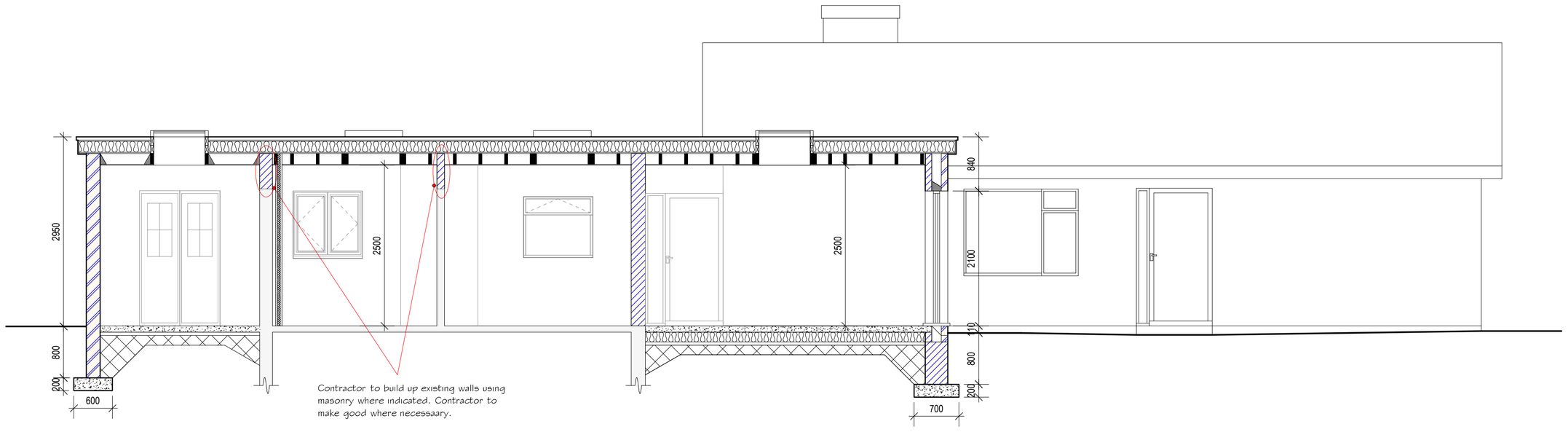
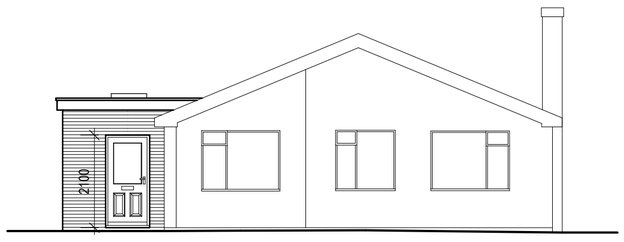
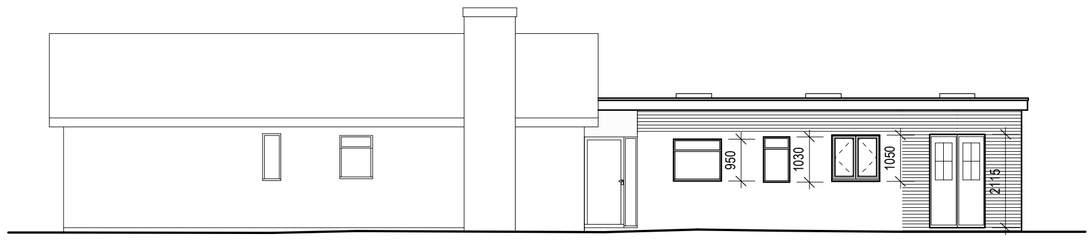


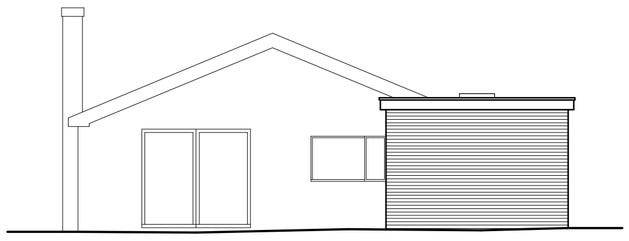
Section 1:50



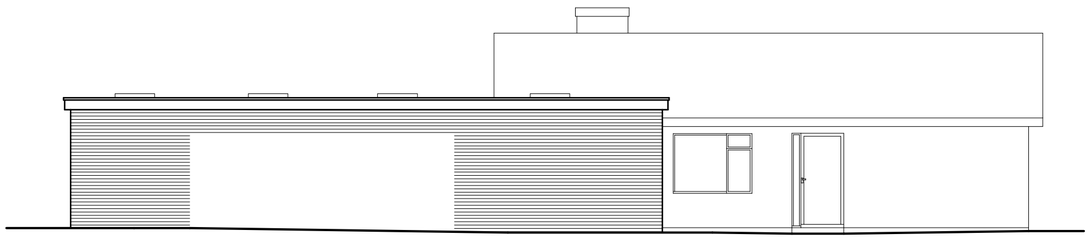
Front Elevation 1:100



Side Elevation 1:100

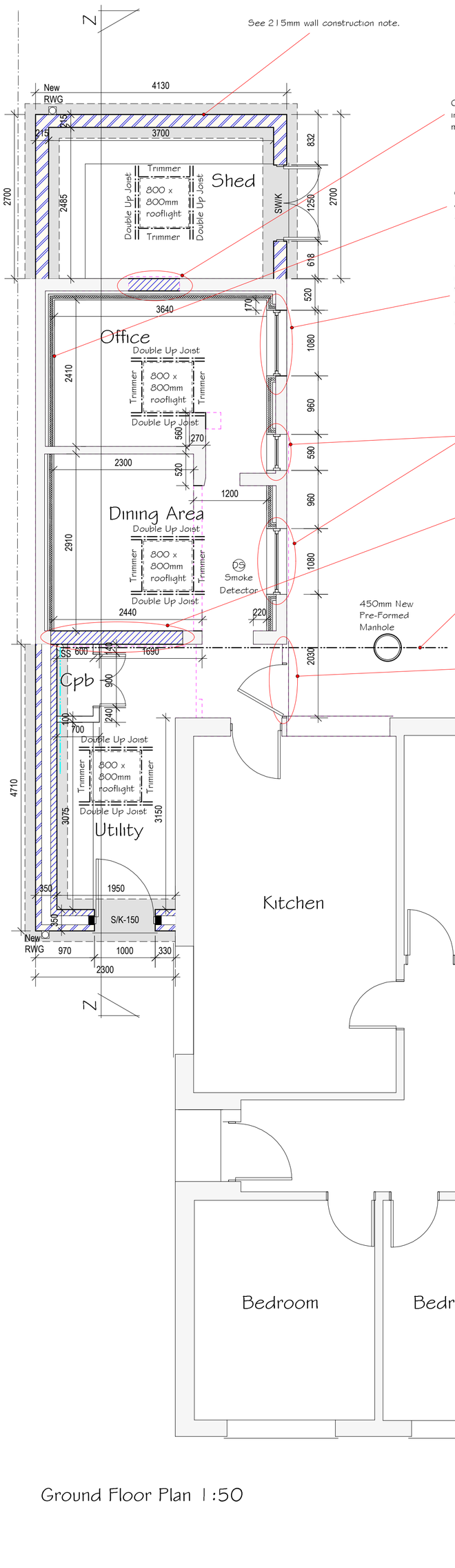


Rear Elevation 1:100



Side Elevation 1:100

New masonry walls to be connected to existing walls using furfix channel wall extension system. Fitted in strict accordance with manufacturers instruction.



Ground Floor Plan 1:50

See 215mm wall construction note.

Opening is to be blocked up using masonry and internal insulation to match existing. Contractor to make good where necessary.

Contractor to form stud wall internally with 50mm GA4000 celotex insulation within studwork. Stud wall to be formed 50mm from existing wall to allow for ventilation.

Contractor to remove masonry as required, opening formed using a BOX/K-100 lintel to support masonry above. Contractor to check wall make up prior to ordering lintels to ensure they are correct for the construction on site. Lintel to be provided with minimum end bearing of 150mm. Contractor to make good where necessary.

Existing windows to be replaced. Existing lintel to be checked and replaced if deemed necessary. Contractor to install BOX/K-100 lintel if required and make good where necessary.

Existing opening to be blocked up using masonry as indicated. Contractor to make good where necessary.

New drains are to connect into existing drainage run.

Contractor to continue upvc above existing window and door to accomodate increased ceiling height. Contractor to make good where necessary.

FLAT ROOF CONSTRUCTION
Roof coverings to be Polyroof 185 flat roofing system from Polyroof Products Ltd. Liquid base coat resin applied evenly over substrate. Polymat laid to overlap by 50mm minimum with additional resin coat to be applied and consolidated to eliminate air bubbles. Liquid top coat resin with appropriate colour pigmentation applied over entire surface including all trims. Substrate to consist of 18mm thick external quality ply over vapour control barrier, 170mm thick Kingspan thermaroof TR27 insulation to achieve a minimum u-value of 0.13W/m²K, laid on 18mm exterior grade plywood fixed to softwood firings to enable roof to discharge surface water at a rate of 1:50. Firings fixed to 170mm x 50mm C16 Softwood flat roof set at 400 centres. Joists to be supported off steel beam or joists hangers as indicated. *Joists to be doubled up where required to support rooflights as indicated.* Ceiling to be formed with 12.5mm of knauf wallboard fixed to the underside of joists with 3mm nominal skim plaster finish. Allow for cavity tray and code 4 lead flashing at all roof/wall abutments.

FLAT ROOFLIGHT
Rooflight window to be 800 x 800mm and is to sit on upstand to doubled up flat roof joists as indicated. Rooflight to be fitted in strict accordance with manufacturer's instructions with recommended flashing kit to ensure weather tight construction. Measurements to be taken on site prior to commissioning of work. Window to comprise sealed double glazed units set within good quality aluminium frames to local authority approval. Sealed double glazed units are to have 16mm minimum air gap and Low-E (soft-coated) glass. Window to achieve a minimum U-value of 1.4 W/m²K. Glazing is to consist of laminated toughened safety glass in accordance with BS 6206 and permanently marked.

CAVITY WALL CONSTRUCTION
External cavity walls are to comprise of 100mm thick brickwork, 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/m²K. Provide insulated Keystone lintels over openings as specified on plans. 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 150 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.
Walls below DPC level are to be constructed class B engineering brick down to Thermalite trench block. Cavity insulation is to continue in 150mm cavity to prevent thermal bridging down to trench block. All walls are to be constructed centrally on supporting foundations.

CONVERTED GARAGE WALL CONSTRUCTION
Existing garage walls are to be retained and internally insulated using stud framed partition filled with 50mm GA4000 celotex insulation. Studwork is to be erected 50mm from existing wall to allow for ventilation. The additional insulation and existing wall makeup including internal insulation, is to achieve a combined minimum U-value of 0.3W/m²K. Provide insulated Keystone lintels over openings as specified on plans. All lintels to have a minimum of 150mm end bearing length. Keystone lintels can be supplied by Huws Gray (01978 264269). All openings in cavity, ie, around window and door openings, are to be closed using stud partition or Thermabate 150 insulated cavity closers to prevent thermal bridging.

215MM WALL CONSTRUCTION
External solid walls are to comprise 215mm thick brickwork to match existing and to local authority approval. DPC to be installed as indicated. Walls below finished ground level to be constructed using concrete common brickwork. Walls above finished ground levels to have two courses of engineering brick. Walls above to be constructed using facing brick to local authority approval. All walls to be constructed centrally on supporting foundations.

STUD FRAMED PARTITIONS
Stud framed partitions are to comprise 12.5mm thick plasterboard fixed to both sides of 75mm x 50mm softwood stud framing set at 400mm centre's. Framework is to be formed on 75mm x 50mm softwood soleplate. Additional framing to be installed where required i.e, around openings. All joints in boards are to be filled and scrimmed prior to the application of skim plaster. Allow for 50mm thick GA4000 celotex insulation in cavity of stud framing to walls as indicated on floor plans to achieve minimum U-value of 0.3W/m²K, including existing wall / insulation.

GROUND FLOOR CONSTRUCTION
100mm thick concrete slab which is to be continued over inner leaf of cavity wall, allow for 1000mm wide A193 mesh to perimeter of slab. 150mm thick Celotex XR4000 rigid polyisocyanurate foam insulation (to ensure U-value <0.15 W/m²K), with 1200G visqueen DPM below, all joints to have 300mm minimum overlap and be securely taped. 50mm sand blinding on 150mm minimum well consolidated hardcore. Build 650mm x 650mm x 450mm high radon protection sump form with 50mm thick concrete paving slab. Walls of sump to be 100mm brick laid honeycomb bond with perpends left open. Cover with another 50mm concrete paving slab. 100mm diameter uPVC pipe to run from sump to duct to outside air, outlet to be capped at finished ground level. Additionally provide cavity tray as indicated in section bridging the two masonry courses to seal cavity against ingress of radon gas.
Contractor to omit insulation from shed floor construction as indicated.

FOUNDATION CONSTRUCTION
Provide 700mm wide x 200mm deep concrete foundations below new cavity wall construction and 600mm wide x 200mm deep foundations below 215mm brickwork wall. 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.

SURFACE WATER DRAINAGE
Rainwater to be collected in 100mm wide half round uPVC and 65mm diameter uPVC downpipes. Water to discharge to Marley rainwater gullies 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.

PLUMBING
Wastes to connect into 110mm diameter new Short Stack as indicated. All connections being made on bossed socket adapters. Short Stack to terminate above flood level of any sanitaryware and fitted with air admittance valve. Utility appliances to connect into anti-syphon traps prior to connecting into new Short Stack.

FOUL DRAINAGE
All new drains are to be 110mm diameter uPVC drains laid in granular material at a fall of 1 in 40. New drainage required in utility to be connected to new Short Stack (SS) located in cupboard and connected into new pre-formed access chamber as indicated. *If required Contractor to saw cut existing floor slab to allow for new drainage run and make good where necessary.* 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 pre-formed access chamber as indicated; set on 150mm thick concrete base. New pipes to be haunched in sand/ cement mortar. Any new preformed chamber to be fitted in strict accordance to manufacturer's instructions. Invert and cover levels of chamber to be confirmed prior to commencement of any drainage works. *All drainage works may be subject to an Agreement from Welsh Water. Contractor to inspect existing drainage system prior to any drainage works.*

HEATING
Existing central heating system to be extended into new areas. 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 underfloor heating and radiators. Radiators to be 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.

FIRE DETECTION
Provide mains operated interacting smoke detector at the position 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.

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 Utility by means of Vent Axia or similar electrically operated fan, extracting directly to external air to the following requirements:
Utility: Wall Mounted Fan to extract at a rate of 30 litres per second, fan operated in conjuction with light switch with 20min overrun.

Vents to be covered with weather proof grilles at points of discharge to external air. Fans to duct through external wall or roof void and terminate at tile vent terminal where applicable.

WINDOWS/DOORS/GLAZING
All windows and doors are to comprise sealed double glazed units set within good quality uPVC frames. 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/m²K. 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 8000mm² 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.

KEY

- 50mm drainage
- 110mm drainage
- Existing walls to be checked for loadbearing capacity prior to their removal. Should walls be found to be loadbearing suitable lintel/steel beams to be installed in required locations *Structural engineer to design and specify steel beams as required* Contractor to make good as necessary Any Short stacks SS/BIG & associated drainage runs that become abandoned to be grubbed up as required.

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.

Contractor to check wall make up prior to ordering lintels to ensure they are correct for the construction on site.

Floor level to match existing, contractor to check floor levels prior to commencement of works.

PLANS HAVE NOT YET GAINED LOCAL AUTHORITY APPROVAL AND MAY BE SUBJECT TO CHANGE.

PLANS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS CALCULATIONS & SAP REPORT. (IF APPLICABLE)

DO NOT SCALE FROM DRAWINGS IF IN DOUBT ASK.

Rev	Date	Detail	Initial
B	05/25	Wall Construction Amendments	L.F
A	05/25	Remove rooflight	SIH

Project:
Proposed Alterations to
12 Little Acton Drive,
Wrexham,
LL12 8DH

Title: Working Drawing

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

Drawn By: L. Fowles

Date: April 2025

Drawing No: E093/007

Sheet: 1 of 1

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