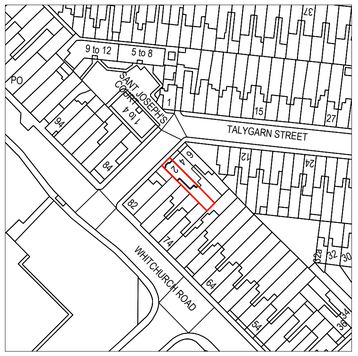
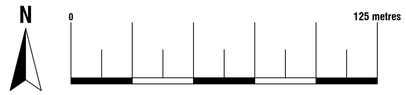


Location Plan

Scale 1:1250

OS 100047474



Existing Block Plan

Scale 1:500

OS 100047474

Proposed Block Plan

Scale 1:500

OS 100047474

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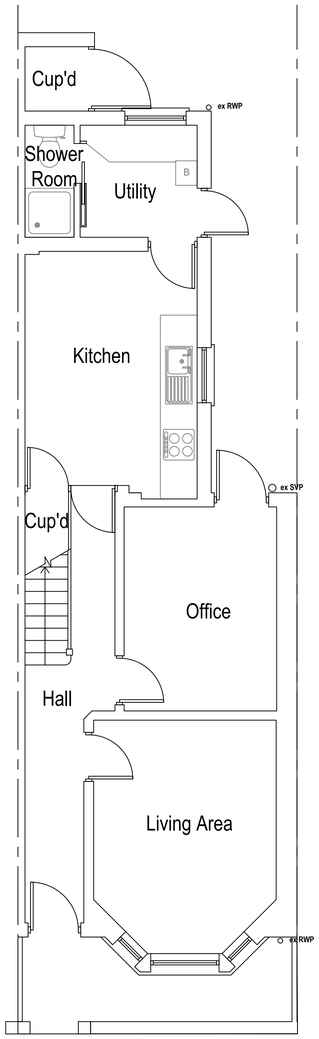
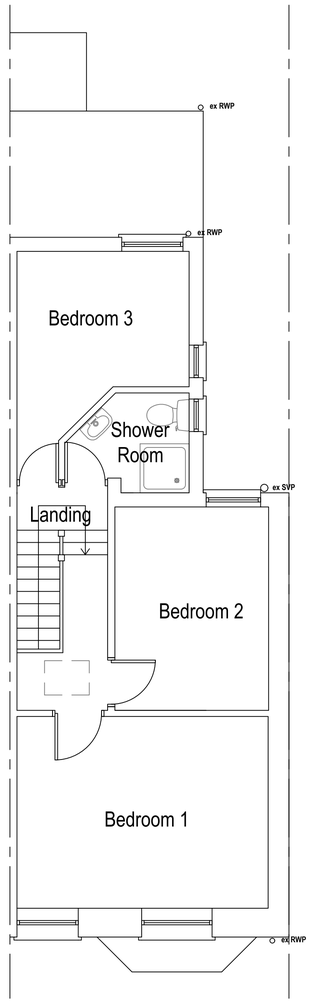
Site	2 Talygarn Street, Heath, Cardiff CF14 3PT	Date	14.08.2023
		Sheet	23-0490 D01 REV 2
		Job	New Extension & Loft Convertion
		Scale	As Shown@A1
Title Number	WA798408	Title	As Shown



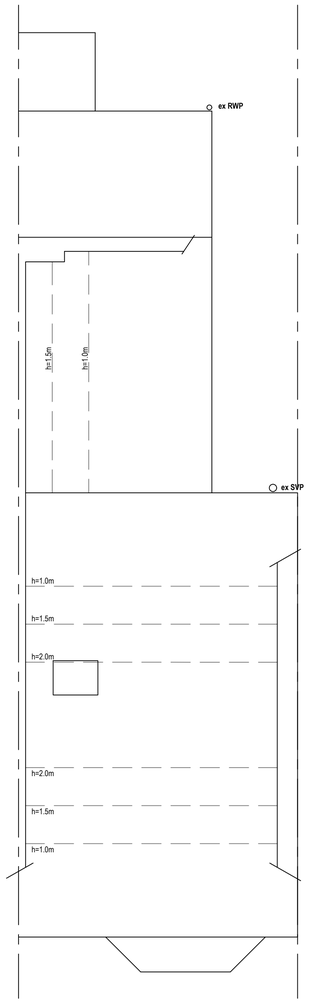
Existing Ground Floor Plan
Scale 1:50

Area ca. 46.16 m²

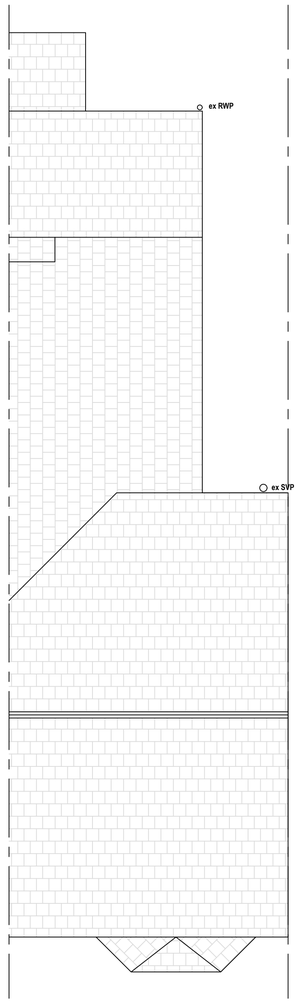


Existing First Floor Plan
Scale 1:50

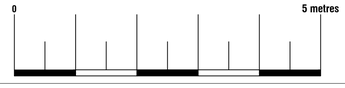
Area ca. 38.60 m²



Existing Loft Plan
Scale 1:50



Existing Roof Plan
Scale 1:50



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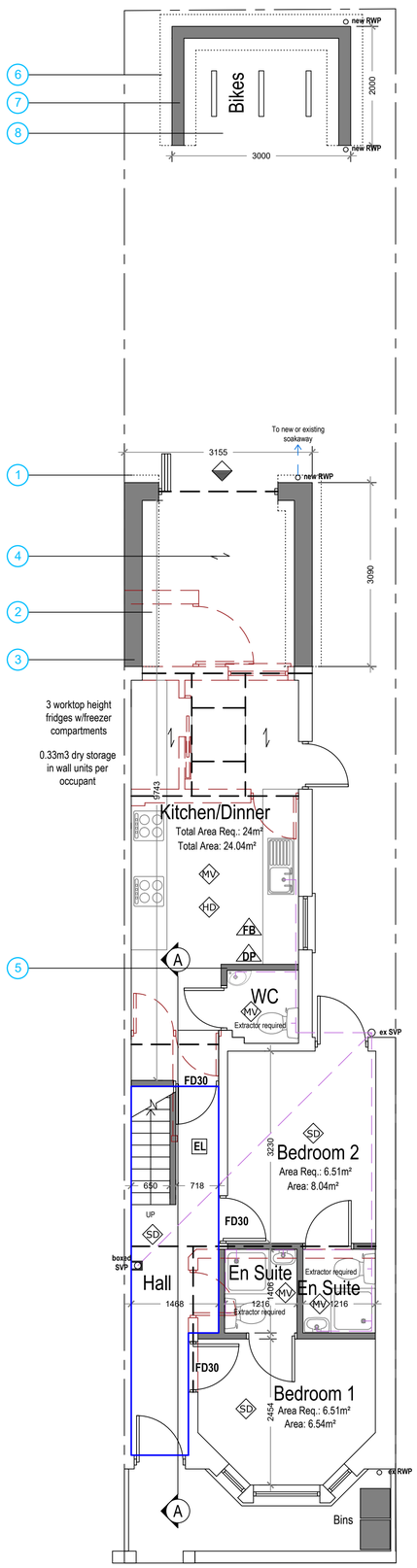
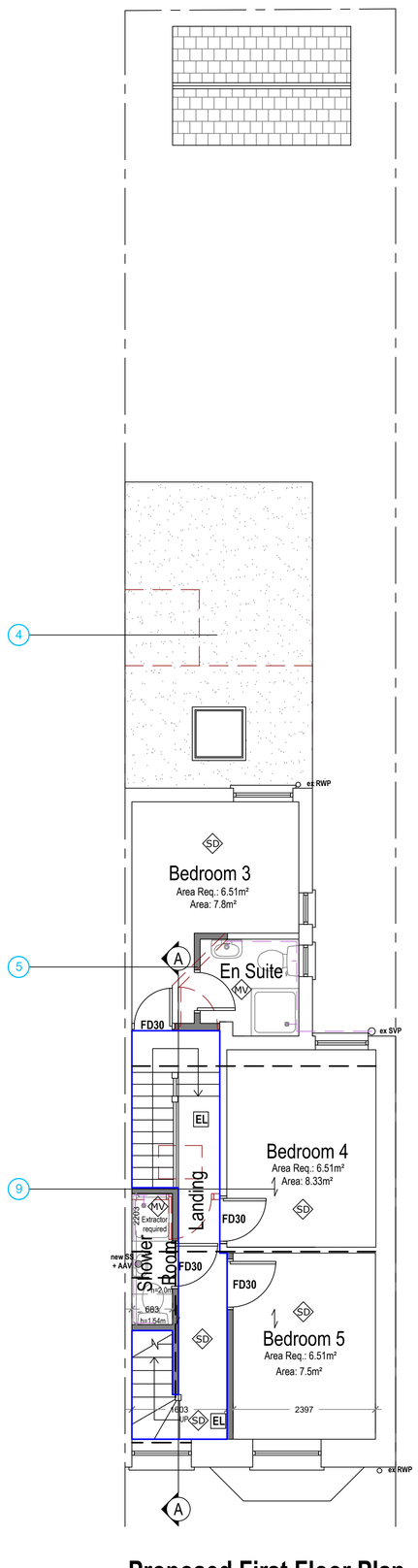
Site	2 Talygarn Street, Heath, Cardiff CF14 3PT	**Date**	14.08.2023
		Sheet	23-0490 D02 REV 2
		Job	New Extension & Loft Convertion
		Scale	As Shown@A1
Title Number	WA798408	**Title**	As Shown



Proposed Ground Floor Plan
Scale 1:50

Area ca. 53.87 m²

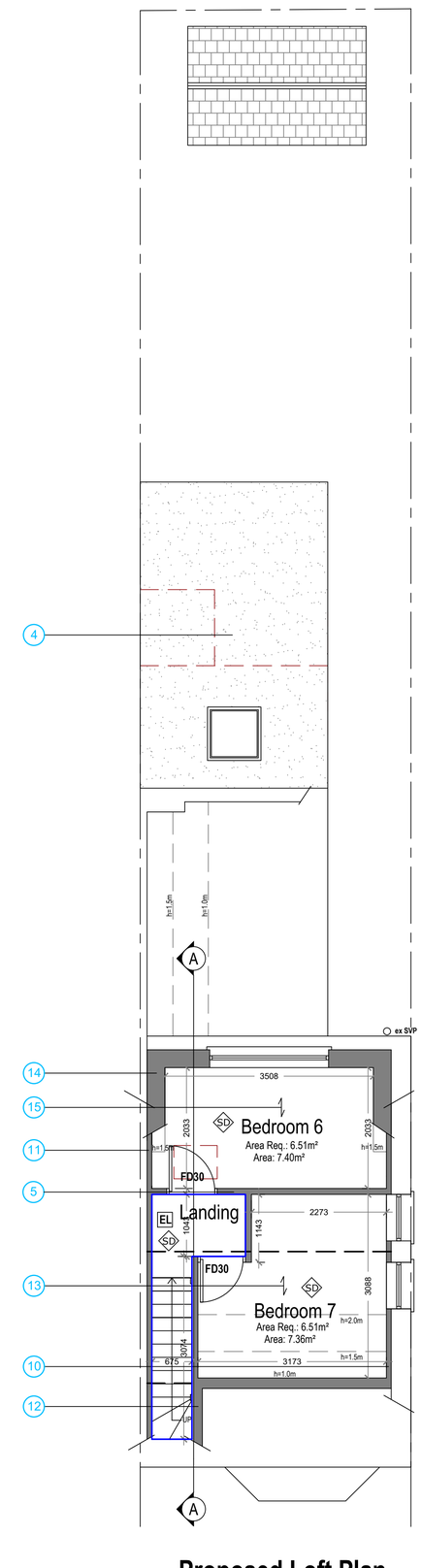
Additional Area 3.78 m²



Proposed First Floor Plan
Scale 1:50

Area ca. 38.60 m²

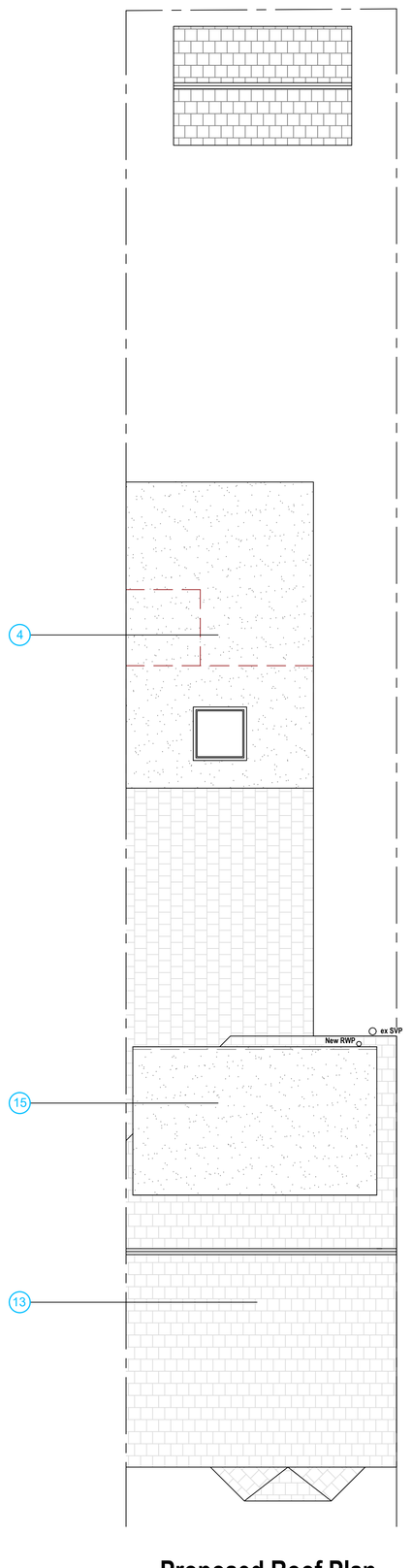
Additional Area: 0m²



Proposed Loft Plan
Scale 1:50

Area ca. 18.23 m²

Additional Area: 18.23m²



Proposed Roof Plan
Scale 1:50

0 5 metres

Symbol Key:

Proposed drainage layout is indicative only and has not been surveyed. Existing foul drainage layout to be surveyed by Contractor on site and exact layout and connections are to be agreed on site with BCO before any works commence. All pipes sizes and falls as per spec. and detail drawings

- Boundary line
- Demolished
- Details above
- Proposed foundation
- Waste drainage layout
- Rainwater drainage layout
- timber/steel beam above sized and specified by Structural Engineer - fire proofed as per spec. and detail drawing
- 1/2 HR Fire resistant constructed wall

DP Dry powder extinguisher

FB Fire blanket

EL Emergency lighting

MV Mechanically ventilated

SD Mains operated interlinked smoke detector

HD Mains operated interlinked heat detector

Escape door / window

CM Carbon Monoxide alarm

DRAWING NOTES

 Dimensions are provided as a guide only. All dimensions are approximate and to be checked on site prior to commencement of any works. All the works should be executed in compliance with the specification. Parts of this project may require new structural steelwork or timberwork. Structural Engineer to provide the necessary calculations and beam sizes/connections to satisfy Building Control Officer requirements.

If the proposed area of any new glazing accounts for more than 25% of the new floor area (minus the area of existing glazing being removed) the client may be required to obtain SAP Calculations from a SAP Assessor before Building Control can fully approve the plans. If in doubt please contact Arkiplan:

Arkiplan Architectural Ltd, Lytchett House, 13 Freeland Park, Wareham Road, Pool, Dorset BH16 6FA 0845 852 0852 enquiries@arkiplan.co.uk

The Building Regulations 2010

Under the above regulations, any works to a building that fall within the requirements must be inspected by either the Local Authority Building Control Department or a person registered under the Competent Person Scheme. This includes independent qualified building inspection organisations.

These drawings are intended only to obtain approval for Building Control applications by either the Local Authority Building Control Department or an independant building inspection company, and should not be used as working construction drawings.

These drawings provide an indication only of the work required, and the current building standards that must be met at the minimum level. All works must be discussed on-site between the contractor(s) and the Inspector prior to being undertaken. All guidance and instructions from the Building Inspector must be strictly adhered to at all times.

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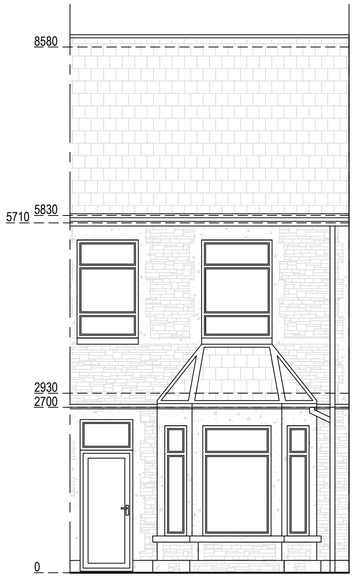
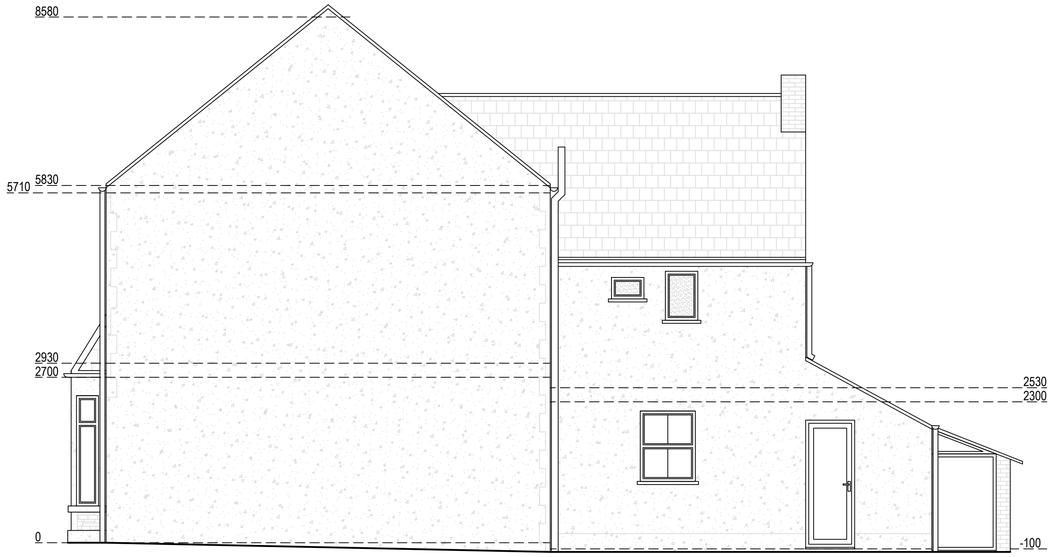
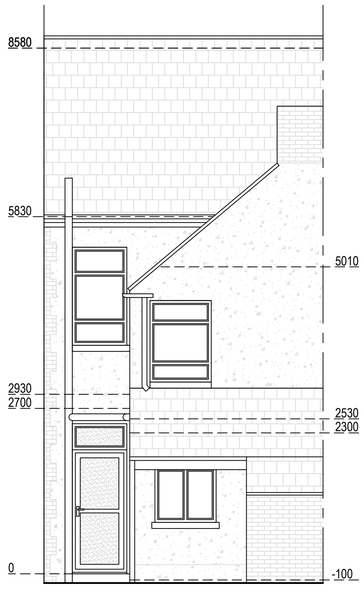
Site	2 Talygarn Street, Heath, Cardiff CF14 3PT	**Date**	14.08.2023
		Sheet	23-0490 D03 REV 2
		Job	New Extension & Loft Convertion
		Scale	As Shown@A1
Title Number	WA798408	**Title**	As Shown



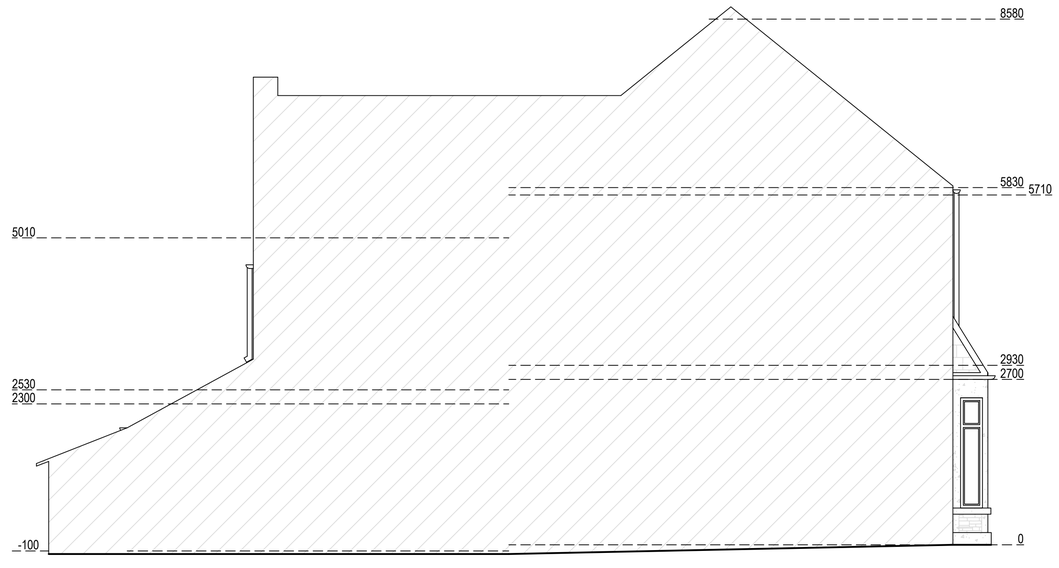
Existing Northwest Elevation
Scale 1:50



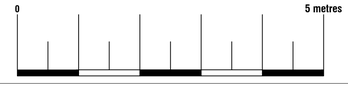
Existing Southwest Elevation
Scale 1:50



Existing Southeast Elevation
Scale 1:50



Existing Northeast Elevation
Scale 1:50



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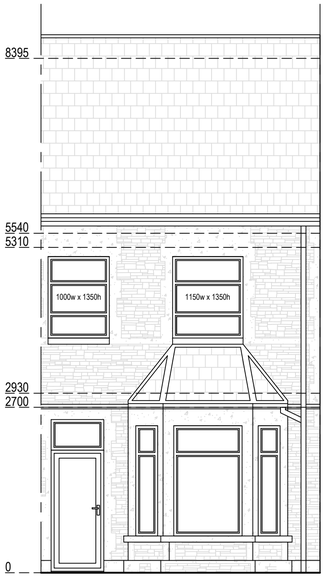
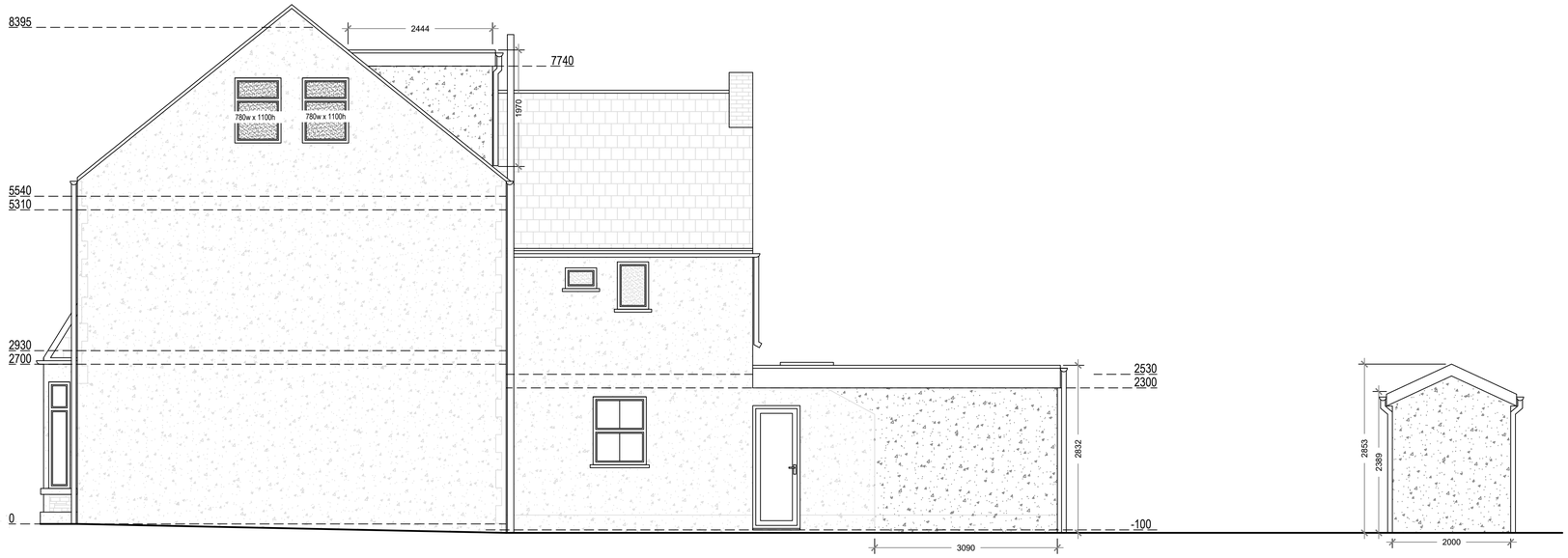
Site	2 Talygarn Street, Heath, Cardiff CF14 3PT	**Date**	14.08.2023
		Sheet	23-0490 D04 REV 2
		Job	New Extension & Loft Convertion
		Scale	As Shown@A1
Title Number	WA798408	**Title**	As Shown

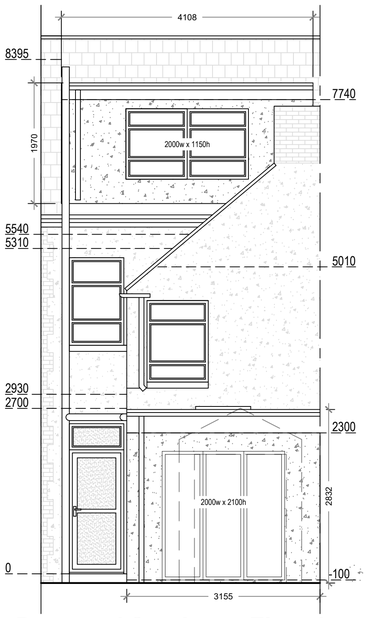
Proposed Materials:
Walls: SIPS Render (to match existing)
Dormer walls: Render (to match existing)
Flat roof: Fibreglass (to match existing)



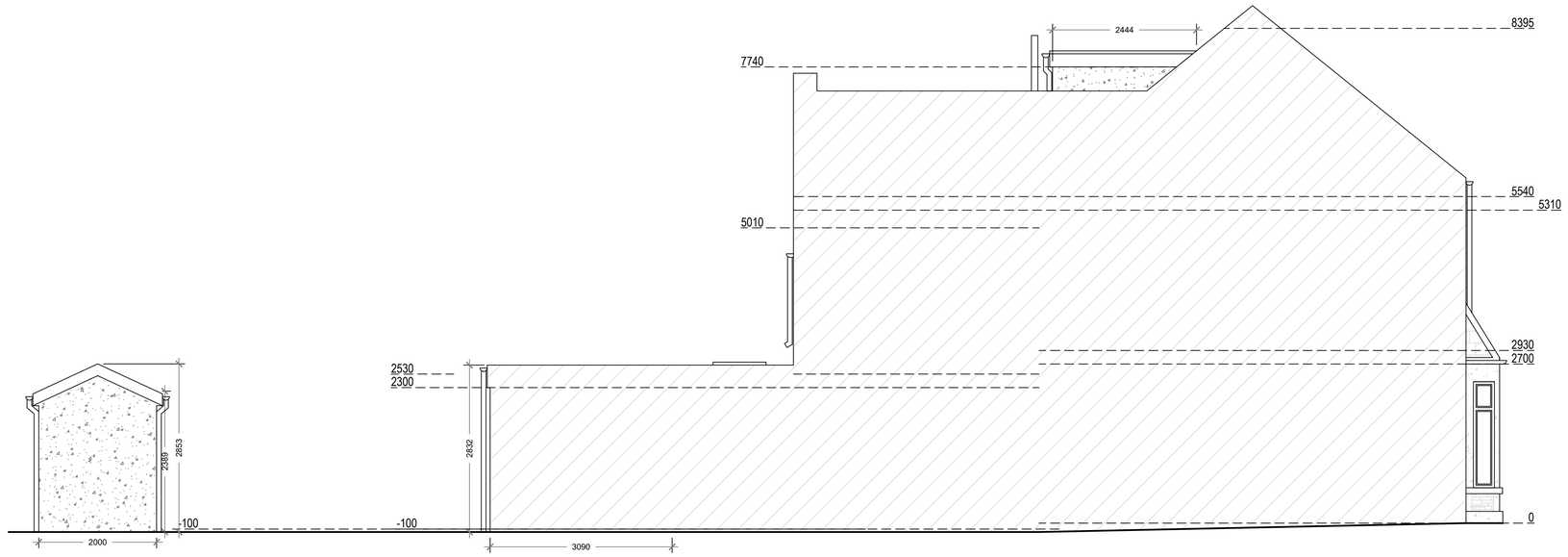
Proposed Northwest Elevation
Scale 1:50



Proposed Southwest Elevation
Scale 1:50



Proposed Southeast Elevation
Scale 1:50



Proposed Northeast Elevation
Scale 1:50

0 5 metres

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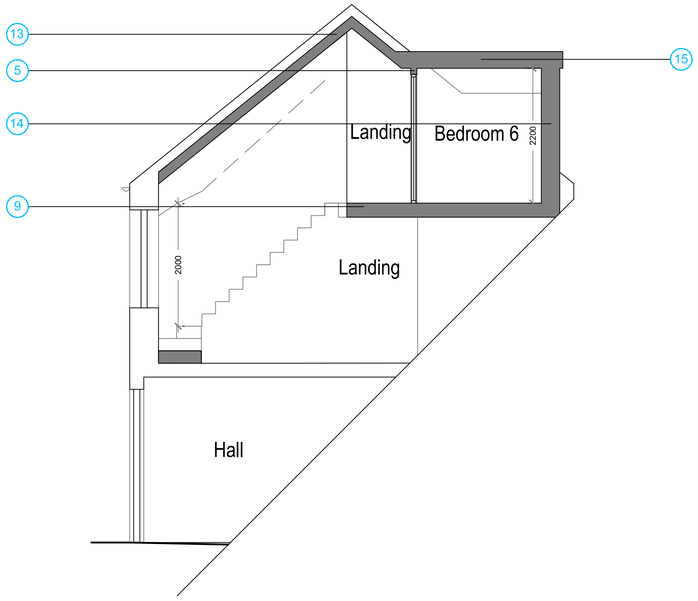
Site	2 Talygarn Street, Heath, Cardiff CF14 3PT	Date	14.08.2023
		Sheet	23-0490 D05 REV 2
		Job	New Extension & Loft Convertion
		Scale	As Shown@A1
Title Number	WA798408	Title	As Shown



Proposed Section A-A
Scale 1:50

0 5 metres

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Site	2 Talygarn Street, Heath, Cardiff CF14 3PT	**Date**	14.08.2023
		Sheet	23-0490 D06 REV 2
		Job	New Extension & Loft Convertion
		Scale	As Shown@A1
Title Number	WA798408	**Title**	As Shown

EXTENSION BUILDING REGULATIONS NOTES

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.

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.

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

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.

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.

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 better than 80 lumens per circuit watt. All fixed to have lighting capacity (lm) 185 x total floor area, 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 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.

OPENINGS AND RETURNS
An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally) construction for pier less than 550mm to be specified by engineer.

SAFETY GLAZING
All glazing in critical locations to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 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 1.4 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.

NEW AND REPLACEMENT DOORS
New and replacement doors to achieve a U-Value of 1.40W/m²K. 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 12543-1:2011 and Part K (Part N in Wales) of the current Building Regulations.

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 8000mm², and to kitchens, bathrooms, WCs and utility rooms at a rate of 4000mm². Where an open plan kitchen diner is proposed, a minimum of 3 trickle vents are necessary within the room (each 8000mm²).
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.

NEW EXTERNAL DOORS
New external doors to achieve a U-Value of 1.40W/m²K. 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 12543-1:2011 and Part K (Part N in Wales) of the current Building Regulations.

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 manufactures standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

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 5628 Code of practice for use of masonry.

UPGRADE OF EXISTING CEILINGS
Intermediate floor to be upgraded by the provision of 100mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floors joists. Ceiling to be 12.5mm plasterboard with a minimum mass of 10 kg/m3 with skim plaster set and finish. Ensure the existing timber flooring of the room above has a minimum mass of 15 kg/m3.

STAIRS
Dimensions to be checked and measured on site prior to fabrication of stairs. Timber stairs to comply with BS585 and with Part K of the Building Regulations. Max rise 220mm, min going 220mm. Two risers plus one going should be between 550 and 700mm. Tapered treads to have going in centre of tread at least the same as the going on the straight. Min 50mm going of tapered treads measured at narrow end. Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight. Min 2.0m headroom measured vertically above pitch line of stairs and landings. Handrail on staircase to be 900mm above the pitchline, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrading designed to be unclimbable and should contain no space through which a 100mm sphere could pass. Allow for all structure as designed by a Structural Engineer.

SMOKE DETECTION
Mains operated linked smoke alarm detection system to BS EN 14604 and BS5839-6:2004 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.

EXTRACT FOR SHOWER ROOM
Provide mechanical extract ventilation to shower room ducted to external air capable of extracting at a rate of not less than 15 litres per second. Vent to be connected to light switch and to have 15 minute over run if no window in the 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 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 overun 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.

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.

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.

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 to be min of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill and with geotextile surround to prevent migration of fines. If necessary carry out a porosity test to determine design and depth of soakaway.

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: 2009.

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.

ESCAPE WINDOWS / DOORS
Provide emergency egress windows / doors to any newly created habitable inner rooms. Windows to have an unobstructed openable area of 450mm high x 450mm wide, minimum 0.33m sq. 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.

MEANS OF ESCAPE - Fire doors
Form a protected escape stairway by providing half hour fire resistance to all partitions as well as floors and ceilings above and below rooms. Stairway to be protected at all levels - from the loft room/rooms then leading directly to an external door at ground level (no inner rooms allowed). All doors on to the stairway must be FD30 rated fire doors to BS 5839-6: 2019 or the European equivalent BS EN 1634 (fitted with intumescent strips rebated around sides & top of door or frame if required by BCO). Where applicable, any glazing in fire doors to be half hour fire resisting and glazing in the walls forming the escape route enclosure to have 30 minutes fire resistance and be at least 1.1m above the floor level or stair pitch line.

FIRE ALARM SYSTEM
Grade A interlinked fire alarm system, to be connected to the mains supply. The system to have a standby power supply in the form of a battery (sealed with a 10 years life span) or capacitor. The detectors to be installed in escape routes at all levels, in all bedrooms, lounge,, dining room and any other high risk rooms, linked to a control panel with manual call points next to final exits and on all landings.

FIRE DOORS
Doors to kitchens and shared lounge must be 30 minute fire dorors with intumescent strips, cold smoke seals and self-closing devices. A fire door must be installed in each doorway leading onto the escape route, except bathroom and WC's (unless they contains a fire risk such a boiler).

Cellar doors must be 30 minute fire doors with intumescent strips, cold smoke seals and self-closing devices.

LOCKS ON DOORS
Final exit doors, bedroom doors and any other doors affording escape from the building must be provided with security locks that can be opened from the inside without a key, for example thumb turn locks. Break glass boxes are not acceptable.

PROTECTED ESCAPE ROUTE
Sound traditional construction that provides fire resistance of 30 minutes is required throughout the escape route, to all walls, floors and ceilings.
Under-stairs cupboards must have a ceiling that gives the staircase 30 minutes fire protection.
Cellars must have a ceiling that is 30 minutes fire resistant. Surface finishes to meet class 0 (non combustible materials) for spread of fire (eg brickwork, concrete, plasterboards and plaster finishes).

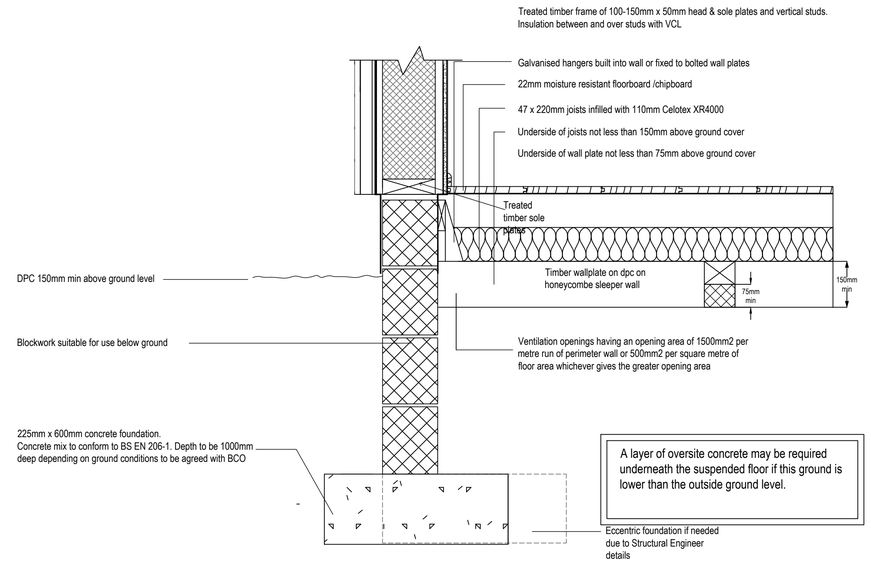
EMERGENCY ESCAPE LIGHTING
The ecape route should allow occupants from all parts of the building to reach a place of safety outside without passing trough a higher fire risk area. The route should be kept free of obstructions and combustible materials at all times, and the walls and ceilings should be free of flammable materials such as polystyrene ceiling tiles and heavy flock wall paper. At least 30 minute fire resistance should be provided to the route as indicated by red on the accompanying plan. There is no requirement for additional fire separation between rooms, but the walls and floors should be of sound traditional construction. Electric and Gas meters located in escape route should either be re-located or contained within fire resisting construction to provide at least 30 minute fire resistance.

Emergency escape lighting is only required if the route is long or complex or if there is no effective borrowed light. Conventional artificial lighting.

FIRE BLANKETS
Fire blankets should be provided in each area where there are cooking facilities, and be wall mounted 1.5m high adjacent to an exit door and away from cooking appliance. These must comply with BS 6575 (or equivalent)

FIRE EXTINGUISHERS
Where the risk assessment indicates that fire extinguishers are required they shall be multipurpose extinguishers and shall be located as requested by the risk assessment. If provided they shall be maintained in working order and residents instructed in their use.

1 2 SIP WALL / TIMBER FLOOR / STRIP FOUNDATION

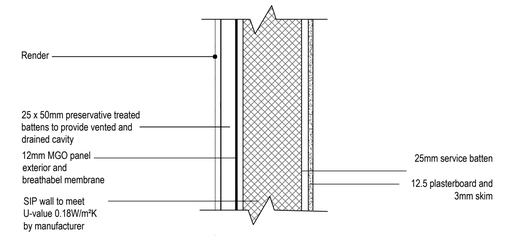


STRIP FOUNDATION
Provide 225mm x 600mm concrete foundation, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 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 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.

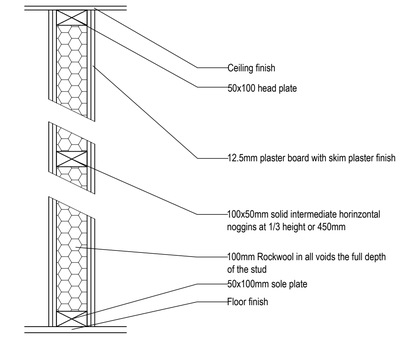
WALLS BELOW GROUND
All new walls to have Class A blockwork below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill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

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 312:2010 as required. Lay with staggered joints on 47mm x 220mm C24 grade soft wood joists. 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 110mm 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 1500mm² per metre run of perimeter wall or 500mm² 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.

3 EXTERNAL SIP PANEL WALL FINISHED WITH RENDER

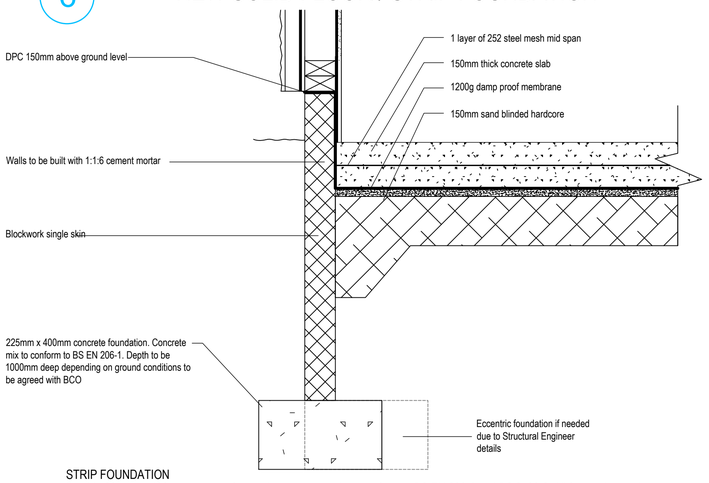


5 STUD WALL



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) 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.

6 NEW SOLID FLOOR / STRIP FOUNDATION



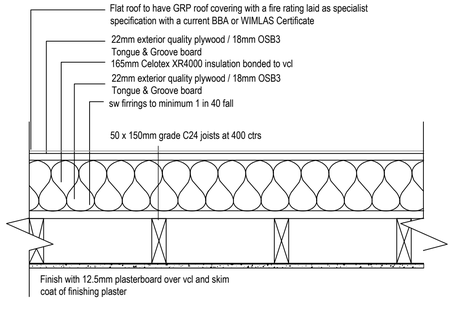
STRIP FOUNDATION
Provide 225mm x 400mm concrete foundation, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 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 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.

SOLID EXTERNAL WALL
Construct solid wall at least 100mm thick constructed using concrete blocks. Rake out joints in the wall to a depth of at least 10mm and apply two coats of render at least 20mm thick with a scraped or textured finish. The rendering mix to comply to BS EN 13914-1:2005 with waterproof additive.

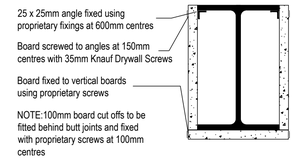
DPC
Provide horizontal strip polymer (hyload) damp proof course to external skin minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals.

4 WARM FLAT MEMBRANE ROOF



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 have GRP roof covering providing aa 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 / 18mm OSB3 Tongue & Groove board over 165mm Celotex XR4000. Insulation bonded to vcl on 22mm exterior quality plywood / 18mm OSB3 Tongue & Groove board on sw firings to minimum 1 in 40 fall on sw treated 50 x 150mm C24 flat roof joists at 400mm ctrs. Finish with 12.5mm plasterboard over vcl and skim coat of finishing plaster.

FIRE PROTECTION OF STEEL BEAM
(Knauf fire board - as section 6 :2012 of manufacturer's details)



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.

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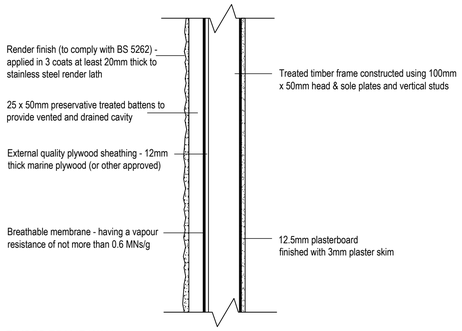
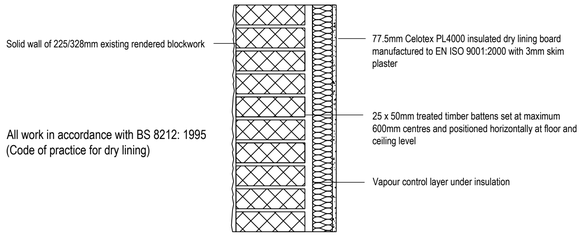
		Job	New Extension & Loft Convertion
		Scale	Not To Scale
Title Number	WA798408	**Title**	Specification & Section Detail Drawings 1:10

7 RENDER FINISH 100mm TIMBER FRAMED WALL



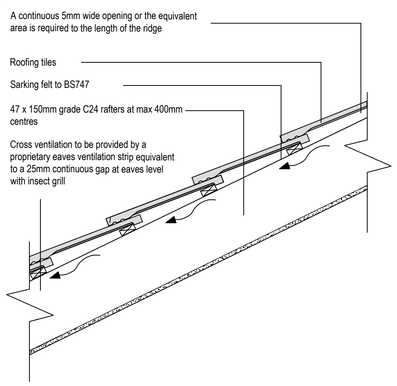
TIMBER FRAME WALL
Render finish (to comply with BS EN 13914-1:2005) - applied in 3 coats at least 20mm thick to stainless steel render lath. Render should be finished onto an approved render stop. Render lath fixed to sawn tanelised feather edge softwood supported on 25 x 38mm preservative-treated battens fixed to breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) and 12mm thick WBP external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using: 100mm x 50mm head & sole plates and vertical studs (with noggins) at 400mm ctrs or to s/engineer's details & calculations. Plasterboard with VCL over. 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.

10 UPGRADING EXISTING SOLID WALL (block)



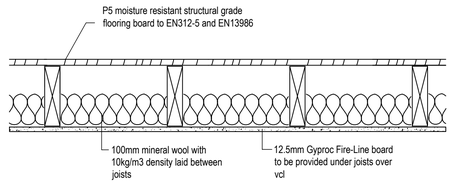
UPGRADE OF SOLID EXTERNAL WALL
To achieve min U-value 0.30W/m²K
Existing wall to be exposed and checked for its suitability. Upgrade existing solid block wall by providing 77.5mm Celotex PL4000 insulated plasterboard internally.
Provide 25mm x 50mm battens at 600mm centres to give a nominal 25mm cavity between the masonry and insulation.
Fix a vapour control layer under the insulation. All work in accordance with BS 8212: 1995 (Code of practice for dry lining).

8 PITCHED ROOF



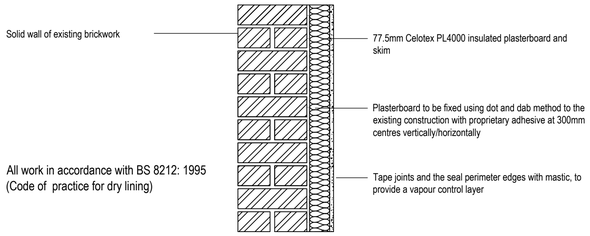
PITCHED ROOF
(imposed load max 0.75 kN/m² - dead load max 0.75 kN/m²)
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on sarking felt 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. Provide 5mm skim coat of finishing plaster to the underside of all ceiling.

9 INTERMEDIATE TIMBER FLOOR



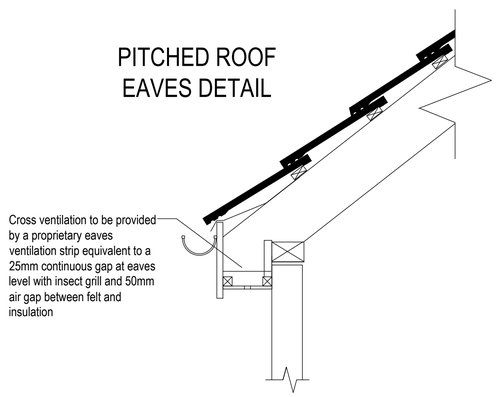
11 UPGRADING 225mm SOLID PARTY WALL

Cold adjoining space

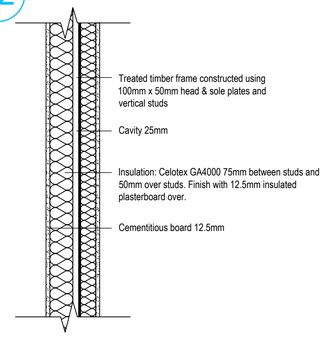


UPGRADING SOLID PARTY WALL (cold adjoining space)
The existing walls must be checked for stability and be free from defects as required by the Building Control Officer. Provide a scratch coat render to existing wall. Insulate wall on the warm side using 77.5mm Celotex PL4000 insulated plasterboard.
Plasterboard to be bonded, using dot and dab method, to the existing construction with proprietary adhesive at 300mm centres vertically/horizontally and in accordance with manufactures instructions. Tape joints and seal perimeter edges with mastic, to provide a vapour control layer (VCL). All work in accordance with BS 8212: 1995 (Code of practice for dry lining).

PITCHED ROOF EAVES DETAIL

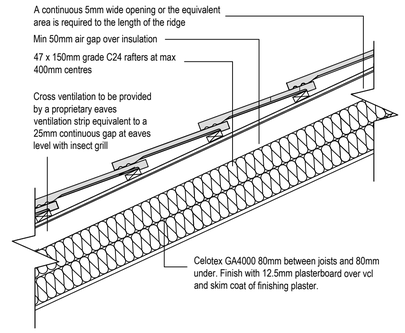


12 ASHLAR/DWARF WALL



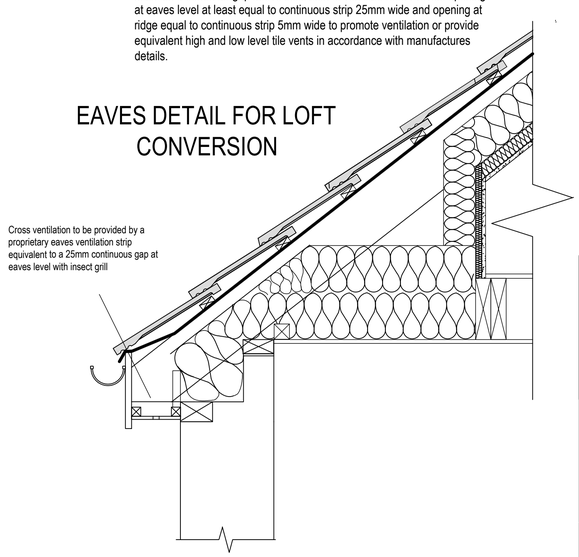
STUD ASHLAR/DWARF WALL
To achieve minimum U Value of 0.18W/m²K
Construct stud wall using 100mm x 50mm head and sole plates and vertical studs (with noggins) at 400mm centres or to structural engineer's details and calculations. Insulation: Celotex GA4000 75mm between studs and 50mm over studs. Finish with 12.5mm insulated plasterboard over.
All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally.

13 UPGRADE OF PITCHED ROOF

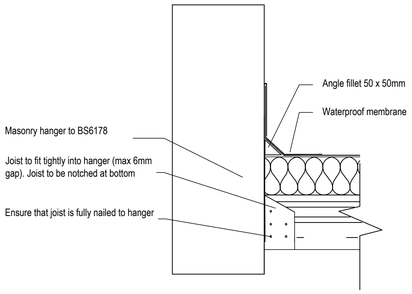


UPGRADE OF PITCHED ROOF
(imposed load max 0.75 kN/m² - dead load max 0.75 kN/m²)
Vented roof – pitch 22-45°
To achieve U-value 0.16 W/m²K
Existing roof structure to be assessed by a structural engineer and any alterations to be carried out in strict accordance with structural engineer's details and calculations which must be approved by building control before works commence on site. The existing roof condition must be checked and be free from defects as required by the Building Control Officer any defective coverings or felt to be replaced in accordance with manufacturer's details.
Roof construction - 47 x 150mm Grade C24 rafters at max 400mm centres. Insulation to be Celotex GA4000 80mm between and 80mm under joists. Finish with 12.5mm plasterboard over vcl and skim coat of finishing plaster. 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 manufactures details.

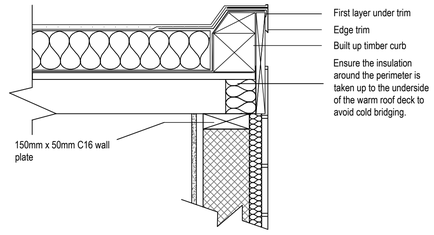
EAVES DETAIL FOR LOFT CONVERSION



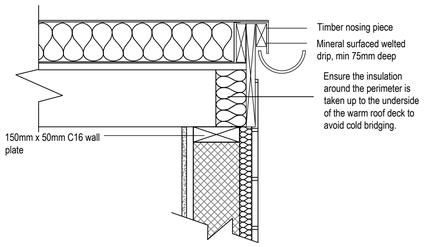
FLAT ROOF / WALL ABUTMENT



VERGE DETAIL



WELTED DRIP TO EXTERNAL GUTTER



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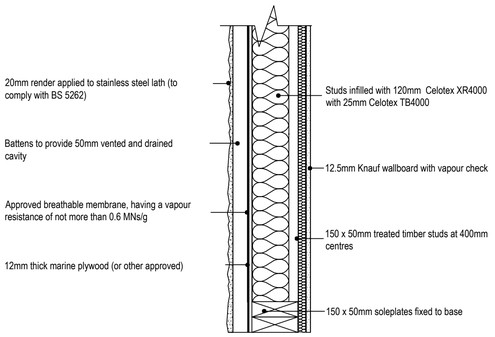
RENDERED 150mm TIMBER FRAMED WALL

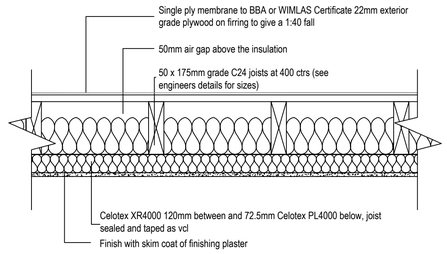
14



TIMBER FRAME WALL
To achieve minimum U Value of 0.18 W/m²K
Render finish (to comply with BS EN 13914-1) - applied in 3 coats at least 20mm thick to stainless steel render lath. Render should be finished onto an approved render stop. Render lath fixed to vertical 25 x 50mm preservative-treated battens to provide vented and drained cavity, battens fixed vertically 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 ctrs or to s/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. Walls 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.

COLD FLAT ROOF

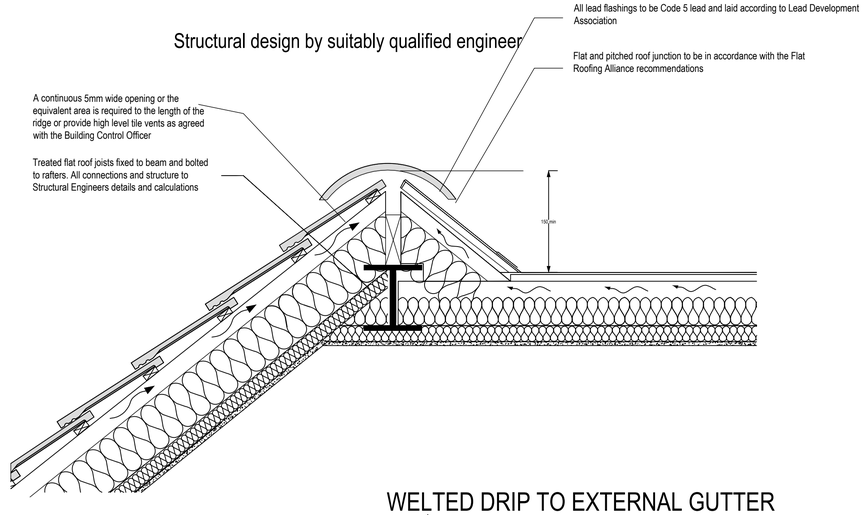
15



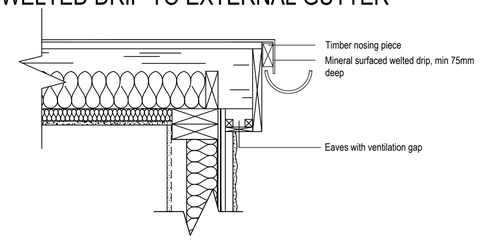
VENTILATED FLAT ROOF
(imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value of 0.15 W/m²K
Flat roof to be single ply membrane roofing with aa fire rating as specialist specification, with a current BBA or WIMLAS Certificate on 22mm exterior grade plywood, laid on firrings to give a 1:40 fall on 50 x 175mm grade C24 timber joists at 400 ctrs. 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 XR4000 120mm between and 72.5mm Celotex PL4000 under, joist sealed and taped as vcl. Finish with skim coat of finishing plaster.

LOFT RIDGE DORMER DETAIL

Structural design by suitably qualified engineer

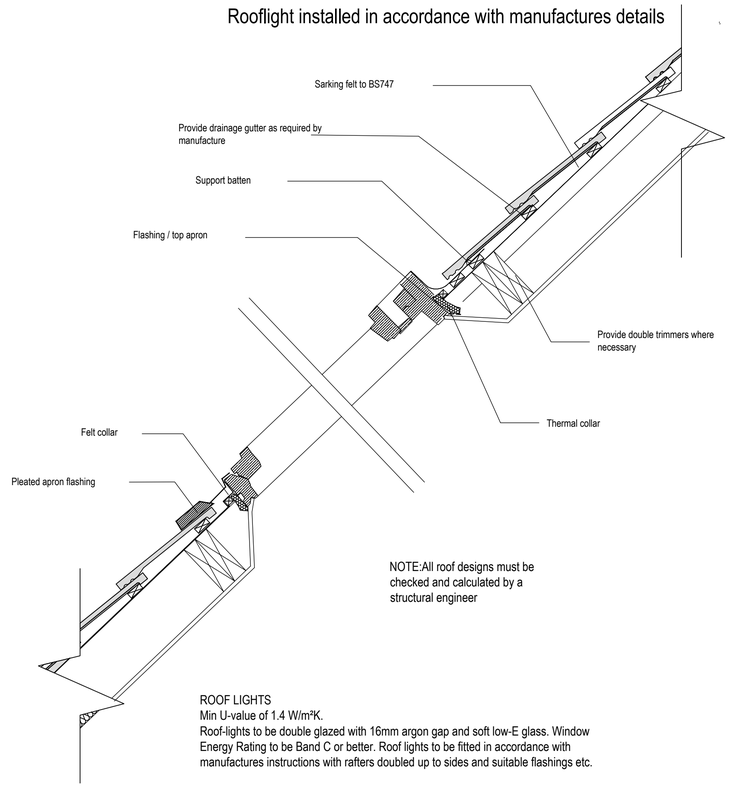


WELTED DRIP TO EXTERNAL GUTTER



ROOFLIGHTS (SECTION)

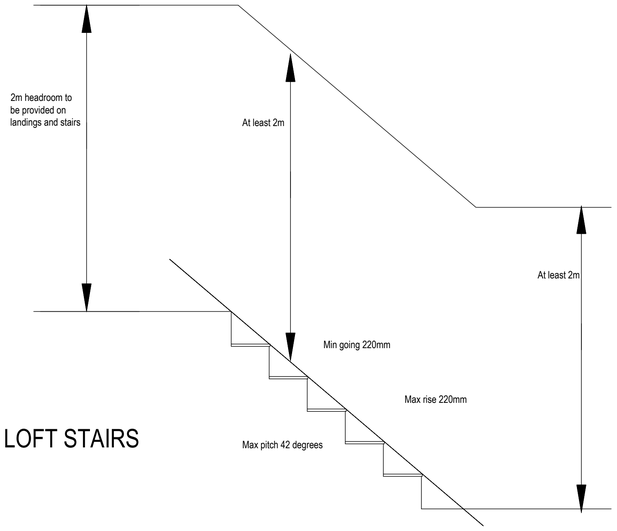
Rooflight installed in accordance with manufactures details



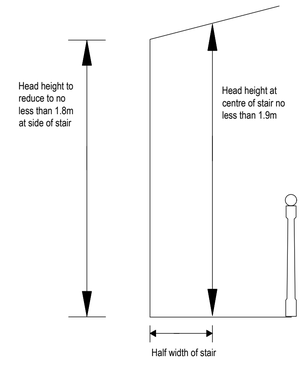
NOTE:All roof designs must be checked and calculated by a structural engineer

ROOF LIGHTS
Min U-value of 1.4 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 manufactures instructions with rafters doubled up to sides and suitable flashings etc.

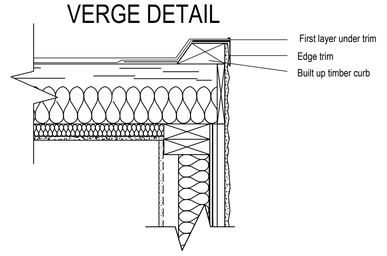
HEADROOM FOR NEW STAIRS



REDUCED HEADROOM FOR LOFT STAIRS



VERGE DETAIL



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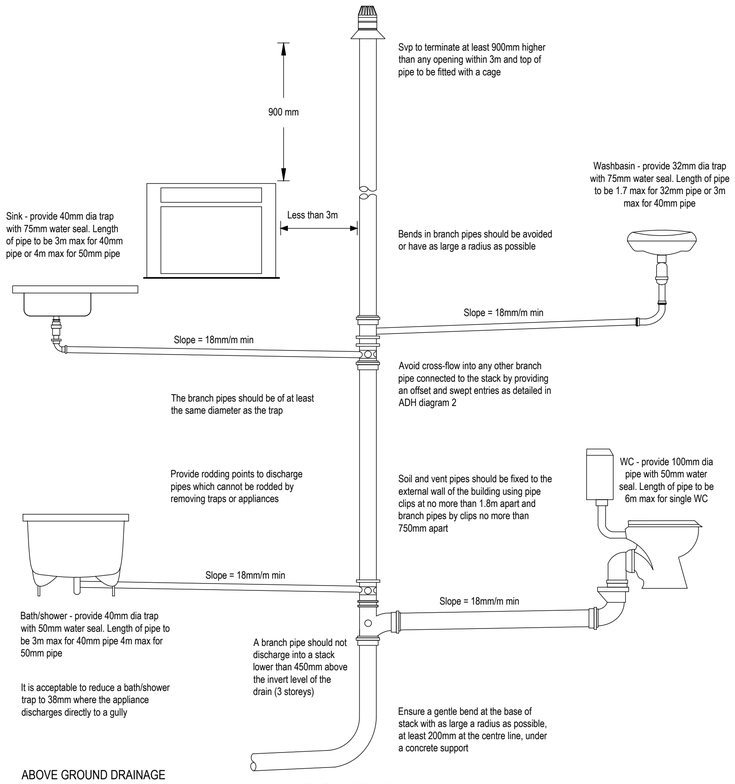
ABOVE GROUND DRAINAGE
SCALE 1:20



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.

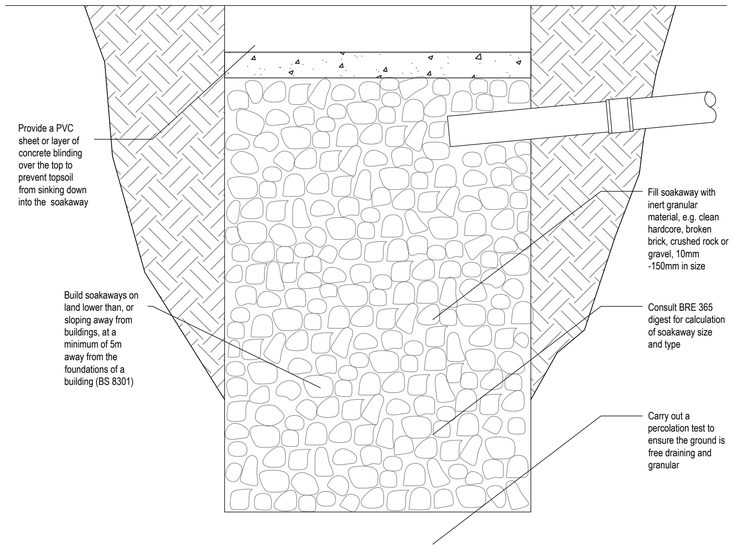
Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)
- Wash basin - 1.7m for 32mm pipe 4m for 40mm pipe
- Bath/shower - 3m for 40mm pipe 4m for 50mm pipe
- W/C - 6m for 100mm pipe for single WC

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.

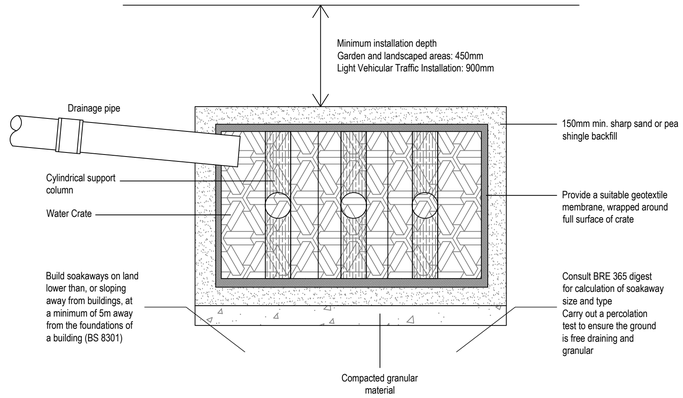
SOAKAWAY OPTIONS -

please confirm on site with the BCO the required method

SOAKAWAY
Soakaway size and type dependent on space requirements, site layout, topography, water table, subsoil type, etc.
Designed to BS EN 752:2017 and BRE digest 365

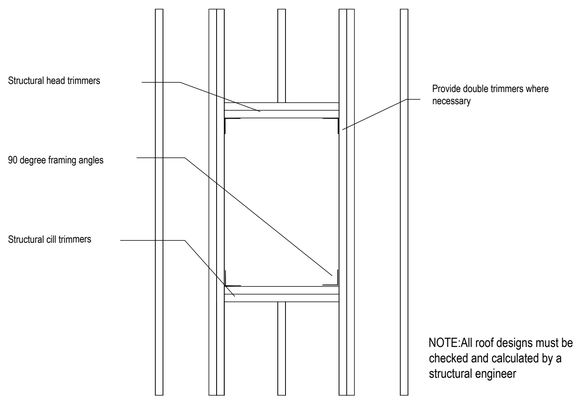


SOAKAWAY CRATES
Soakaway size and type dependent on space requirements, site layout, topography, water table, subsoil type, etc.
Designed to BS EN 752



ROOFLIGHTS (STRUCTURE)

Rooflight installed in accordance with manufactures details



ROOF LIGHTS
Min U-value of 1.4 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 manufactures instructions with rafters doubled up to sides and suitable flashings etc.

Arkiplan
74 Cardiff Road, CF15 7QE • Enquiries@ArkiPlan.co.uk

Site	2 Talygarn Street, Heath, Cardiff CF14 3PT	**Date**	14.08.2023
		Sheet	23-0490 D10 REV 2
		Job	New Extension & Loft Convertion
		Scale	Not To Scale
Title Number	WA798408	**Title**	Section Detail Drawings 1:10