, on all floors, within 3m of a bedroom and 7.5m to any other rooms The detectors are to be wired to a separately fused circuit and distribution board. The detectors are to be ceiling mounted at least 300mm from walls and light fittings. Units designed for wall mounting may be used if they are fixed above the level of all doors and are fixed in accordance with the manufacturers instructions The sensors in predominately flat ceilings are to be between 25 and 600mm below the ceiling, (25-150mm in the case of heat detectors) sensors should not be fitted to heaters or air conditioning outlets

The existing foundations, walls and lintels are to be checked for suitability before work commences  
 All structural timbers to be tanalised  
**NOTE:-**  
 These plans have been prepared for the purposes of ensuring compliance with the requirements of the Building Regulations and Planning legislation and should not be used as working drawings.  
 All work to comply with the Building Regulations 2010 and associated legislation  
 All dimensions and levels to be checked by Contractor on site  
 Any variations or discrepancies to be reported to the designer  
 All work on common boundaries to be carried out with the written permission of the adjoining owner  
 PARTY WALL etc ACT 1996.- It is the responsibility of the owner to serve satisfactory notice on any adjoining owner affected by these proposals An advisory booklet is available from DOE Publications, Blackhorse Road, London, SE39 6TT

**COMPLIANCE WITH CONSTRUCTION**  
 There are no particular processes or construction methods that produce unusual risks to health and safety during construction or in subsequent maintenance works All usual precautions are to be taken to protect the workforce and the building occupants.  
 All materials and products are to be used in accordance with the manufacturers instructions, British Standards, Codes of Practice and good building practice  
 Where the works are subject to Local Authority interest, say by way of a grant, the contractor is to make himself aware of any requirements  
 The contractor is to inform the Health and Safety Executive should any of the works falls within their interest  
 The contractor is advised to visit the site so as to become thoroughly acquainted with the scope and extent of works, to satisfy themselves as to accessibility of the site and to make their own risk assessment of the project  
 Arrangements to visit the site must be made through the client



Proposed Single Storey Side and Rear Extension at No 39 Edgewell Grange, Prudhoe  
 Plans Showing Existing and Proposed Floor Layout's, Elevation's and Section.  
 Scale 1:100 & Section 1:50 Nov : 2022