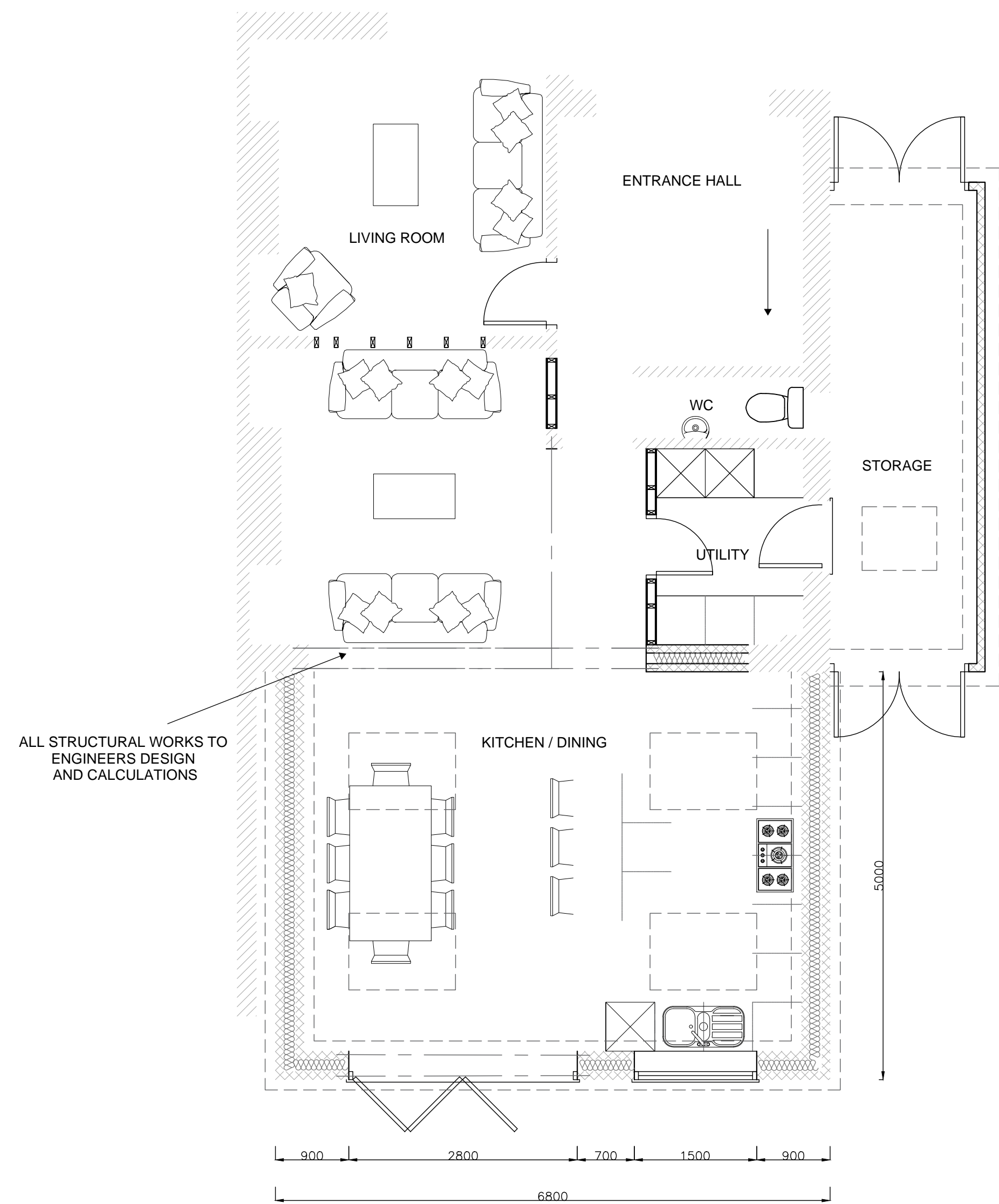
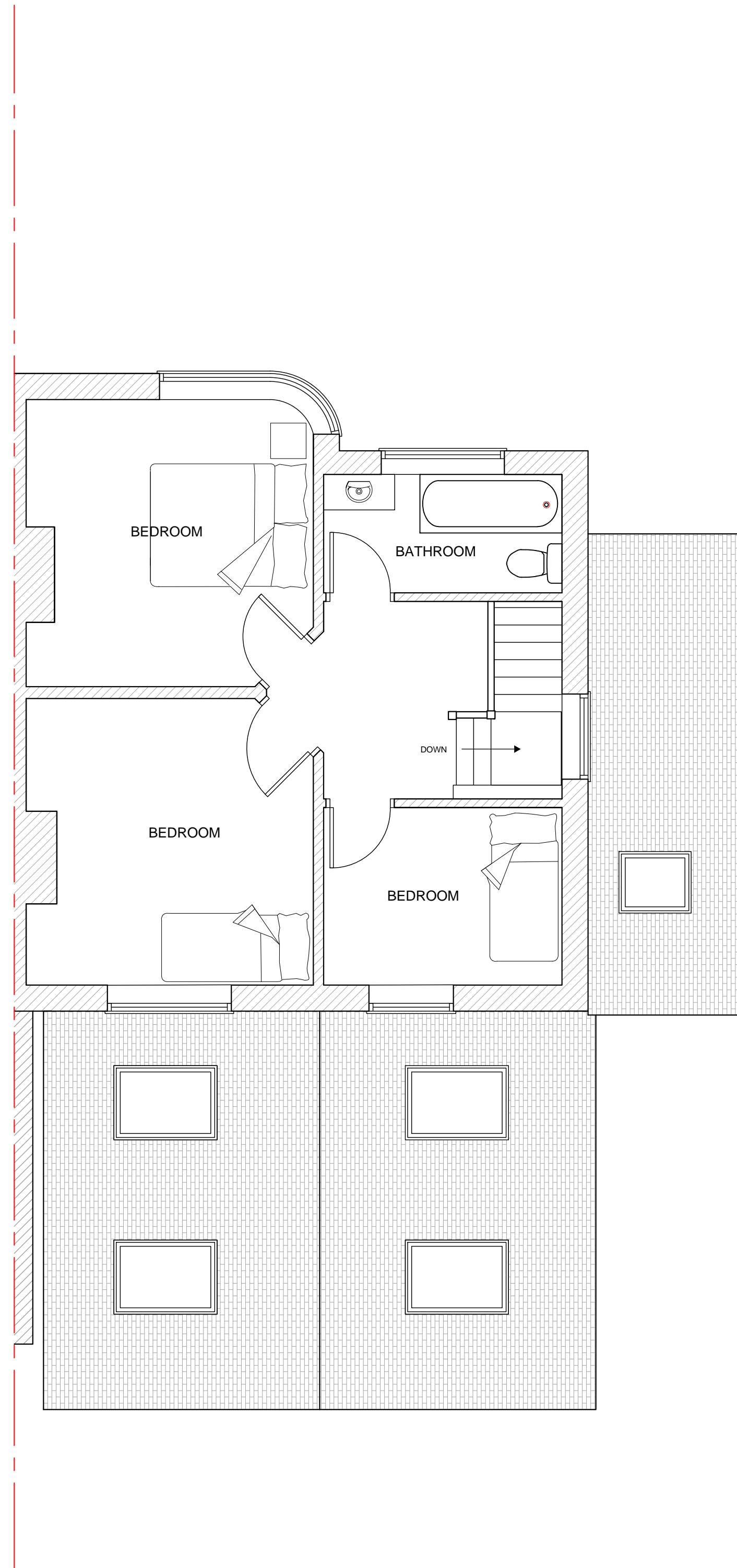
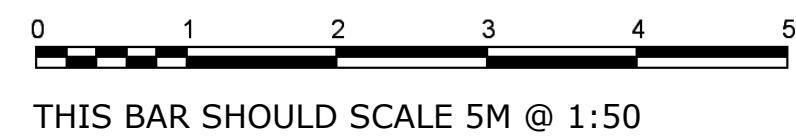


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AS PROPOSED GROUND FLOOR PLAN - 1:50



AS PROPOSED FIRST FLOOR PLAN - 1:50



CLIENT/PROJECT:  
 ANDY CULLIS  
 29 KINGSCROFT ROAD, GLOUCESTER, GL3 3RG  
 REAR & SIDE SINGLE STOREY EXTENSION

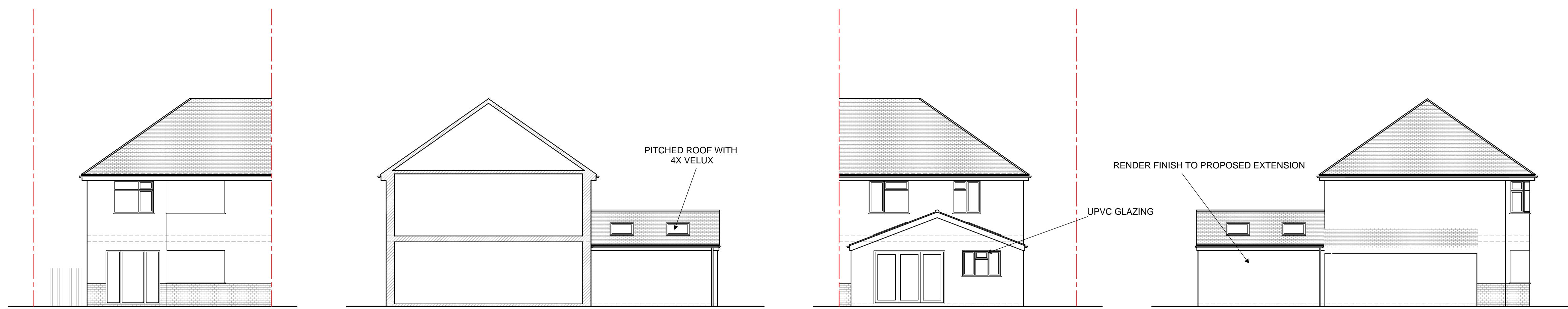
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**AS PROPOSED FRONT ELEVATION - 1:100**

**AS PROPOSED SIDE ELEVATION - 1:100**

**AS PROPOSED REAR ELEVATION - 1:100**

**AS PROPOSED END ELEVATION - 1:100**

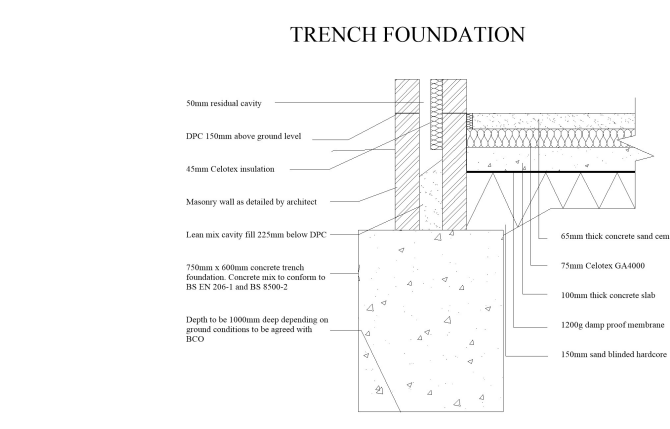
THIS BAR SHOULD SCALE 5M @ 1:100

**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 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.

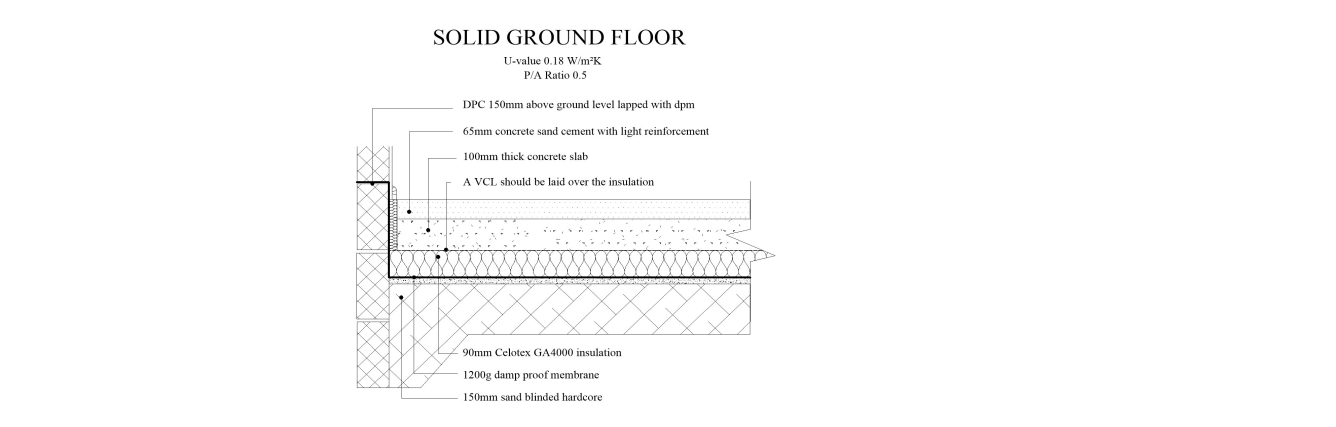
**UNDERGROUND FOUL DRAINAGE**  
Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material.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

**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 A1/2 and BS 8004:1986 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.

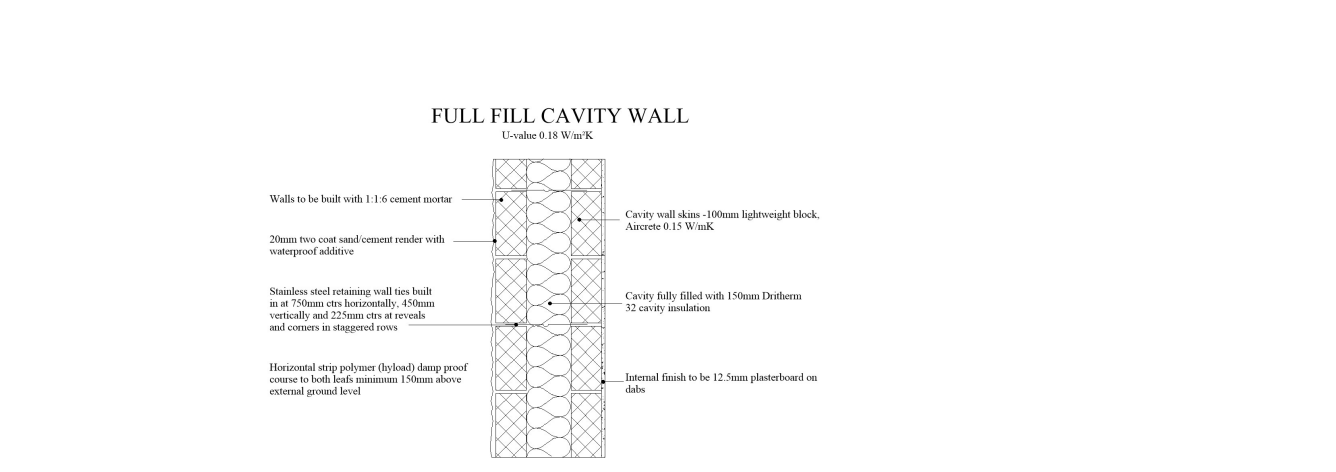


**INSPECTION CHAMBERS**  
Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in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

**UNVENTED PITCHED ROOF**  
Pitch 22-45°  
To achieve U-value 0.15 W/m²K  
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 breathable sarking felt to relevant BBA Certificate. Supported on 47 x 195mm grade C24 rafters at max 400mm centres span to engineer's details. Rafters supported on 100 x 50mm treated sw wall plates. Allow min 20mm air space to allow for drape of breathable felt. Insulation to be 165mm Celotex XR4000 between rafters and 30mm TB4000 under. 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.  
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.



**SOLID FLOOR INSULATION UNDER SLAB**  
To meet min U value required of 0.18 W/m²K  
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 G4-000 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**  
To achieve minimum U Value of 0.18 W/m²K  
20mm top coat sand/cement render to comply to BS EN 13914-1 with waterproof additive on 100mm lightweight block, 0.15 W/m²K, e.g. Celcon solar, Toplite Standard. Fully fill the cavity with 150mm Dritherm S2 cavity insulation as manufacturer's spec. Inner leaf to be 100mm lightweight, 0.15 W/m²K, e.g. Celcon solar, Toplite standard. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.

**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.

**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 40 N/mm² 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 manufacturers standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

**NEW AND REPLACEMENT DOORS**  
New and replacement doors to achieve a U-Value of 1.4 W/m²K. 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 low-E glass. Window Energy Rating to be Band B or better and to achieve U-value of 1.4 W/m²K. 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.

**HEATING**  
Extend all heating and hot water services from existing and provide new TVRs 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.

**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.

**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. Wastes to have 75mm deep anti vac bottle traps and rodding eyes to be provided at changes of direction.

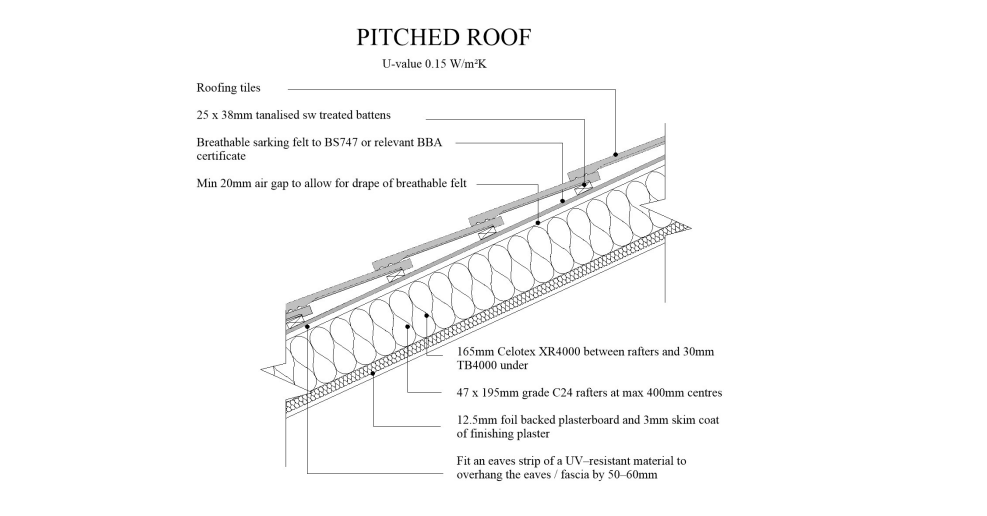
Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)  
Wash basin - 1.7m for 32mm pipe 4m for 40mm pipe  
Bath/shower - 3m for 40mm pipe 4m for 50mm pipe  
W/c - 6m for 100mm pipe for single WC  
All branch pipes to connect to 110mm soil 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.

**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.

**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/m³ density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) on 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.

**EXTRACT TO WC**  
WC to have mechanical ventilation ducted to external air with an extract rating of 15/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.

**ROOF LIGHTS**  
Min U-value of 1.6 W/m²K.  
Roof lights to be double glazed with 16mm 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.



**CLIENT/PROJECT:**  
ANDY CULLIS  
29 KINGS CROFT ROAD, GLOUCESTER, GL3 3RG  
REAR & SIDE SINGLE STOREY EXTENSION

**TITLE:**  
AS PROPOSED ELEVATIONS & BUILDING REG NOTES

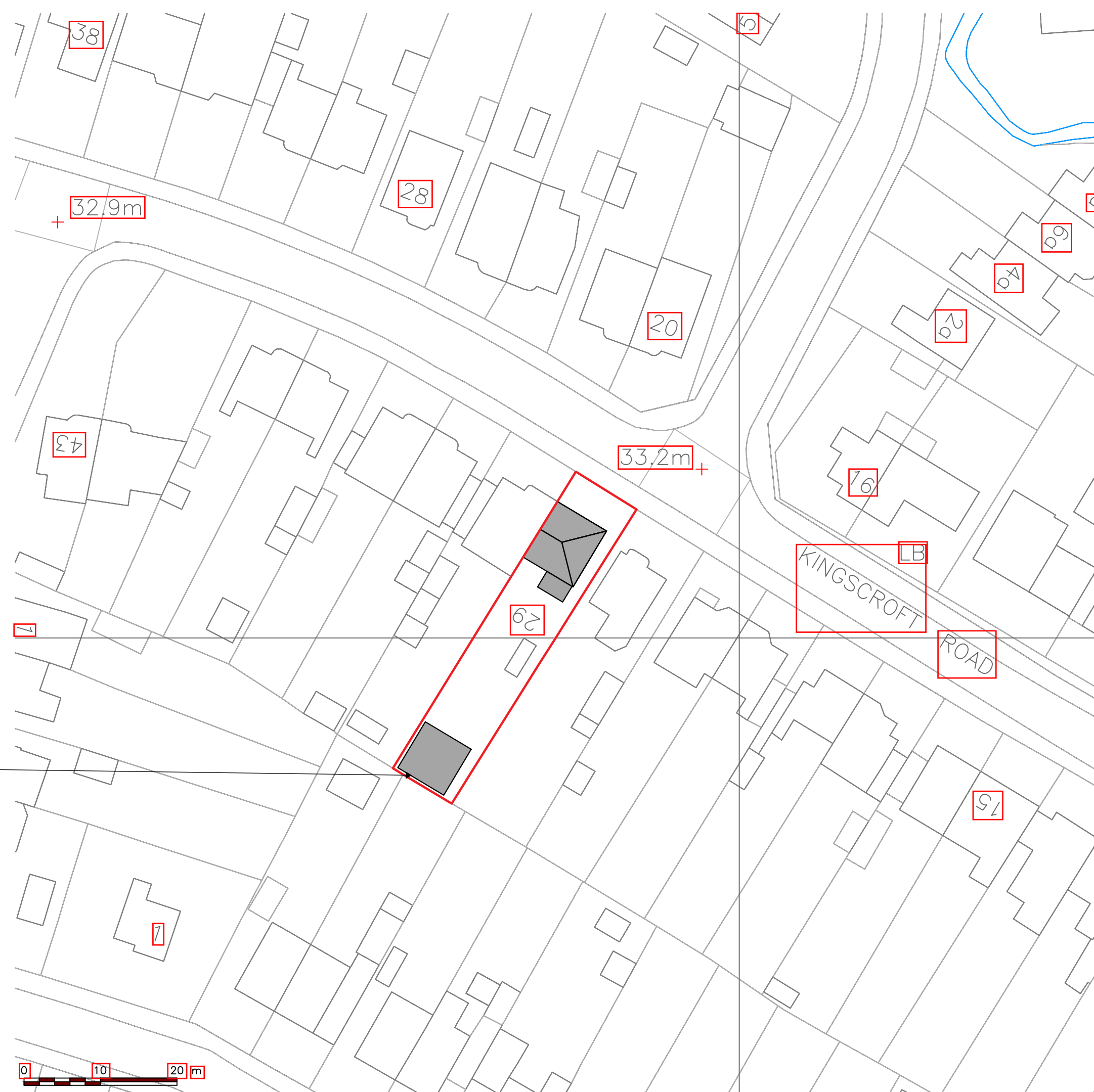
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AS EXISTING BLOCK PLAN - 1:500



AS PROPOSED BLOCK PLAN - 1:500



AS EXISTING SITE PLAN - 1:1250



AS PROPOSED SITE PLAN - 1:1250



CLIENT/PROJECT:  
 ANDY CULLIS  
 29 KINGS CROFT ROAD, GLOUCESTER, GL3 3RG  
 REAR & SIDE SINGLE STOREY EXTENSION

TITLE:  
 AS EXISTING & PROPOSED SITE PLANS

SCALE:  
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