SURFACE WATER DRAINAGE

Rainwater to be collected in uPVC guttering and uPVC downpipes to match existing. Water to discharge to Polypipe rainwater gullys and to be taken to soakaways located in garden. Soakaways to be 1000mm diameter x 1000mm deep filled with 50mm nominal clean stone up to 300mm minimum of finished ground level, covered with visqueen membrane and back filled up to surrounding finished level with top soil. Soakaways to be at least 5m away from structure within lower ground.

FOUL DRAINAGE

All new drains are to be 110mm diameter uPVC drains laid in granular material at a fall of 1 in 40. Wastes from Kitchen appliences to connect into new Back Inlet Gully (BIG). Kitchen Sink to connect to SS (short stack) Short Stack to be fitted with with Durgo air admittance valve. Drains passing through walls are to be isolated from structure with 600mm long x 100mm wide x 150mm deep reinforced concrete lintels. Drains passing under structure and within 300mm of finished external ground level are to be encased with 150mm concrete. Wastes to connect into new 450mm preformed manhole as indicated, set on 150mm thick concrete base. New pipes to be haunched in sand/ cement mortar.Any new preformed manholes to be fitted in strict accordance to manufacturer's instructions. Invert and cover levels of manholes to be confirmed prior to commencement of any drainage works. Man Holes to connect into existing septic tank. Contractor to inspect existing drainage system prior to any drainage works.

PLUMBING

Wastes from Kitchen sink and appliances within Utility to be 50mm minimum diameter uPVC pipe fitted with 75mm deep seal traps. Wastes to connect into new Back Inlet Gully (BIG). Kitchen sink to connect to anti-syphon traps prior to connecting into foul drainage. Any appliances within Utility to connect into anti-syphon traps prior to connecting into new BIG. All connections being made on bossed socket adapters.

HEATING

Existing central heating system to be extended into new areas. Existing boiler to be inspected by nominated sub-contractor to ensure suitability. If existing boiler is deemed inadequate, boiler to be replaced with wall mounted gas fired condensing combi-boiler with SEDBUK rating of at least 90% to power radiators fitted with thermostatic control valves. No radiators to be fitted in positions which would reduce landings / walkways to less than 900mm wide. Ensure boiler will not discharge opposite boundaries where within 2.5m. Boiler is to be fitted by GAS SAFE registered engineer.

ELECTRICAL WORKS

All electrical works are to be completed by a competent person registered with an electrical self-certification scheme and to take full responsibility to ensure that new works are in compliance with BS7671:2001. On completion the client should receive certification signed by the designer, installer and person responsible for testing of the new electrical system. Ensure that electrical sockets and light switches are sited between 450mm and 1200mm above floor level. Avoid placing sockets back to back, stagger with 150mm minimum gap. Ensure cables to be sleeved where possible contact with polystyrene could occur.

EFFICIENT LIGHTING

100% of fixed lights to be fitted with lighting outlets which take lamps of luminous efficacy of at least 40 lumens/circuit watt.

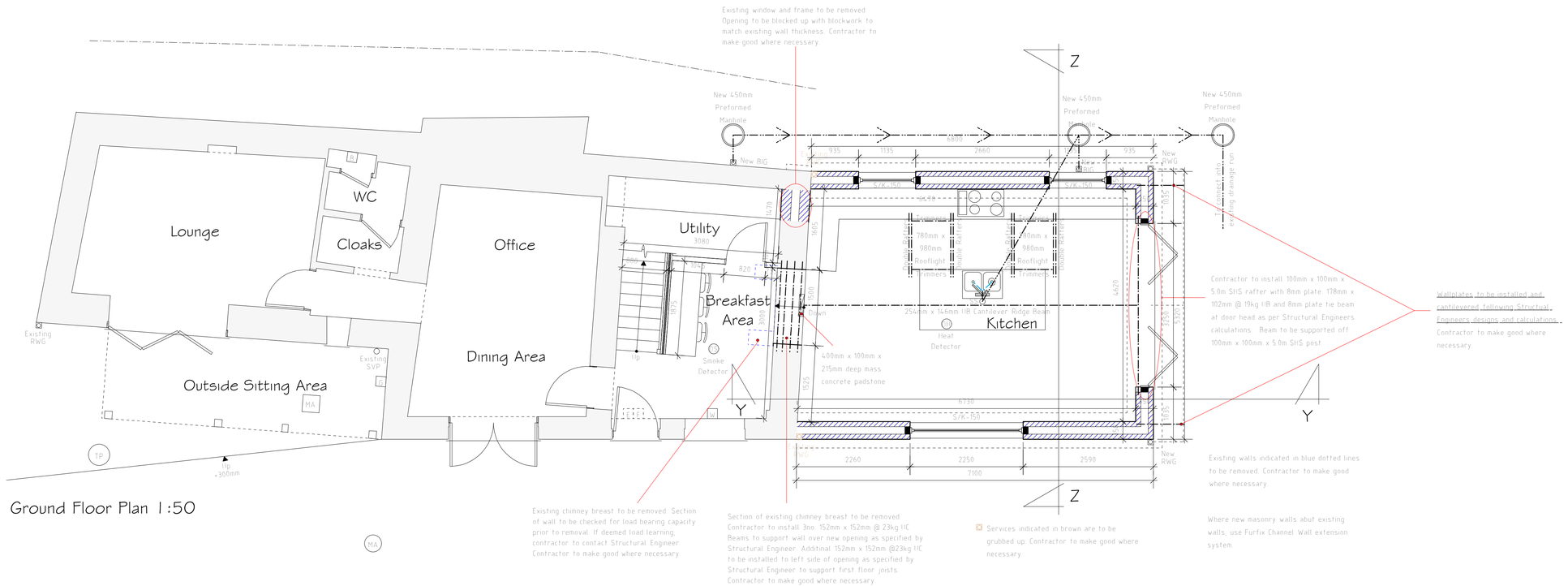
MECHANICAL VENTILATION

Provide mechanical ventilation to Kitchen and Utility by means of Vent Axia or similar electrically operated fan, extracting directly to external air to the following requirements:
Kitchen: Cooker hood to extract at a rate of 30 litres per second.
Utility: Wall mounted fan to extract at a rate of 30 litres per second.

Vents to be covered with weather proof grilles at points of discharge to external air.

FIRE DETECTION

Provide mains operated interacting smoke/ heat detectors at the positions indicated on floor plan. All detection units are to be provided with battery backup with the ability to be trickle charged to ensure continuity in the event of mains power failure. Detection and warning of fire from one unit must be audible throughout entire building. Smoke detectors to be positioned 300mm minimum away from walls and lights. Detection units are to be interlinked to ensure early warning of fire is achieved.



Ground Floor Plan 1:50

Drainage Key

- 50mm diameter drainage pipe
- 110mm diameter drainage pipe

All dimensions are taken from brickwork/blockwork face and plasterboard face and to be checked on site prior to commencing work.

Where lintels and foundations are to be subjected to additional loading, they are to be exposed by contractor and checked by the Building Control officer for there adequacy prior to introduction of new loads.

DO NOT SCALE FROM DRAWINGS IF IN DOUBT ASK.

PLANS TO BE READ IN CONJUNCTION WITH STRICTTIRAL ENGINEER'S DESIGNS AND CALCULATIONS.

Rev	Date	Detail	Initial
C	06/24	Design Amends	D.J.E
B	06/24	Design Amends	D.J.E
A	01/23	SOD	E.M.J

Project:
Proposed Alterations to,
Bryn Ffynnonn,
Woodlands Road, Froncysylle,
LL20 7SA

Title:	Scale: (A1)
Floor Plan	1:50

Drawn By:	Date:
E.M.Jackson	June 2022

Drawing No:	Sheet:
F046/007	1 of 2

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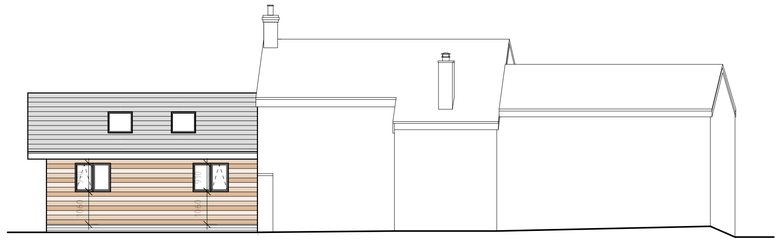
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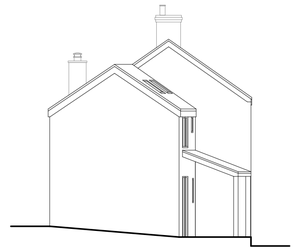
Front Elevation 1:100



Side Elevation 1:100



Rear Elevation 1:100



Side Elevation 1:100

ROOF CONSTRUCTION

Roof coverings are to be slates to match existing to Local Authority approval. Slates to be fixed to 50mm x 25mm treated softwood battens over Tyvek Supro permeable understating membrane or similar (Tyvek membrane to be draped Approximately 10mm between the rafters for ventilation purposes). Tyvek to be laid on loose cut rafters supported off wallplates at bottom of roof slope and ridgebeam at top of slope. Ridgebeam Cantilever, Wallplate and connection details to be specified by Structural Engineer. Rafters are to be 150mm x 50mm C24 softwood rafters set at 400mm centres and supported off 75mm x 100mm wallplates. Wallplates are to be anchored to walls at 1800mm centres with 30mm x 6mm mild steel straps. Straps are to be of sufficient length to be fixed to masonry of supporting walls, fixings are to be screwed or plugged and screwed. Gable wall straps to be 1350mm long x 30mm x 6mm galvanised mild steel and positioned at rafter level at 1800mm centres. Allow for doubling up of rafters to enable trimming around rooflights. Where ceiling follows roof line, allow for 100mm thick Celotex GA4000 insulation between rafters ensuring minimum 50mm clear air gap is provided, with 90mm Celotex GA4000 fixed to underside prior to fixing 12.5mm thick plasterboard ceilings to achieve a minimum U-value of 0.13W/m^{2}K. Cavity tray and code 4 lead flashing to be installed at all roof/wall abutments.

STUD PARTITIONS

Stud framed partitions are to comprise 12.5mm plasterboard fixed to both sides of 75mm x 50mm softwood stud framing where applicable set at 400mm centres. Framework is to be formed on 75mm x 50mm softwood soleplate as required. Additional framing to installed where required i.e., around openings. All joints in boards are to be filled and skimmed prior to application of skim plaster. Allow for absorbent layer of 25mm thick wire reinforced mineral wool quilt to be suspended in cavity of stud framing to walls as indicated on floor plans.

CAVITY WALL CONSTRUCTION

External cavity walls are to comprise timber cladding attatched to 100mm thick blockwork, 150mm wide cavity fully filled with 150mm thick DriTherm 0.032-lambda, with an inner leaf of 100mm thick thermolite turbo block. Internal face of blockwork to be finished with 12.5mm thick plasterboard with 3mm thick nominal skim finish. Wall construction to achieve a minimum U-value of 0.18W/m^{2}K. Provide insulated Keystone lintels and Universal Steel Beams over openings as specified on plans. Universal Steel Beams with plates and connection details to be specified by Structural Engineer. All lintels to have a minimum of 150mm end bearing length. Keystone lintels can be supplied by Huws Gray (01978 264269). Provide stainless steel wall ties across cavity, ties are to be based on double triangle ties as per BR443. Wall ties set at 750mm horizontal and 450mm vertical staggered centre's. Provide additional wall ties at 300mm vertical centres within 225mm of all openings and roof verges. All openings in cavity, ie, around window and door openings, are to be closed with Thermabate 125 insulated cavity closers to prevent thermal bridging. DPC to be installed in new cavity wall as indicated, Cavity trays to be lapped onto DPC with weep holes installed at 900mm centres to outer leaf of wall to ensure any moisture within cavity is dispersed of adequately. Where indicated on floor plans, sleeper wall to be constructed around steps within Kitchen to support beam and block floor construction.

Walls below DPC level and above finished ground level are to be constructed with facing brick, below ground level use class B engineering brick down to Thermalite trench block. Cavity insulation is to continue in 125mm cavity to prevent thermal bridging down to trench block. All walls are to be constructed centrally on supporting foundations.

GROUND FLOOR BEAM & BLOCK CONSTRUCTION

Ground to be excavated where appliciable and 150mm minimum hardcore laid to prevent growth of vegetation below beam and block floor as indicated on section Z-Z and Y-Y. Beam and block floor to comprise 75mm thick sand/cement screed, 100mm thick Celotex tuff-R GA4000 rigid polyisocyanurate foam insulation (to ensure U-value of 0.18W/m^{2}K), 1200G visqueen DPM with all joints to have 300mm minimum overlap and be securely taped, Infill blocks to be 100mm wide dense blocks designed for use in this location. Block and beam floor layout is to be designed and specified by supplier. Prior to manufacturing of concrete floor beams specialist manufacturer to check mesurements on site. Periscopic vents installed in external cavity walls at 1800mm centres to provide ventilation below beam and block floor and full radon protection, additionally allow for cavity tray as shown on sections.

FOUNDATION CONSTRUCTION

Provide 700mm wide x 200mm deep concrete foundation below new cavity wall construction. Contractor to ensure 150mm outcrop is achieved to all loadbearing walls. All foundations are to be cast onto suitable load bearing strata to the satisfaction of the Local Authority Building Inspector. Foundations are to be cast in one pour to prevent joints in concrete. Contractor to ensure new foundations do not undermine existing foundations on site. Concrete can be supplied by Huws Gray (01978 759516).

ROOFLIGHTS WINDOWS

Rooflight windows to be 780mm x 980mm GGL or similar rooflights as indicated. Windows are to comprise sealed double glazed units with 16mm minimum air gap and Low-E (soft-coated). Rooflights to be fitted in strict accordance with manufacturer's instruction with recommended flashing kit to ensure weather tight construction. Windows to not exceed U-value of 1.4 W/m^{2}K.

WINDOWS/DOORS/GLAZING

All windows and doors are to comprise sealed double glazed units set within good quality uPVC frames to local authority approval. Sealed double glazed units are to have 16mm minimum air gap and Low-E (soft-coated) glass to styles generally as indicated. Windows and doors are to achieve a minimum U-value of 1.4 W/m^{2}K. Opening areas of windows are to be equal to at least 5% of enclosed floor area with part of the opening set at 1750mm above floor level. Provide background ventilation to habitable rooms by means of 8000mm^2 controllable trickle ventilators set in head frame member of windows/doors. Glazing in critical locations, such as within 800mm of floor level to windows, within 1500mm of floor level to doors, and windows adjacent to doors are to consist of toughened safety glass in accordance with BS 6206 and permanently marked.

ENGINEERED STEEL BEAMS

All engineered steel beams are to be installed in positions as indicated. Steel beams are to be protected from fire by means of 2 layers of 12.5mm thick plasterboard and nominal skim finish to provide 30 minutes fire protection. All works in relation to Steel Beams to be as per Structural Engineers specification.

CONSEQUENTIAL IMPROVEMENTS

Due to the extension increasing the habitable space of the dwelling by over 10m^2, the following improvements are required:

- If the dwelling has uninsulated or partially insulated cavity walls, cavity to be filled with insulation where possible (Cavity wall insulation may not be suitable for sites exposed to driving rain)
- If there is no or less than 200mm thick insulation within the loft space, provide 250mm insulation or increase to 250mm thick
- Any existing hot water cylinder tank that is found on site is to be inspected. If tank is uninsulated provide 160mm insulated jacket. If cylinder tank has uninsulated jacket fitted less than 100mm in thickness, contractor to add a further jacket to achive a total thickness of 160m. If tank is fitted with solid foam insulation of less than 25mm thick, contractor to add an additional 80mm thick insulation jacket.

All consequential improvements are to only be undertaken where they are technically, functionally or economically feasible

External Facing Materials

External walls are to comprise timber cladding to Local Authority approval

Roofing Materials

Roof coverings are to be slates to match existing and to Local Authority approval

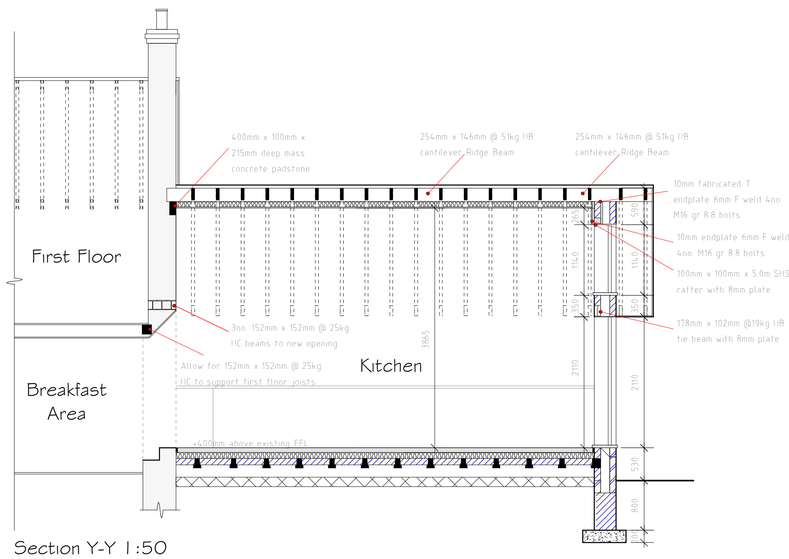
All windows are to comprise sealed double glazed units set in uPVC frames to Local Authority approval

All fascias and soffits are to comprise uPVC to match windows

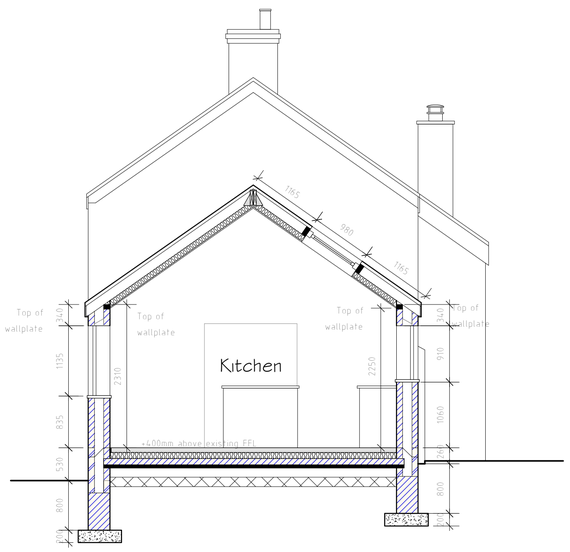
Rainwater to be collected in half round uPVC guttering and uPVC downpipes, to discharge to soakaways located in garden

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Section Y-Y 1:50



Section Z-Z 1:50

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Title: Sections & Elevations

Scale: (A1) 1:50 & 1:100

Drawn By: E.M.Jackson

Date: June 2022

Drawing No: F046/007

Sheet: 2 of 2

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