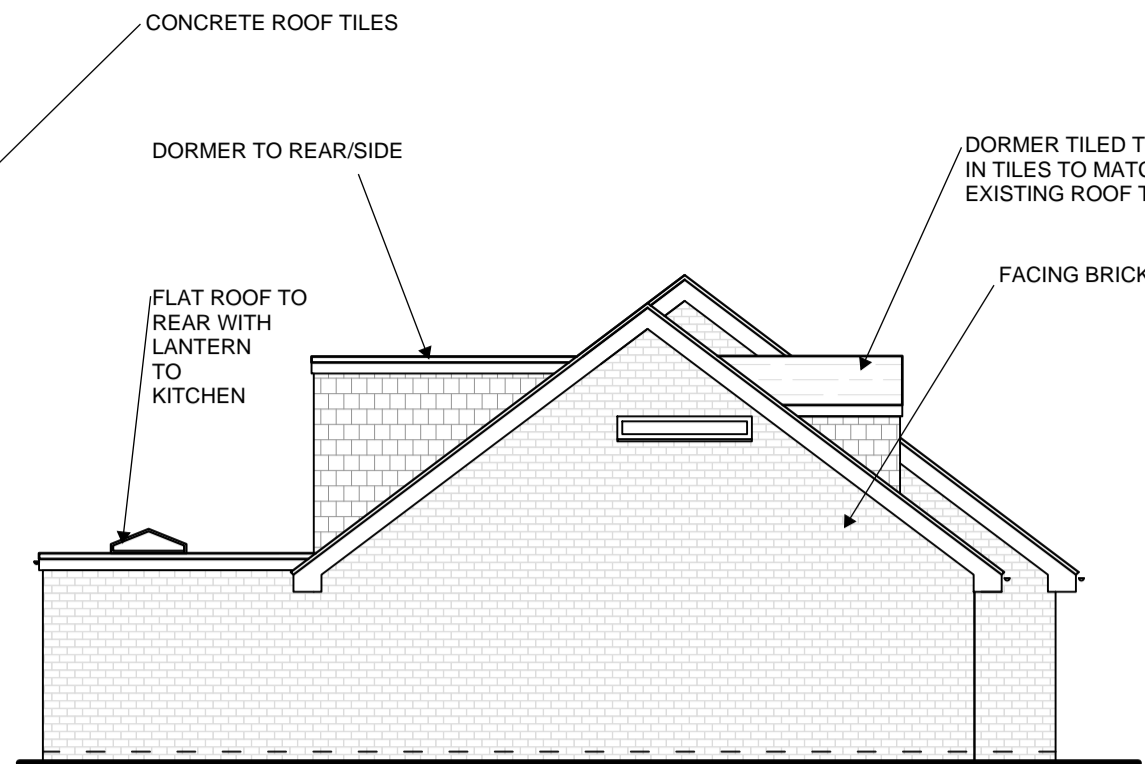
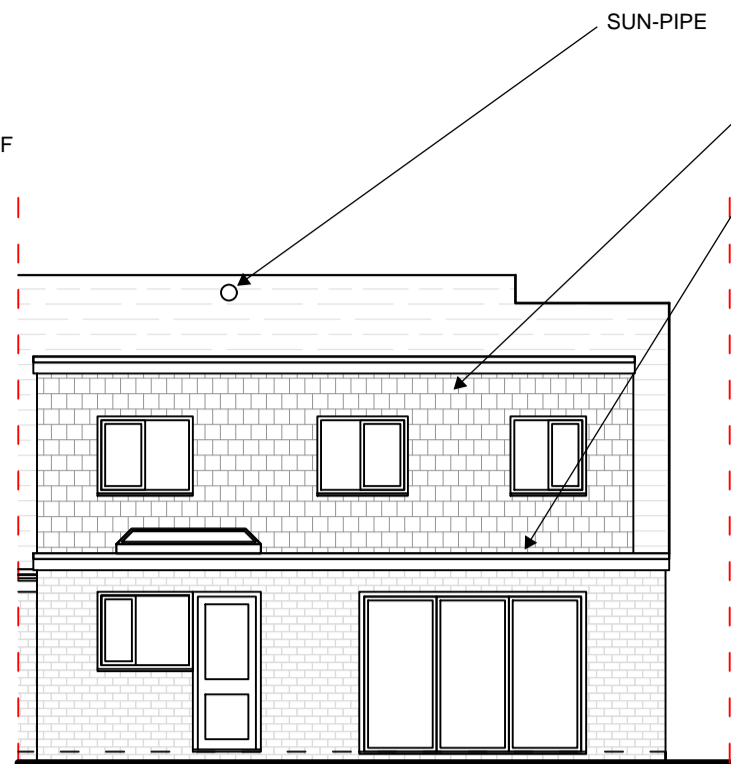


**FRONT ELEVATION - 1:100**

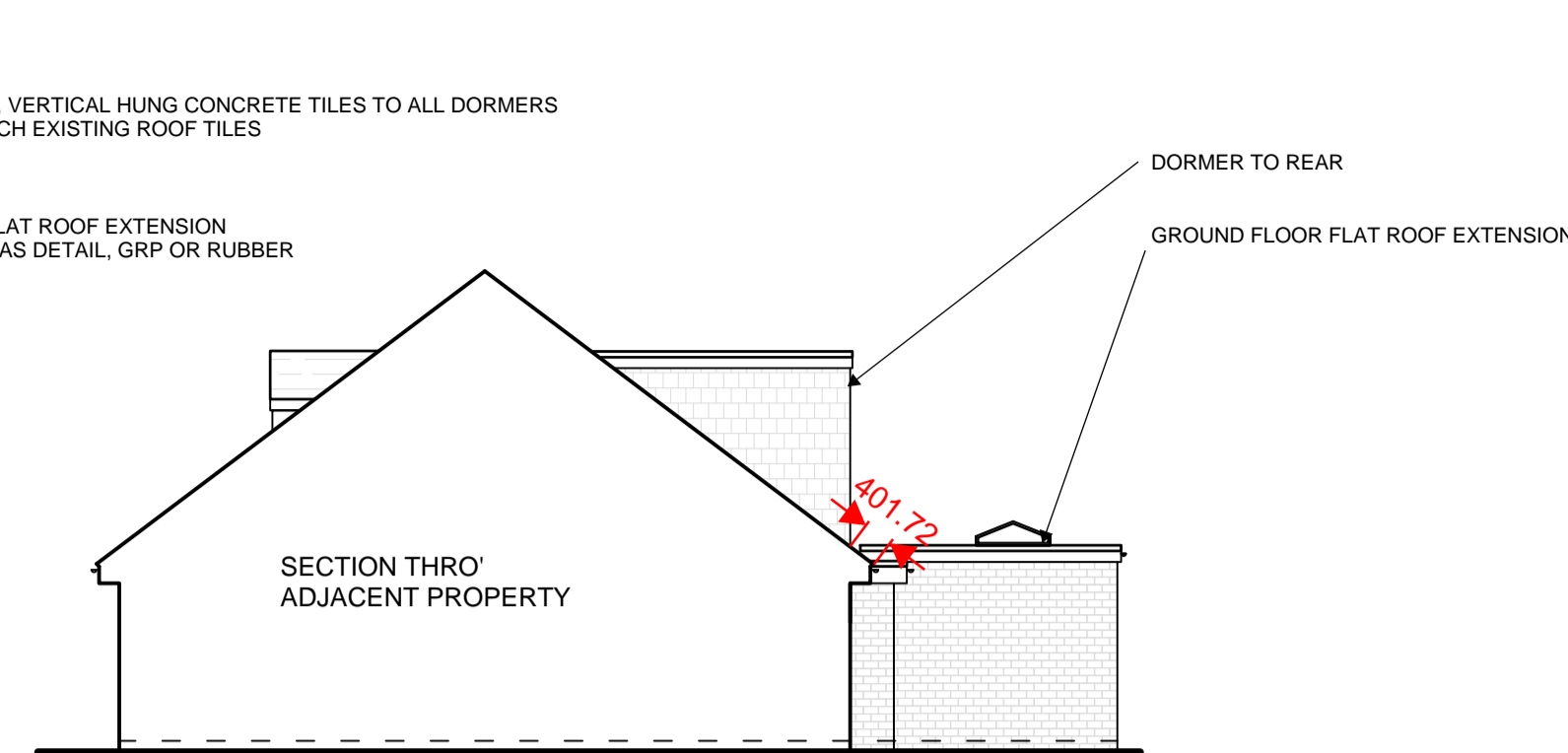
THIS BAR SHOULD SCALE 5M @ 1:100



**ELEVATION ON A - 1:100**



**REAR ELEVATION - 1:100**



**ELEVATION ON B - 1:100**

**TRENCH FOUNDATION**  
Provide 750mm x 600mm trench fill foundations, concrete mix to conform to BS EN 206-1 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 2004 Building Regulations A12 and BS 8004:1996 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.

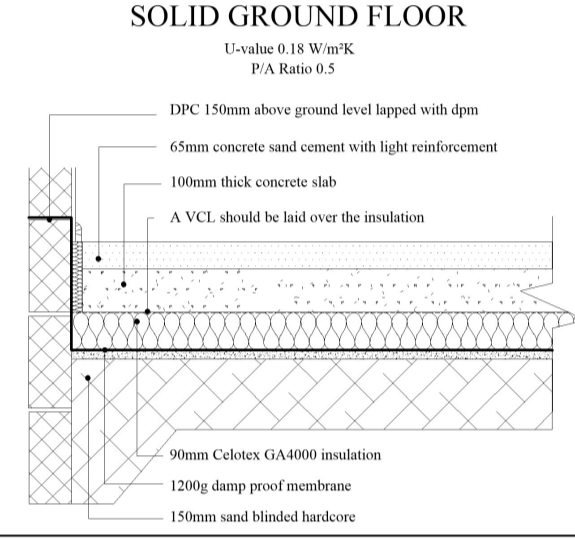
**WALLS BELOW GROUND**  
All new walls to have Class A blockwork below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

**PIPEWORK THROUGH WALLS**  
Where new pipework passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall. 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.

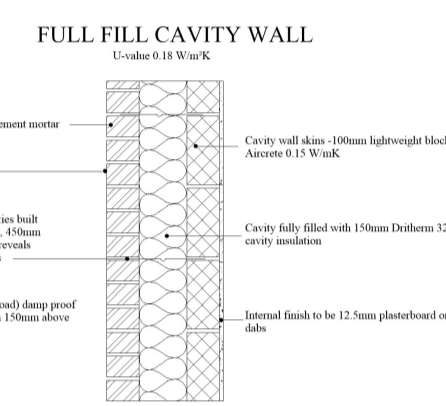
**UNDERGROUND FOUL DRAINAGE**  
Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1: 2009.

**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 both double sealed covers in buildings and be adequate for vehicle loads in driveways.

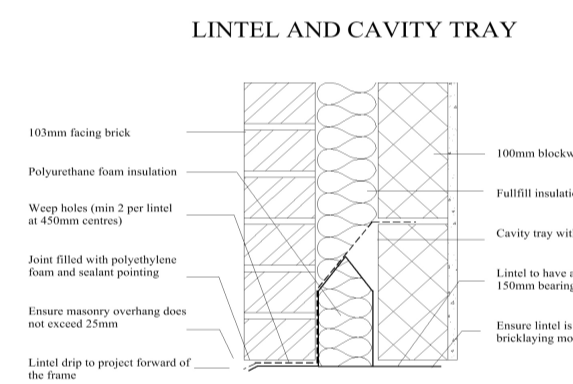
**SOLID FLOOR INSULATION UNDER SLAB**  
To meet min U value required of 0.18 W/m<sup>2</sup>K P/A ratio 0.5  
Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide a 1200 gauge polythene DPM, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 90mm thick Celotex GA4000 insulation. 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.



**FULL FILL CAVITY WALL (GROUND FLOOR)**  
To achieve minimum U Value of 0.18 W/m<sup>2</sup>K  
New cavity wall to comprise of 105mm suitable facing brick. Full fill the cavity with 150mm Dritherm 32 insulation as manufacturer's details. Inner leaf constructed using 100mm lightweight block, 0.15 W/m<sup>2</sup>K, e.g. Celcon solar, ThermaLite turbo. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.

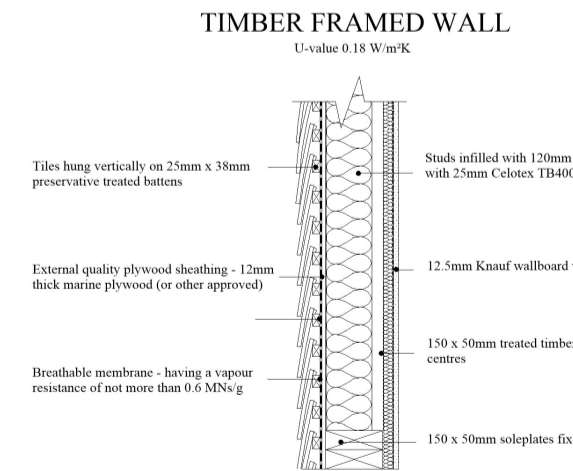


**LINTELS**  
- For uniformly distributed loads and standard 2 storey domestic loadings only  
Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal 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 8110, with a concrete strength of 50 or 47 N/mm<sup>2</sup> and incorporating steel strands to BS 6898 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 steel manufacturers standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.



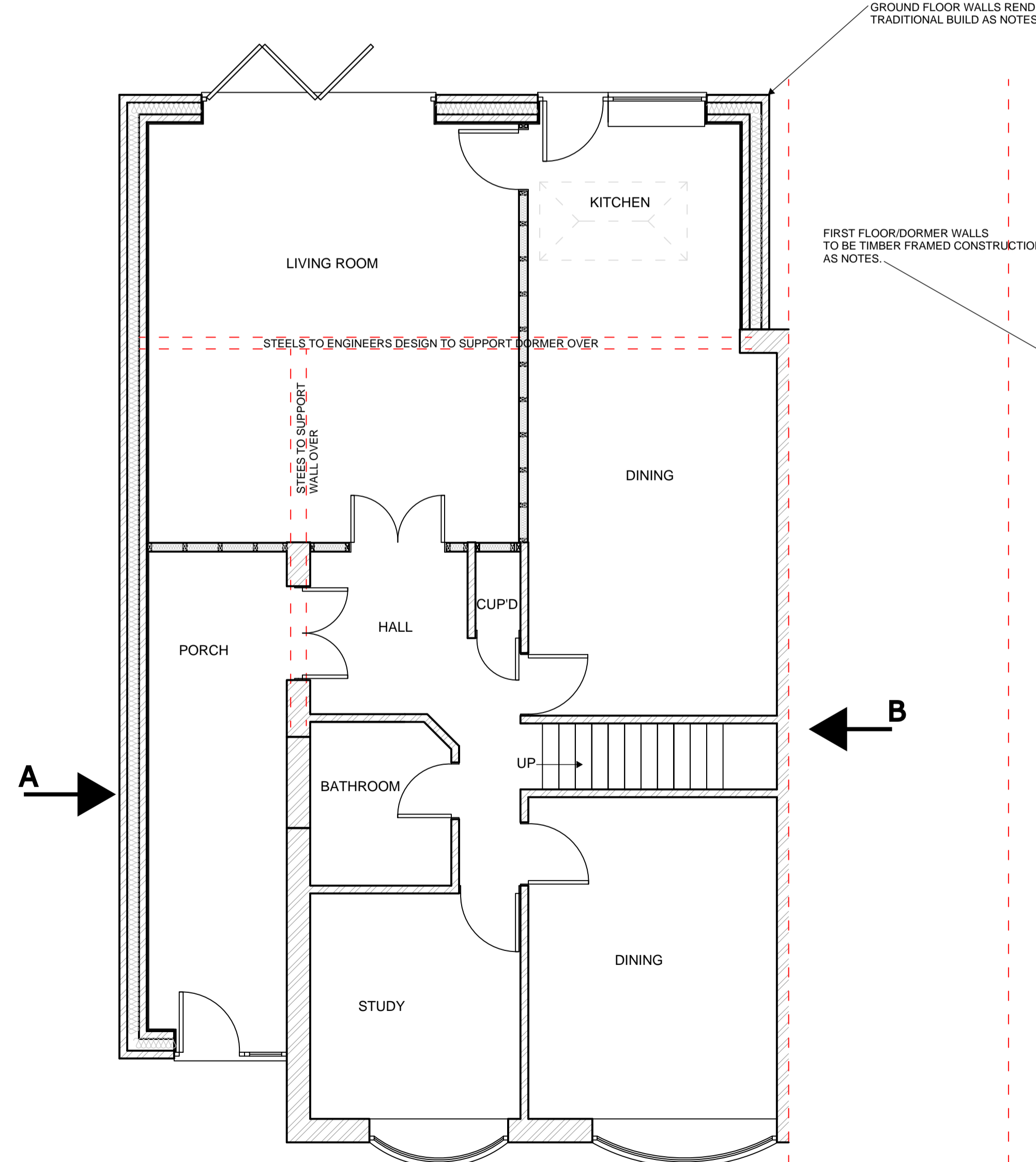
**INTERMEDIATE FLOORS**  
Intermediate floor to be 25mm 18g flooring grade chipboard or floorboards laid on C24 joists at 400mm ctrs (see engineer's calculation for sizes and details). Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m<sup>2</sup> or equivalent between floor joists. Ceiling 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 312:2010. 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 1/4 depth solid noggins between joists at strap positions.

**DORMER CONSTRUCTION**  
To achieve minimum U Value of 0.18 W/m<sup>2</sup>K  
Structure to engineer's details and calculations. Tiles hung vertically on 25 x 38mm preservative treated battens (vertical counter battens to be provided to ensure vented and drained cavity if required) fixed to breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) and 12mm thick W.B.P external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using: 150mm x 50mm head and sole plates and vertical studs (with noggins) at 400mm centres or to structural engineer's details and calculations. Insulation to be 120mm Celotex XR4000 between studs with 25mm Celotex TB4000 over. Provide vcl and 12.5mm plasterboard over internal face of insulation. Finish with 3mm skim coat of finishing plaster.  
All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally. Dormer walls built off existing masonry walls to have galvanised mild steel straps placed at 900 centres. Dormer cheeks within 1m of the boundary to be lined externally with 12.5mm Supalux and 12.5mm Gyproc FireLine board internally to achieve 1/2 hour fire resistance from both sides.



**NEW AND REPLACEMENT DOORS**  
New and replacement doors to achieve a U-value of 1.4W/m<sup>2</sup>K. Glazed areas to be double glazed with 16-20mm 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.  
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.  
Windows and door frames to be taped to surrounding openings using air sealing tape.

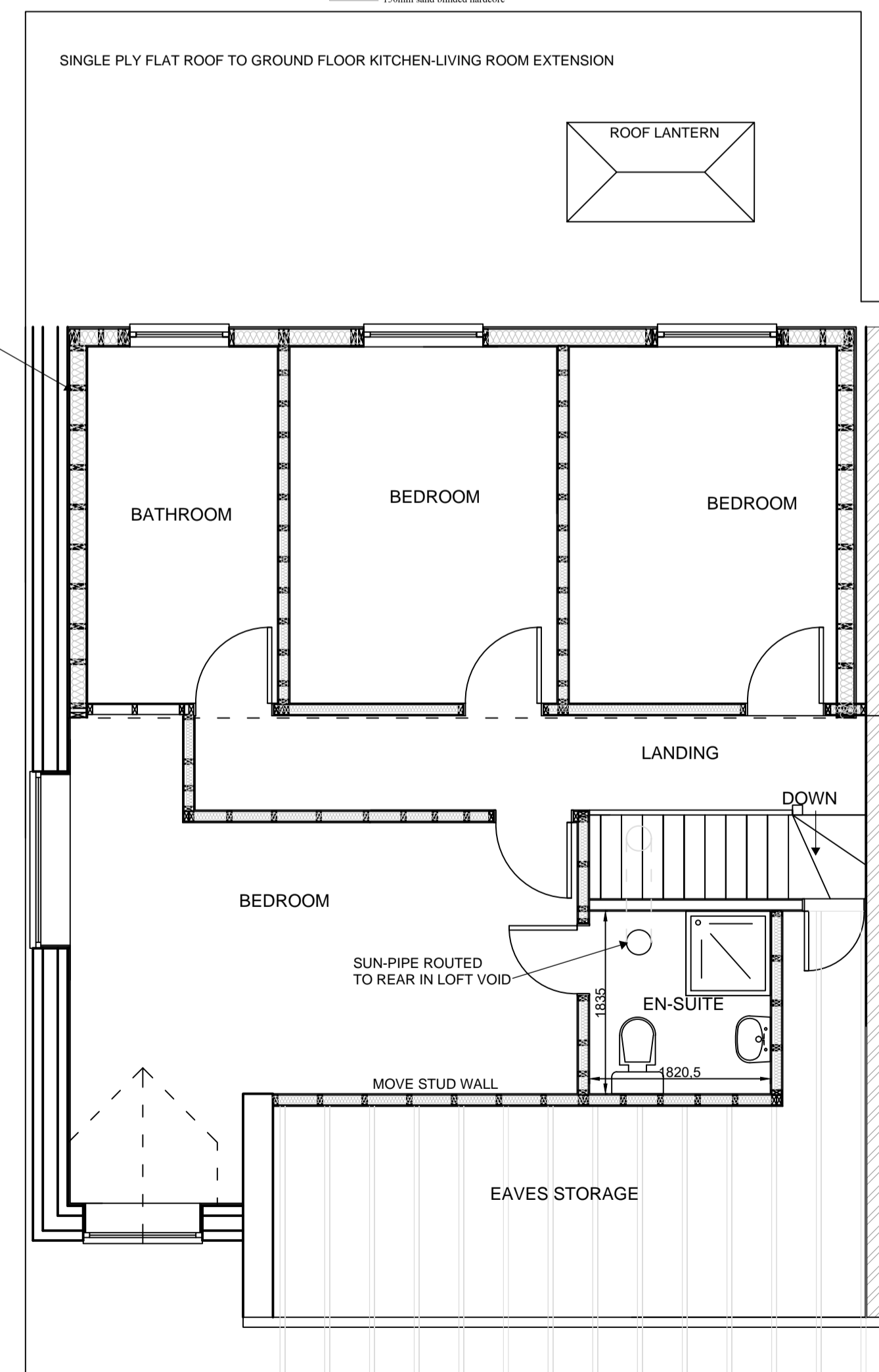
**NEW AND REPLACEMENT WINDOWS**  
New and replacement windows to be double glazed with 16-20mm argon gap and soft coat low-E glass. Window Energy Rating to be Band B or better and to achieve U-value of 1.4 W/m<sup>2</sup>K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.  
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.  
Windows and door frames to be taped to surrounding openings using air sealing tape. Windows to be fitted with trickle vents to provide adequate background ventilation in accordance with Approved Document F.



**AS PROPOSED GROUND FLOOR PLAN - 1:50**

THIS BAR SHOULD SCALE 5M @ 1:50

**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.



**AS PROPOSED FIRST FLOOR PLAN - 1:50**

- NOTES**
- 1) ALL DIMENSIONS TO BE CHECKED ONSITE PRIOR TO CONSTRUCTION. (INTERNAL DIMS MAY CHANGE DEPENDING ON EXTERNAL WALL CONSTRUCTION METHOD)
  - 2) A STRUCTURAL ENGINEER MUST BE CONSULTED FOR ALL STRUCTURAL WORKS
  - 3) WORKS TO BE CARRIED OUT BY COMPETENT, QUALIFIED CONTRACTORS
  - 4) ALL WORKS TO BE CARRIED OUT UNDER ALOCAL AUTHORITY BUILDING NOTICE ALL BUILD NOTES ARE GIVEN BASED ON STANDARD BUILDING REGULATIONS DETAILS AND MAY VARY. CONSTRUCTION METHODS MAY VARY ACCORDING TO BUILDERS PREFERENCE AND BUILDING CONTROL OFFICER REQUIREMENTS. THESE DRAWINGS ARE PRODUCED FOR PLANNING ONLY.

Glass reinforced plastic (GRP) system with a current BBA or other approved VENTILATED FLAT ROOF (imposed load max 1.0 kN/m<sup>2</sup> - dead load max 0.75 kN/m<sup>2</sup>)  
To achieve U value of 0.18 W/m<sup>2</sup>K  
Glass reinforced plastic (GRP) system with aa fire rating and a current BBA or other approved accreditation be laid in compliance with manufacturers details by flat roofing specialist, on 22mm exterior grade plywood, laid on firings to give a 1:40 fall on 47 x 145mm grade C24 timber joists at 400 ctrs max span 3.22m (see engineer's details for sizes). Cross-ventilation to be provided on opposing sides by a proprietary eaves ventilation strip to give 25mm continuous ventilation, with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a continuous 50mm air gap above the insulation for ventilation. Insulation to be Celotex GA4000 90mm between and 62.5mm Celotex PL4000 insulated plasterboard under joists placed over vapour barrier with skim plaster finish. Provide cavity tray where pitched roof meets existing wall. 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.  
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.

**ABOVE GROUND DRAINAGE**  
All new above ground drainage and plumbing to comply with BS EN 12056-2:2000 for sanitary pipework. All drainage to be in accordance with Part H of the Building Regulations. Waste 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 4m for 40mm pipe  
Bathroom - 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 to SWP within 200mm of the WC connection.  
Supply hot and cold water to all fittings as appropriate.

**EXTRACT TO KITCHEN**  
Kitchen to have mechanical ventilation with an extract rating of 60/sec or 30/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.  
**EXTRACT TO BATHROOM**  
Bathroom to have mechanical vent ducted to external air to provide min 15 litres / sec extraction. Kiten to be connected to light switch and to have 15 minute over run 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.  
**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 40 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.

- REV F: REAR DORMER WINDOWS ALTERED, JAN 2023
- REV E: DORMER CHANGED TO VERTICAL HUNG TILE AND REAR WINDOWS ALTERED, JAN 2023
- REV D: ROOF TO FRONT AND DORMERS CORRECTED, JAN 2023
- REV C: DESIGN REVISED FOR RE-SUBMISSION, NOV-2022
- REV B: FIRST FLOOR SIDE EXTENSION REMOVED AND DORMER REDUCED, JULY 2022
- REV A: KITCHEN WINDOW AND FIRST FLOOR ROOMS ALTERED, JUNE 2022

**HOMEPLAN**  
ARCHITECTURE PLANNING DESIGN

**CLIENT/PROJECT:**  
MR TURNER AND MISS BISHOP  
PROPOSED EXTENSION AND WORKS TO PROPERTY  
16 GATTON WAY, HUCCLECOTE, GLOS, GL3 3DG

**TITLE:**  
AS PROPOSED PLANS AND ELEVATIONS

**SCALE:**  
1:100 AND 1:50 @ A1

**DATE:**  
JUNE 2022

B-16GW-H-G-002F

FOR PLANNING ONLY