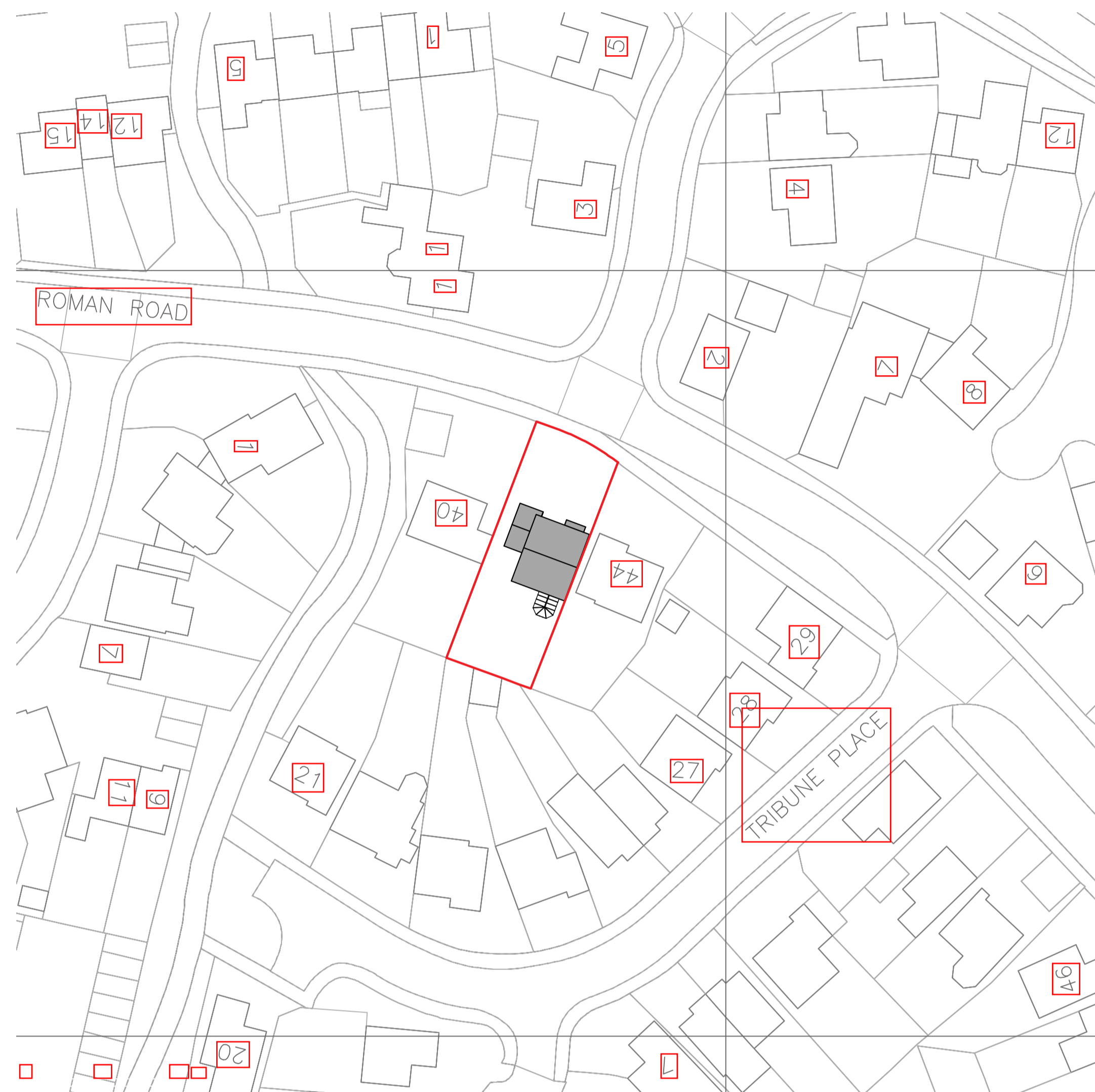
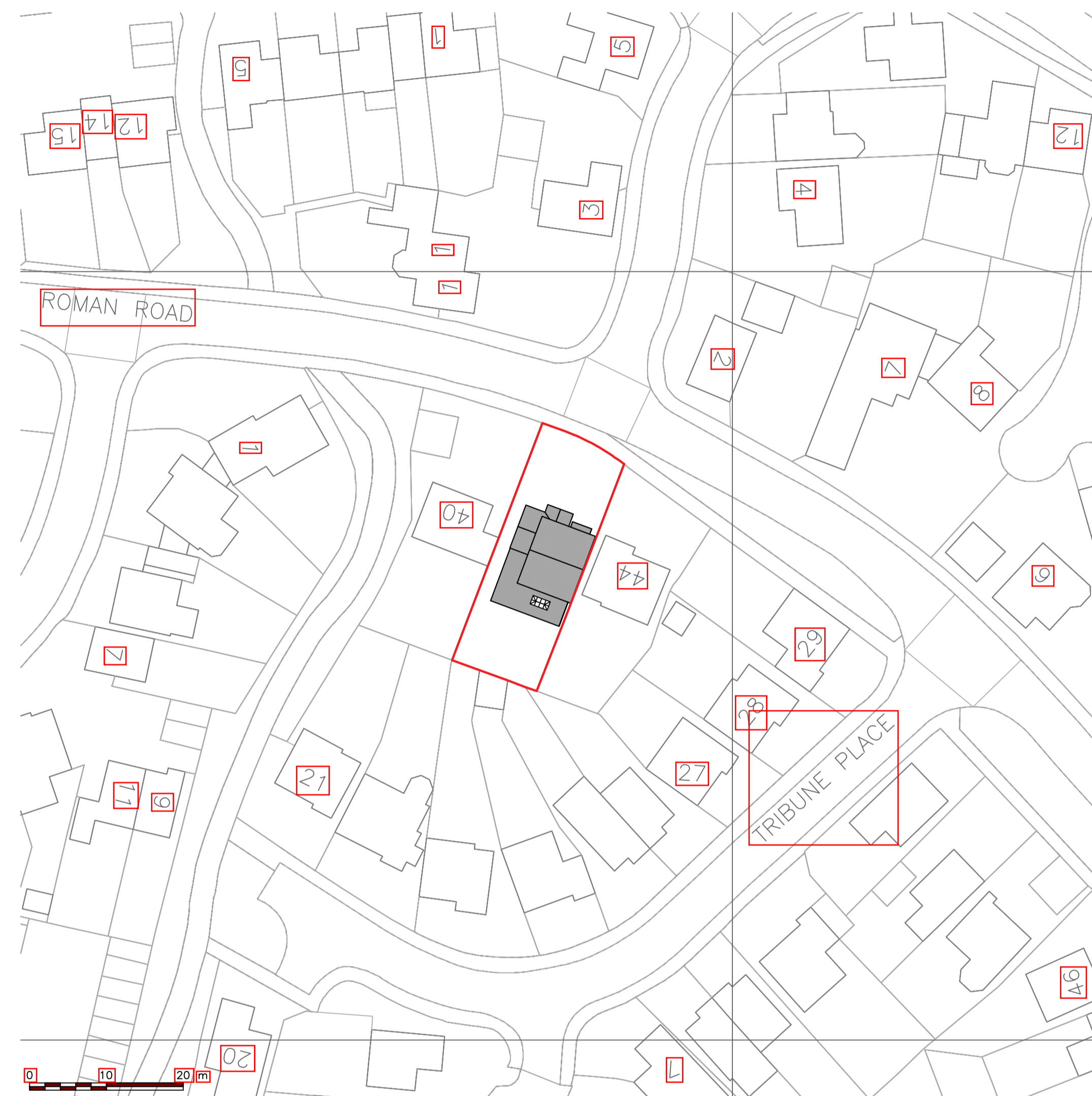


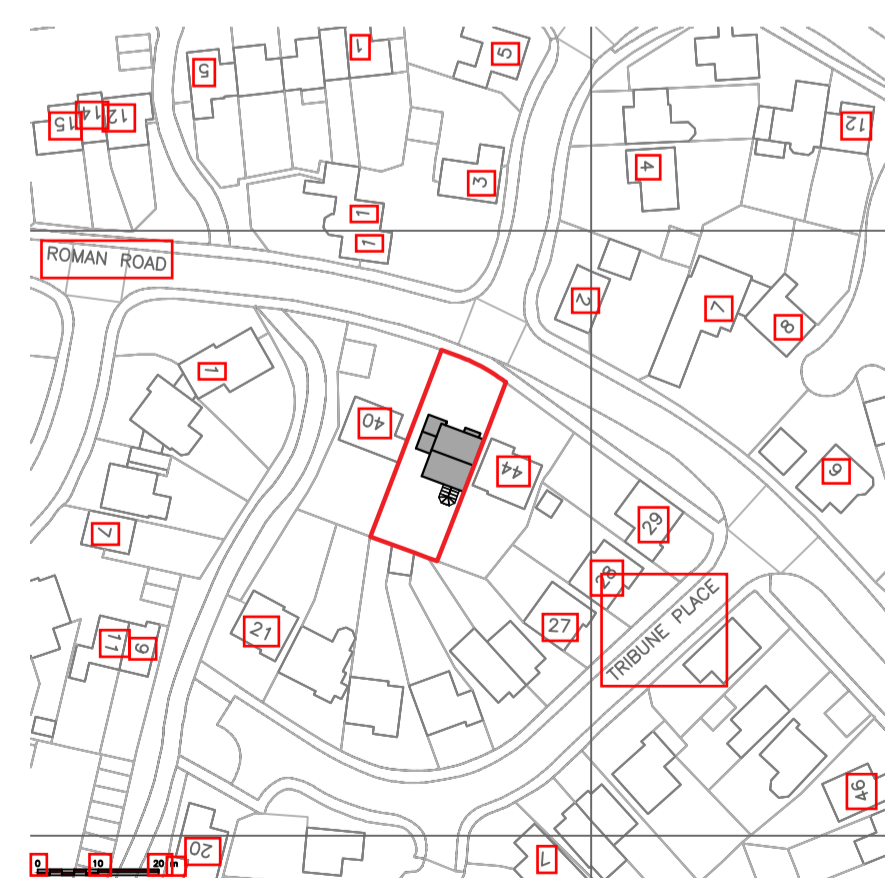
- NOTES
- 1) ALL DIMENSIONS TO BE CHECKED ONSITE PRIOR TO CONSTRUCTION (INTERNAL DIMS MAY CHANGE DEPENDING ON EXTERNAL WALL CONSTRUCTION METHOD)
 - 2) A STRUCTURAL ENGINEER MUST BE CONSULTED FOR ALL STRUCTURAL WORKS
 - 3) WORKS TO BE CARRIED OUT BY COMPETENT, QUALIFIED CONTRACTORS
 - 4) ALL WORKS TO BE CARRIED OUT UNDER A LOCAL 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.



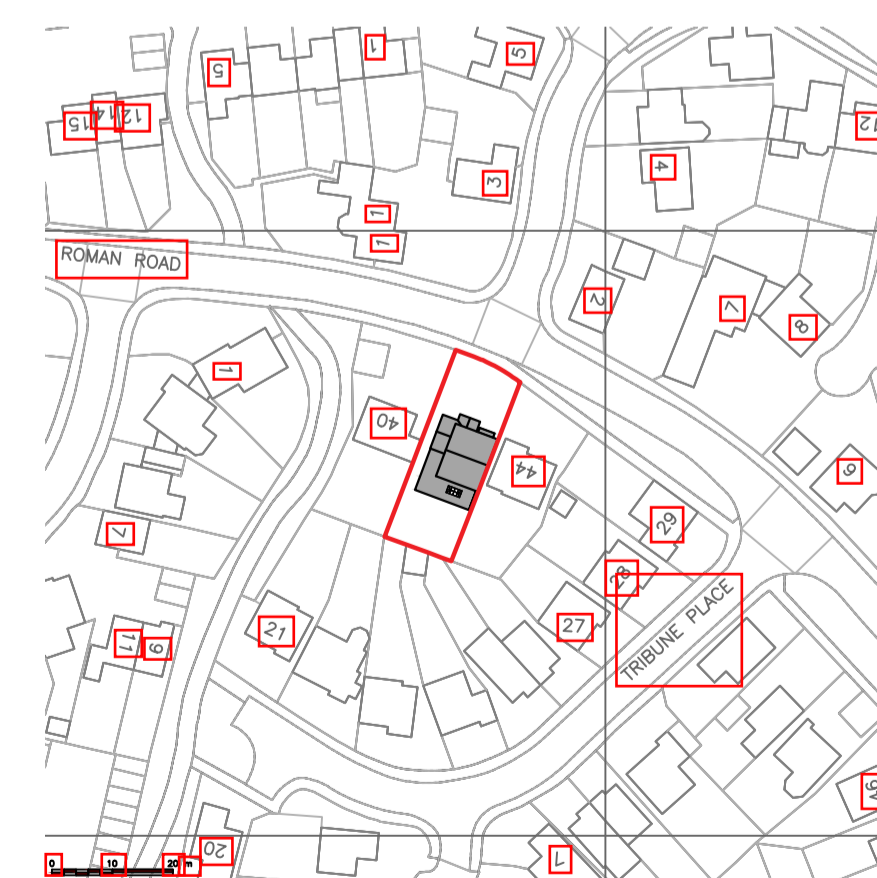
AS EXISTING BLOCK PLAN - 1:500



AS PROPOSED BLOCK PLAN - 1:500



AS EXISTING SITE PLAN - 1:1250



AS PROPOSED SITE PLAN - 1:1250

CLIENT/PROJECT:
SAM HALL
42 ROMAN ROAD, ABBEYMEAD, GLOUCESTER, GL4 5HR
REAR SINGLE STOREY EXTENSION

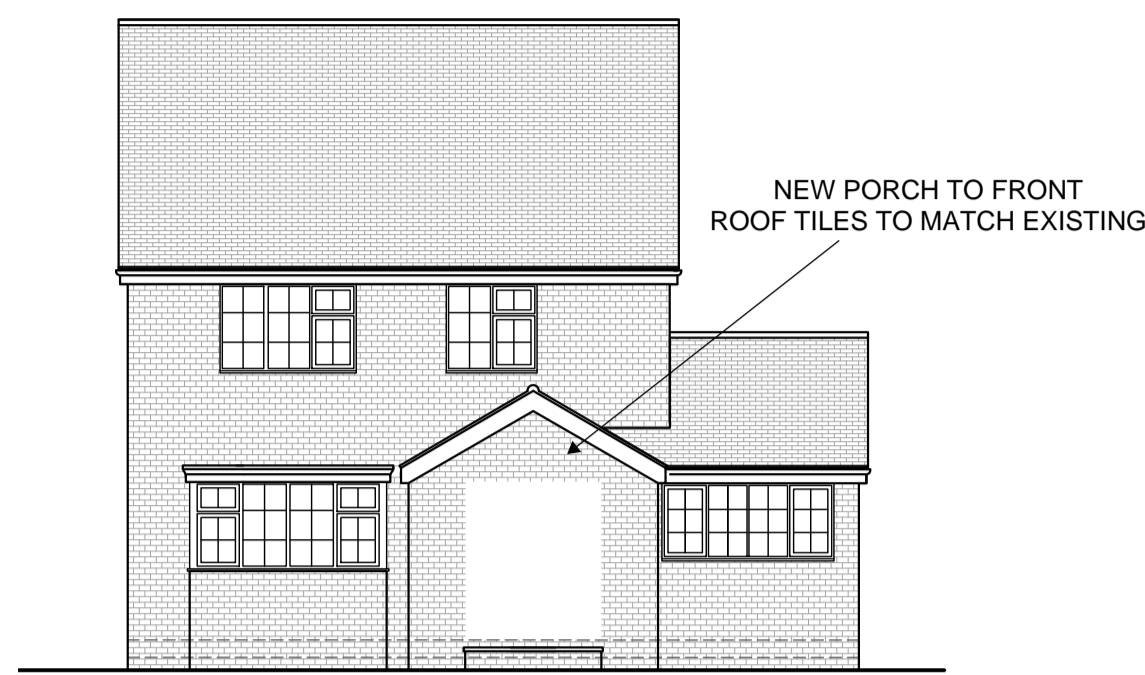
TITLE:
SITE PLANS

SCALE:
1:500, 1:1250 @ A1

DATE:
OCT 2022



- NOTES
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AS PROPOSED FRONT ELEVATION - 1:100

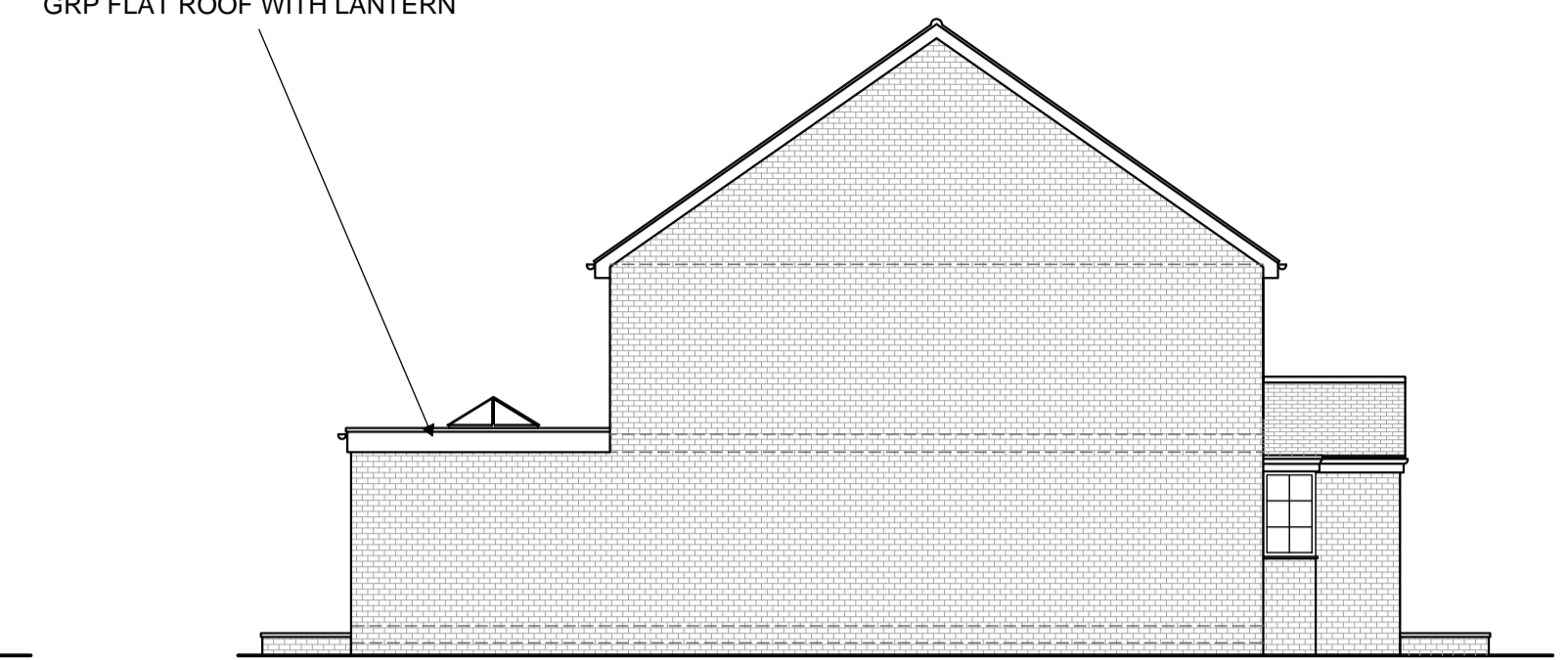
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AS PROPOSED SIDE ELEVATION - 1:100



AS PROPOSED REAR ELEVATION - 1:100



AS PROPOSED END ELEVATION - 1:100

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.

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.

LEAD WORK AND FLASHINGS
All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.

NEW AND REPLACEMENT DOORS
New and replacement doors to achieve a U-Value of 1.4W/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 coat 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.

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 waste 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 12389, 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 connector.
Supply hot and cold water to all fittings as appropriate.

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/m² density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Iso wool 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.

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.

BACKGROUND AND PURGE VENTILATION
Background ventilation - Controllable background ventilation via trickle vents to BS EN 13141-3 within the window frame to be provided to new habitable rooms at a rate of min 5000mm² and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm².
Purge ventilation - New Windows/rooftops 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.

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.

C2. CONDENSATION
Walls, floors and roof of the building to be designed and constructed so that their structural and thermal performance will not be adversely affected by interstitial condensation, surface condensation or mould growth. Account to be taken of the building's form and orientation in relation to topography, prevailing winds, sunlight and over-shadowing, and the rate at which humidity is generated.
Materials with the highest vapour resistance should be located on the warm side of a thermal element. VCLs to be provided where necessary.
The junctions between elements are designed to Accredited Construction Details or guidance of BRE IP7/01 and BS 5250:2011+A1:2016 Code of practice for control of condensation in buildings to be followed.

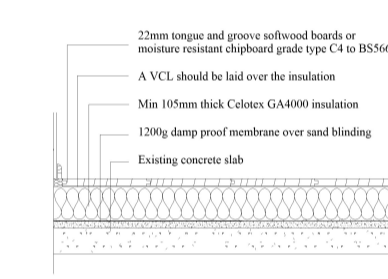
WARM FLAT ROOF
(Imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value 0.15 W/m²K
Flat roof to be single ply membrane roofing providing an fire rating for surface spread of flame with a current BBA or WMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 165mm Celotex XR4000 insulation.

Insulation bonded to vcl on 22mm external quality plywood decking or similar approved on sw fixings to minimum 1 in 80 fall on sw treated 47 x 195mm C24 flat roof joists at 400mm ctrs to give a max span of 4.51m or as Structural Engineer's details and calculations. Underside of joists to have 12.5mm foil backed plasterboard and skim. Provide cavity tray to existing house where new roof abuts existing house.
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.
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 DETAIL 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.

UNVENTED PITCHED ROOF - FOR PORCH
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. Rafter 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 DETAIL 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.

UPGRADE OF GROUND FLOOR



UPGRADING EXISTING SOLID FLOOR
To meet min U value required of 0.25 W/m²K
The existing solid floor slab must be checked for stability and be free from defects as required by Building Control. The existing floor will need upgrading to ensure adequate damp protection and to prevent heat loss. Provide 1200 gauge polythene DPM or 3 coats RIV over existing concrete slab (if required). DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 75mm thick Celotex GA4000, 25mm Celotex 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. Care should be taken to ensure any existing airbricks for the main house are not obstructed by this work. If so, they should be extended through the new floor to external air. Where drain runs pass under floor provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain. A lesser provision may be appropriate where meeting such a standard would create significant problems in relation to adjoining floor level.

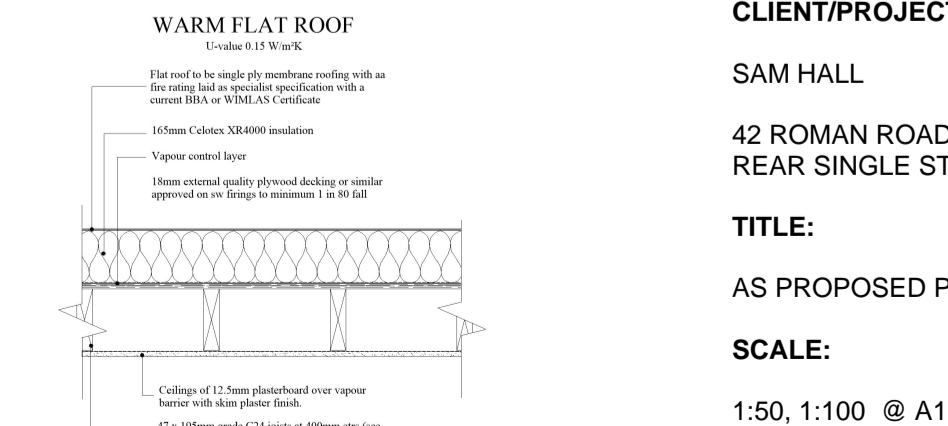
EXTERNAL WALL UPGRADE
To achieve minimum U Value of 0.30W/m²K
Existing garage floor to be exposed and checked for suitability to carry the load from the new stud wall prior to commencement of work and as required by the Building Control Officer. Construct an inner leaf of timber studwork using 100mm x 50mm treated timbers with head and sole plates and noggins at 400mm ctrs ensuring a 50mm clear cavity between existing wall and new stud. Provide a breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) on cavity side of studwork. Insulation between and over studs to be 90mm Celotex GA4000 between and 37.5mm Celotex PL4000 insulated plaster board with VCL over studs. 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. Provide a cavity tray at the base with weep holes at 600 ctrs. Provide horizontal strip polymer (hyalod) damp proof course to new leaf minimum 150mm above external ground level. An injected DPC may also be required if one is not already present and working in existing wall. New DPC to be made continuous with floor DPM.
A lesser provision of insulation may be appropriate where meeting such a standard would result in a reduction of more than 5% in the internal floor area of the room.

WARM FLAT ROOF
(Imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value 0.15 W/m²K
Flat roof to be single ply membrane roofing providing an fire rating for surface spread of flame with a current BBA or WMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 165mm Celotex XR4000 insulation.

WARM FLAT ROOF
(Imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value 0.15 W/m²K
Flat roof to be single ply membrane roofing providing an fire rating for surface spread of flame with a current BBA or WMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 165mm Celotex XR4000 insulation.

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CLIENT/PROJECT:

SAM HALL
42 ROMAN ROAD, ABBEYMEAD, GLOUCESTER, GL4 5HR
REAR SINGLE STOREY EXTENSION

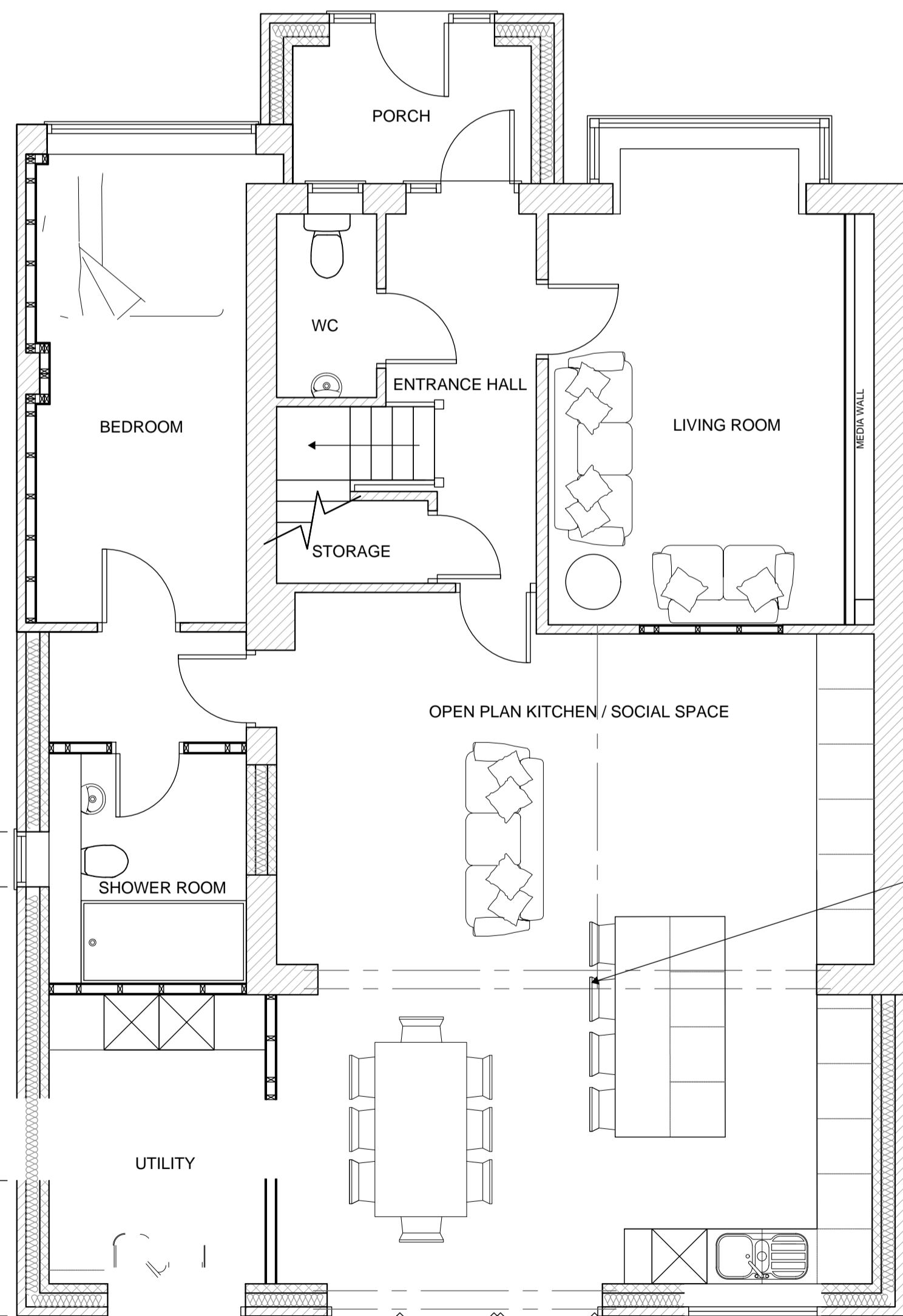
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SCALE:
1:50, 1:100 @ A1

DATE:
SEPT 2022

DATE:
SEPT 2022

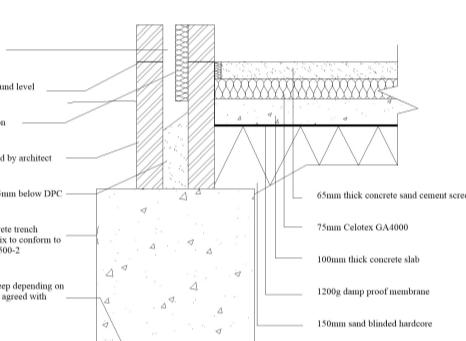
42RR-SH-G-002A



AS PROPOSED GROUND FLOOR PLAN - 1:50

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TRENCH FOUNDATION



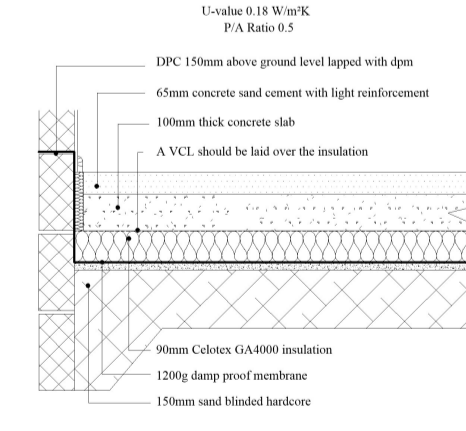
WALLS BELOW GROUND
All new walls to have Class A blockwork below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill 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.

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 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.

ALL STRUCTURAL WORKS TO ENGINEERS DESIGN AND CALCULATIONS

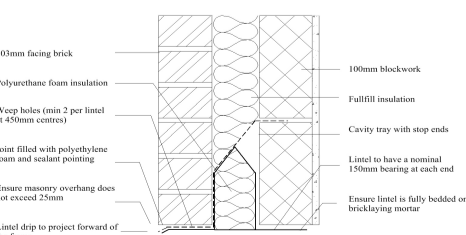
SOLID GROUND FLOOR
To meet min U value required of 0.18 W/m²K
P/A Ratio 0.5



FULL FILL CAVITY WALL
To achieve minimum U Value of 0.18 W/m²K
New cavity wall to comprise of 105mm suitable facing brick. Full fill the cavity with 150mm Dniberm 32 insulation as manufacturer's details. Inner leaf constructed using 100mm lightweight block, 0.15 W/m²K, e.g. Calcon solar, Thermatite 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 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.

LINTEL AND CAVITY TRAY

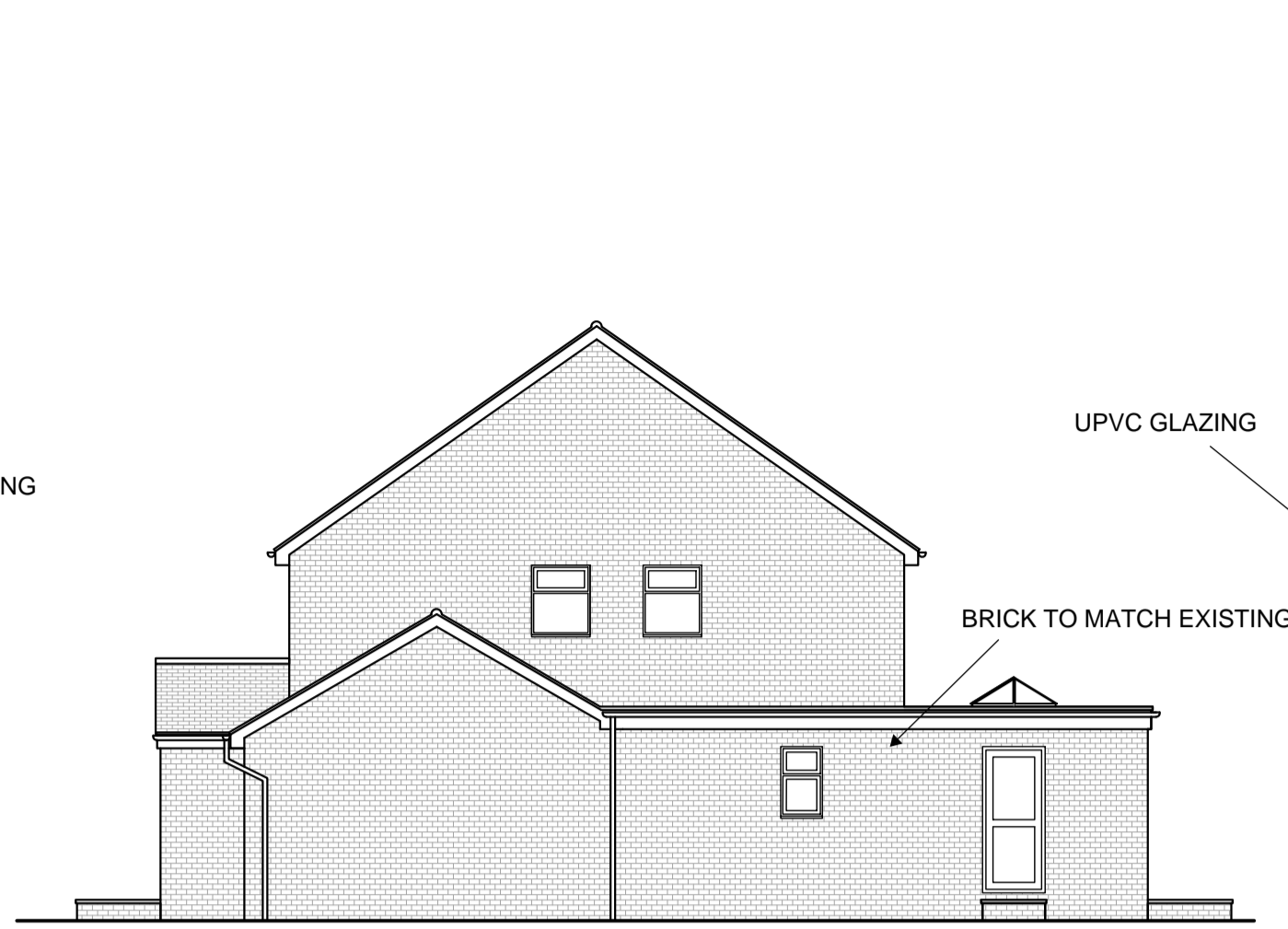


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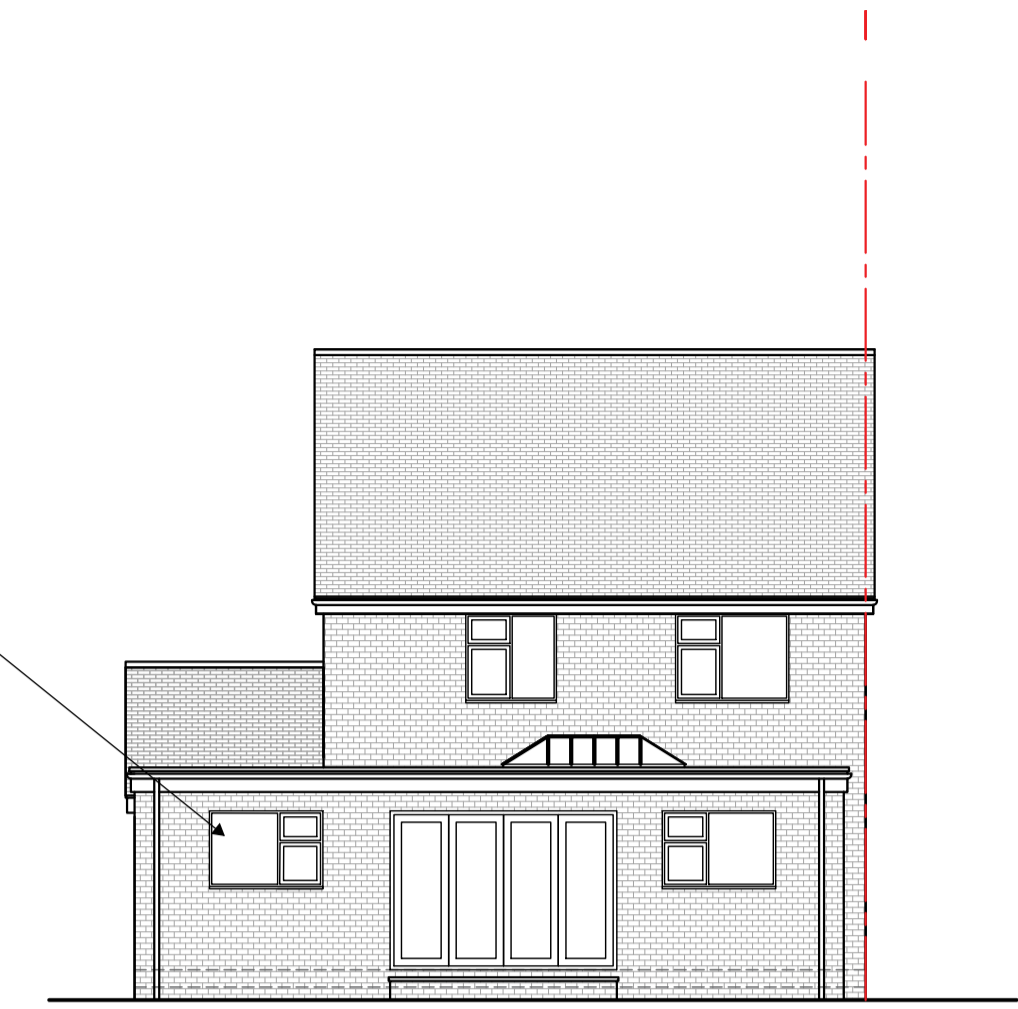


AS PROPOSED FRONT ELEVATION - 1:100

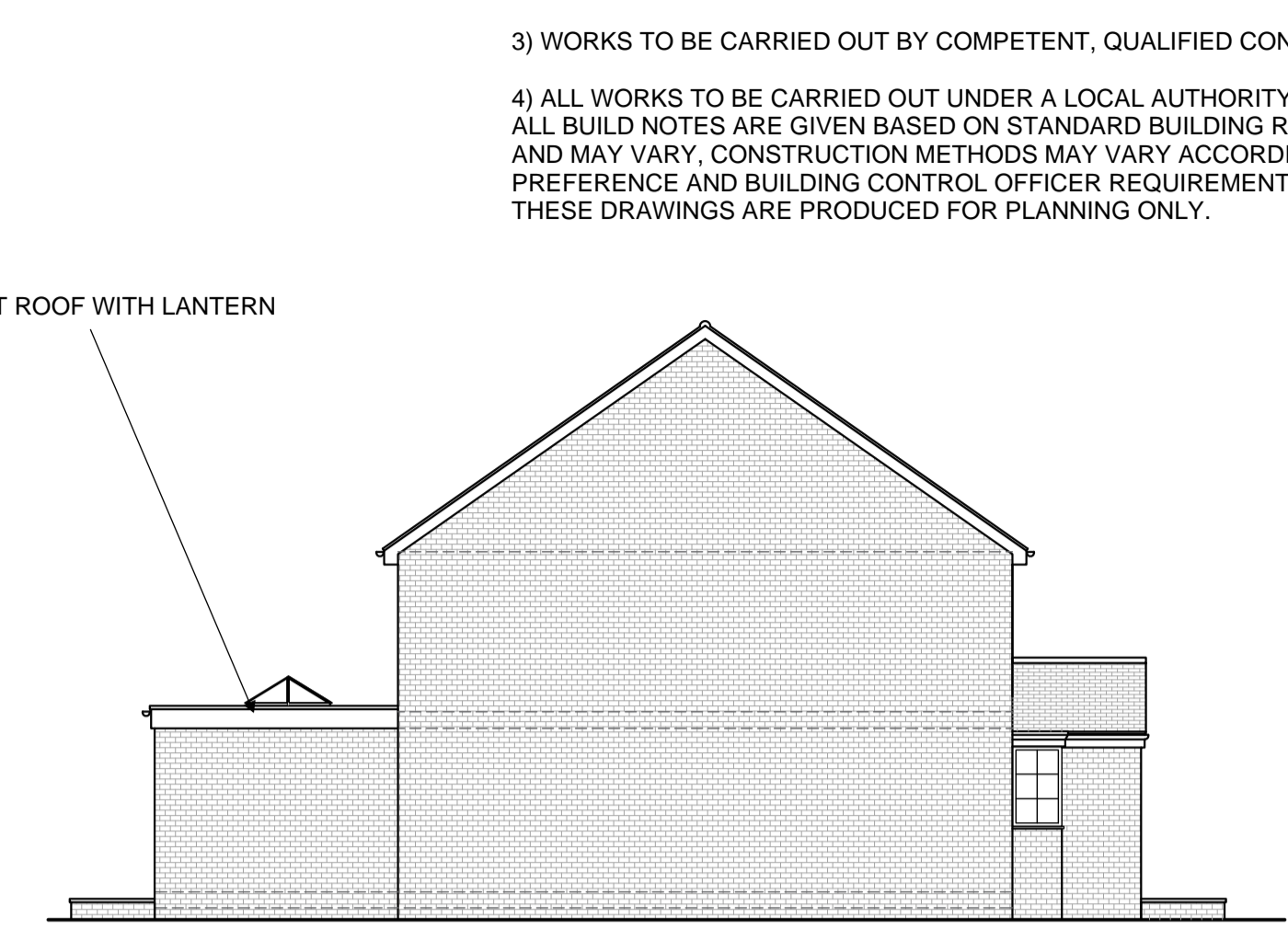
THIS BAR SHOULD SCALE 5M @ 1:100



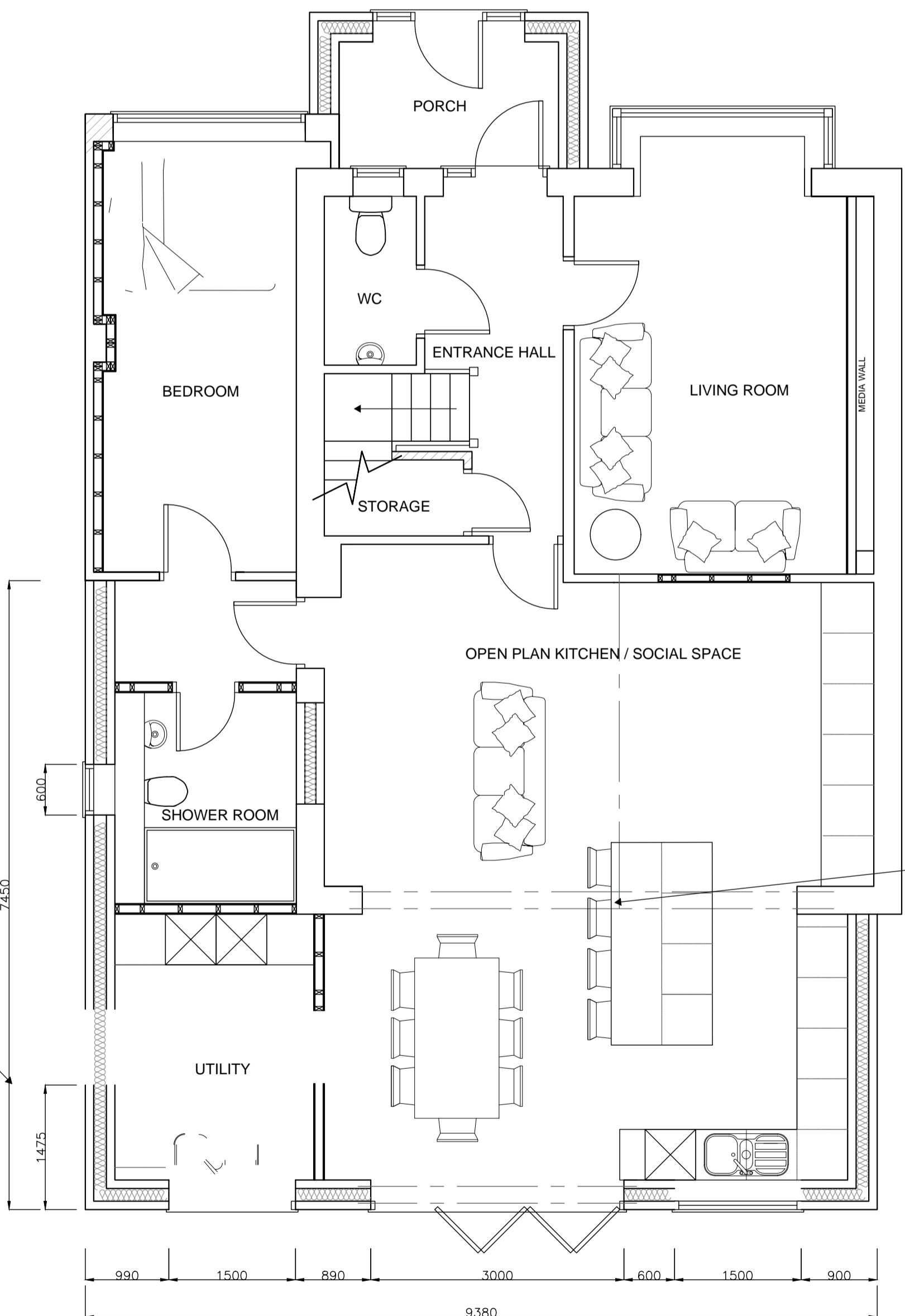
AS PROPOSED SIDE ELEVATION - 1:100



AS PROPOSED REAR ELEVATION - 1:100



AS PROPOSED END ELEVATION - 1:100

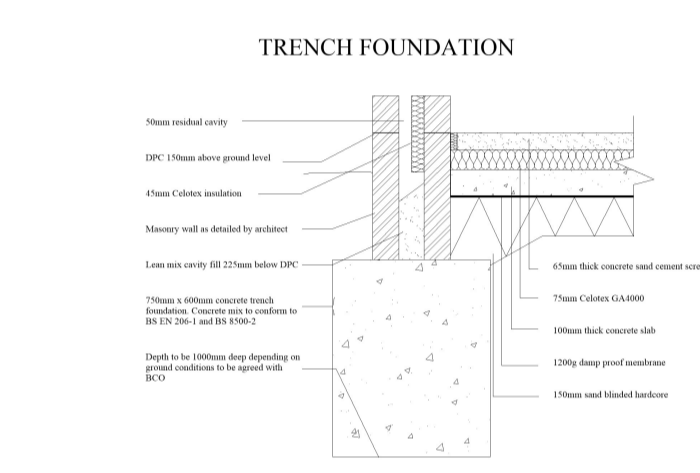


AS PROPOSED GROUND FLOOR PLAN - 1:50

THIS BAR SHOULD SCALE 5M @ 1:50

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.

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 8004:1985 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.

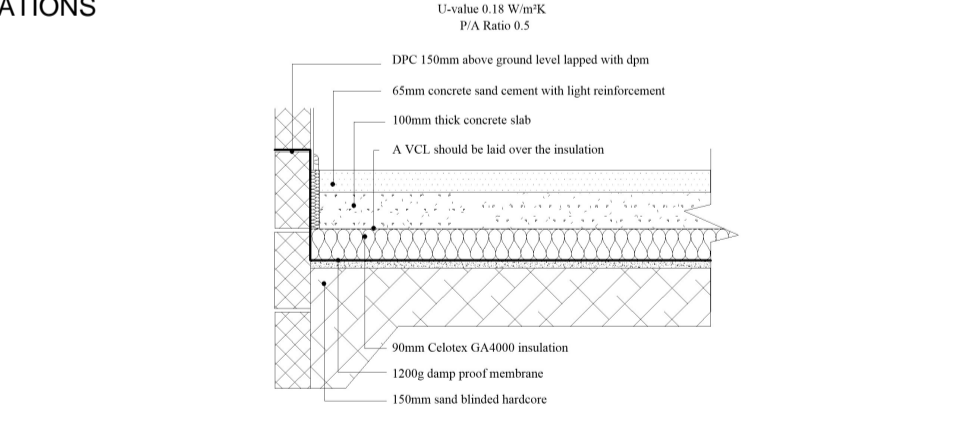
PIPEWORK THROUGH WALLS
Where new pipework passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall. Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe; max opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.

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 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 beam 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 an 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.

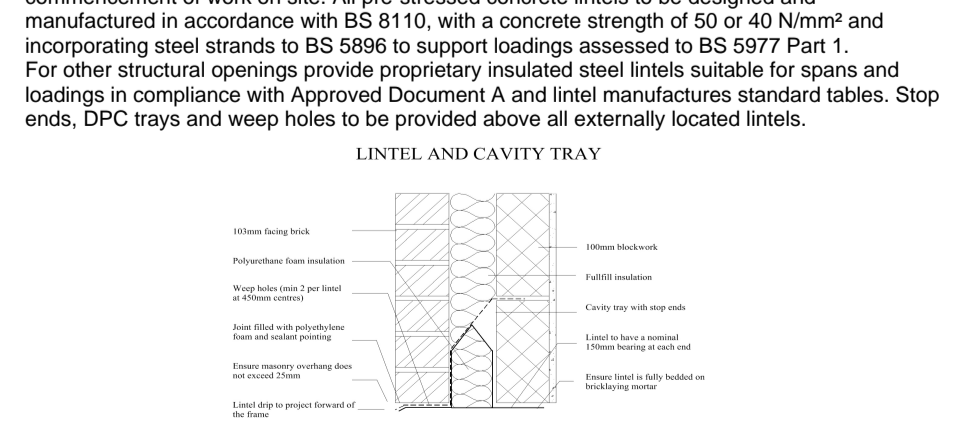
ALL STRUCTURAL WORKS TO ENGINEERS DESI AND CALCULATIONS

SOLID GROUND FLOOR
To meet min U value required of 0.18 W/m²K
P/A ratio 0.5
DPC 150mm above ground level lapped with glass
45mm concrete sand cement with light reinforcement
100mm thick concrete slab
A VCL should be laid over the insulation
90mm Celotex GA4000 insulation
100mm deep polyurethane foam insulation
150mm sand finished hardcore



FULL FILL CAVITY WALL
To achieve minimum U Value of 0.18 W/m²K
New cavity wall to comprise of 150mm suitable facing brick. Full fill the cavity with 150mm Ditritherm 32 insulation as manufacturer's details. Inner leaf constructed using 100mm lightweight block, 0.15 W/m²K, 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 40 N/mm² and incorporating steel strands 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 manufactures standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.



LEAD WORK AND FLASHINGS
All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.

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 coat 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.

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
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 on to SVP within 200mm of the WC connection.
Supply hot and cold water to all fittings as appropriate.

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 Iso wool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off double 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 primer finish. Taped and jointed complete with beads and stops.

EXTRACT TO KITCHEN
Kitchen to have mechanical ventilation with an extract rating of 60l/sec or 30l/sec if adjacent to hob with 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. Intermitent 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.

BACKGROUND AND PURGE VENTILATION
Background ventilation - Controllable background ventilation via trickle vents to BS EN 13141-3 within the window frame to be provided to new habitable rooms at a rate of min 5000mm²; and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm².
Purge ventilation - New Windows/rooftops 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.

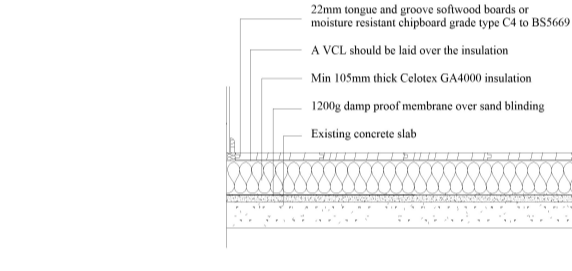
FLAT ROOF VENTILATION
Cross-ventilation to be provided on opposing sides by a proprietary eaves ventilation strip equivalent to 25mm continuous with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a 50mm air gap above the insulation for ventilation.

C2. CONDENSATION
Walls, floors and roof of the building to be designed and constructed so that their structural and thermal performance will not be adversely affected by interstitial condensation, surface condensation or mould growth. Account to be taken of the building's form and orientation in relation to topography, prevailing winds, sunlight and over-shadowing, and the rate at which humidity is generated.
Materials with the highest vapour resistance should be located on the warm side of a thermal element. VCLs to be provided where necessary.
The junctions between elements are designed to Accredited Construction Details or guidance of BRE IP17/01 and BS 5250:2011+A1:2016 Code of practice for control of condensation in buildings to be followed.

WARM FLAT ROOF
(imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value 0.15 W/m²K
Flat roof to be single ply membrane roofing providing as fire rating for surface spread of flame with a current BBA or WIMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 165mm Celotex XR4000 insulation.

Insulation bonded to vel on 22mm exterior quality plywood decking or similar approved on sw firings to minimum 1 in 80 fall on sw treated 47 x 195mm C24 flat roof joists at 400mm ctrs to give a max span of 4.51m or as Structural Engineer's details and calculations. Underside of joists to have 12.5mm foil backed plasterboard and skim. Provide cavity tray to existing house where new roof abuts existing house.
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 200mm 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.

UPGRADE OF GROUND FLOOR



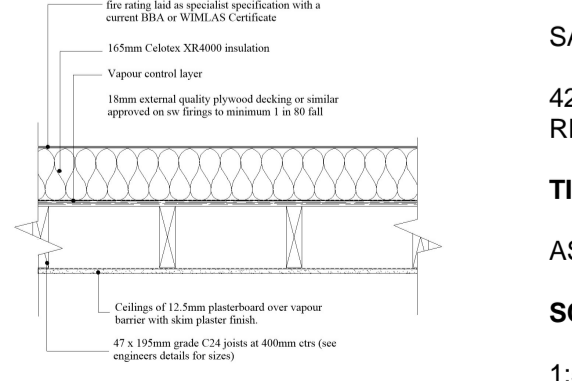
UPGRADING EXISTING SOLID FLOOR

To meet min U value required of 0.25 W/m²K
The existing solid floor slab must be checked for stability and be free from defects as required by Building Control. The existing floor will need upgrading to ensure adequate damp protection and to prevent heat loss. Provide 1200 gauge polythene DPM or 3 coats RIVV over existing concrete slab (if required, DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 75mm thick Celotex GA4000, 25mm Celotex insulation to continue around floor perimeters to avoid thermal bridging.
All joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. Care should be taken to ensure any existing airbricks for the main house are not obstructed by this work. If so, they should be extended through the new floor to external air. Where drain runs pass under floor provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain. A lesser provision may be appropriate where meeting such a standard would create significant problems in relation to adjoining floor level.

EXTERNAL WALL UPGRADE

To achieve minimum U value of 0.30 W/m²K
Existing garage floor to be exposed and checked for suitability to carry the load from the new stud wall prior to commencement of work and as required by the Building Control Officer. Construct an inner leaf of timber studwork using 100mm x 50mm treated timbers with head and sole plates and noggins at 400mm ctrs ensuring a 50mm clear cavity between existing wall and new stud. Provide a breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) on cavity side of studwork. Insulation between and over studs to be 90mm Celotex GA4000 between and 37.5mm Celotex PL4000 insulated plaster board with VCL over studs. 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. Provide a cavity tray at the base with weep holes at 600 ctrs. Provide horizontal strip polymer (polyed) damp proof course to new leaf minimum 150mm above external ground level. An insected DPC may also be required if one is not already present and existing in existing wall. New DPC to be made continuous with floor DPM.
A lesser provision of insulation may be appropriate where meeting such a standard would result in a reduction of more than 5% in the internal floor area of the room.

WARM FLAT ROOF



CLIENT/PROJECT:
SAM HALL
42 ROMAN ROAD, ABBEYMEAD, GLOUCESTER, GL4 5HR
REAR SINGLE STOREY EXTENSION
TITLE:
AS PROPOSED PLANS & ELEVATIONS
SCALE:
1:50, 1:100 @ A1
DATE:
OCT 2022 42RR-SH-G-002B

