Construction Notes:

1. Foundations General:
Foundations under external walls and solid internal walls to be min 600mm wide concrete strip foundations.
Foundations shown on this drawing have been shown at the minimum required depth of 1000mm below ground level.
If upon excavation it is found that ground conditions at this level are unsuitable then foundations shall be laid at an increased depth on adequate load bearing strata.
Final depth of foundations to be approved by Building Control.

2. Sub-structure Walls:
Provide Trench blocks on foundations with 3no. courses facing brickwork below ground & up to DPC level to external leaf, and 100mm thick 7.3N/mm² blockwork for internal leaf tied together with stainless steel wall ties (see Wall Ties note for details), with a 150mm cavity filled with lean mix concrete up to 225mm below DPC in cavity, cavity wall insulation taken down to fill level (see external wall note for insulation).

3. Sub-structure Ventilation:
Void under suspended floor to be provided with Timloc 1201XL periscope vents or equal to suit 150mm cavity installed within cavity wall complete with air brick within external skin, vents to be provided at 2000mm cts on opposite walls to achieve minimum 1500mm²/m run, vents to be installed in accordance with manufacturers recommendations.

4. Sleeper Walls:
Sleeper walls built to support floor beams in positions shown to be 100mm thick 7.3N/mm² blockwork built of foundation, either built up as Honeycomb wall or with air bricks built in at max. 2000mm cts to achieve 1500mm²/ metre air flow to ventilate suspended floor.

5. Ground Floor Construction:
Ground floor to be Suspended to comprise of 75mm sand/cement screed on 1200 gauge Visqueen Vapour Barrier (VCL) on 150mm Recticel Eurothane GP insulation board with perimeter upstand insulation at edge of screed, laid on 1600 gauge Visqueen R400 Radon Membrane to be used as basic radon protection (lapped and taped at joints and around service penetrations, membrane to be taped to continuous cavity tray installed around building perimeter), on 150mm precast concrete beam and block (designed by specialists), with minimum 150mm void under beams.
P/A=0.56.
Specification to achieve a 'U value' of 0.12 W/m²K.
Note Insulation thickness indicated as a guide only and subject to change pending results of SAP Calculations.

6. DPC'S:
Horizontal DPC's to be textured or embossed polyethylene min. 2000 gauge with min. 100mm laps and installed to all walls min 150mm above ground level. The DPC must not project excessively into the cavity where it may collect mortar droppings. The DPM(see ground floor note for spec) shall be laid to form a continuous moisture barrier, lapped and taped at joints and lapped with cavity tray in external cavity walls.
Vertical DPC's to be provided to all jambs of openings in cavity walls. Cavity to be closed with a Thermabate cavity closer together with a 225mm DPC used to lap with window frame of opening and extended into cavity.
Where ground level encroaches within 150mm of general DPC level provide additional DPC to be stepped up to maintain 150mm above raised ground level.

7. External Walls:
External wall construction to consist of 102.5mm Facing brickwork outer skin (Ibstock Aston Red), 150mm cavity fully filled with Knauf Supafil blown insulation (lambda value of 0.034W/mK), inner leaf made up of 100mm Plasmor Aglite Ultima 4.2N blockwork or equal (lambda value of 0.31W/mK), finished with 12.5mm Gyproc wallboard and skim on dabs.
Specification to achieve a 'U-value' of 0.19 W/m²K.
Note Insulation thickness indicated as a guide only and subject to change pending results of SAP Calculations.

Cavity trays to be built into walling over all vents, air bricks, lintels, service boxes and anything that crosses the cavity with weep holes every third perpend. Close cavity at eaves with a fire resistant material.

8. Wall Ties:
External Brickwork Leaf to be tied back to timber frame with 300mm Ancon Staifix HRT4 Housing Wall Tie (Type 4/Type A) stainless steel wall ties or equal approved, positioned at max 600mm cts horizontally and 450mm cts vertically. Spacing to be reduced at jambs of openings to max 300mm cts vertically and within 225mm of the masonry reveal or movement joint.
Leaves of sub-structure cavity walls to be tied together with 300mm Ancon Staifix HRT4 Housing Wall Tie stainless steel wall ties or equal approved, positioned at 600mm cts. horizontally and 450mm cts. vertically and staggered in a diamond formation.

9. Movement Joints:
Provide expansion Joints in brickwork where walls exceed 12m in length at maximum 12m cts and 6m from corner or in accordance with brick manufacturers recommendations. Joints to be filled with a flexible compressible material and finished with a flexible exterior quality low modulus sealant to match mortar colour. Where possible movement joints are to be concealed behind rain water pipes.

10. Lintels:
All Lintels over openings in masonry wall to be IG L1/S 150 with IG Universal Arch formers or equal unless stated otherwise installed to manufacturers recommendations.
O/a length to be checked on site before ordering.
Openings in external walls to have additional cavity tray protection to lintels.

11. Internal Walls:
Partition walls in positions shown to comprise of 50x75mm C16 Grade timber studs.
Provide 25mm thick Isover APR 1200 insulation quilt between and finish both sides with 12.5mm Gyproc wallboard with skim finish, to achieve a sound insulation rating of 40Rw dB.
Additional studs and noggins are to be provided as necessary for fixing of sanitary ware and kitchen / utility units.
(Note: use moisture resistant plasterboards on Bathroom side of partitions and where walls are expected to be fully tiled i.e. bathrooms, stud centers to be reduced and additional noggins to be provided). A gap of 5mm to be left between bottom edge of skirting and top of floor finish, sealed with flexible sealant.

12. First Floor Construction:
Provide Engineered floor joists to be designed by manufacturer finished to top with 22mm moisture resistant T&g chipboard installed in accordance with manufacturers details and finished to under side with 12.5mm Gyproc wallboard Ten (or equal) and skim. Provide strutting mid span and provide double floor joist below partitions unless specified otherwise by specialist.
Provide 100mm insulation quilt between joists above ceiling.
Floor joist depth of 250mm shown for indication purposes only, exact joist sizes to be confirmed by specialist)

13. Main Roof Construction:
All Tiling to comply with the standards set out in BS 5534.
Pitched roof to consist of Marley Double Roman Concrete roof tiles in colour Smooth Grey on 25x50mm tanalised roofing battens on one layer of Protect A1 roofing underlay or equal approved, laid on Trussed rafters designed by Timber frame specialist. Pitch of main roof to be 40°. In accordance with BS5534 Perimeter Tiles to be Nailed once & Clipped (65x3.35mm Aluminium Nails), Tiles 2 courses from Valleys, Eaves & Ridge to be Clipped, General Tiles to be Nailed Once. Provide Marley universal dry verge, GRP Dry Valley, Ridgefast Dry Ridge & Tile vent terminal to the top of soil pipes where required to terminate through roof.
Rafter depth of 200mm shown for indication purposes only, exact joist sizes to be confirmed by specialist)

14. Main Roof Insulation:
Roof void to be insulated with 400mm thick Rockwool loft roll or similar insulation roll laid in two layers (lambda value of 0.044W/mK or better), one layer 200mm between ceiling ties and 200mm laid at 90 degrees over. Ceiling to be finished with 12.5mm Gyproc Wallboard and skim.
Specification to achieve a 'U-value' of 0.11 W/m²K.
Cut down areas of the roof to be insulated within the slope with 120mm Thick Recticel Eurothane GP between the rafters ensuring min 50mm clear between underside of tile and top of insulation is maintained and 50mm Thick Recticel Eurothane GP fixed below rafters, with 25mm batten service void below and finished with 12.5mm Gyproc wallboard and skim.
Specification to achieve a 'U-value' of 0.15 W/m²K.
Note Insulation thickness indicated are a guide only and subject to change pending results of SAP Calculations.

15. Main Roof Ventilation:
Roof void to be ventilated with Glidevale SV Soffit ventilators together with Glidevale in-line ridge ventilators all fixed in accordance with manufacturers instructions and recommendations. to give ventilation at new eaves equal to 25,000mm²/m and 5,000mm²/m at the ridge.

16. Wall Restraint:
Walls to be strapped to floor above ground level at centers not exceeding 2m with Galvanised MS 30x5x1200mm lateral support straps to BS EN 845-1.
Gable walls to be strapped to roof at centers not exceeding 2m with Galvanised MS 30x5x1200mm lateral support straps to BS EN 845-1.
Vertical (holding down) straps at least 1m long to be anchored to wall and turned over wall plate at centers not exceeding 2m. All in accordance with timber frame manufacturers details.

17. Main Staircase:
Form new timber staircase comprising of 13 No equal risers of approximately 204mm (max 220mm rise) with a going of 250mm measured from nosing to nosing, pitch of new stairs not to exceed 42 degree.
Provide min 2000mm vertical headroom above pitch line.
Provide and fix handrail 900mm above pitch line with balustrades and newels to clients choice - Balustrades to be set at cts to prevent the passage of a 100mm sphere. Ensure Min 900mm clear width between handrail and opposite wall.

21. Windows:
New Windows to be uPVC double glazed units, windows accessible from the ground or adjacent roof to be manufactured to a design tested to meet the requirements of PAS24:2012. Units to have a min 16mm cavity and have low emissivity glass with a rating of 0.15 to achieve a 'U value' of 1.3W/m²K or better. Window Cill to project beyond face of wall by at least 25mm and have anti-capillary drip. Back of frame to overlap into cavity by min 30mm. Cavity to be closed with a Thermabate cavity closer or equal together with a 225mm dpc to lap with window frame of opening and extended into cavity.
Provide background ventilation via trickle vents installed in heads of windows - (see ventilation note for details)
Glazing in critical locations to be laminated or toughened to comply with Bldg. Reg. K4 and BS EN 12150.

22. Roof Lights:
Provide 2No. Velux GGU MK06 0070 or similar approved roof lights, Exact Model of roof light to be confirmed with client prior to ordering.
roof lights to achieve a U-Value of 1.3W/m²K or better, all installed in accordance with manufacturers details and recommendations.

23. External Doors:
External doors to be uPVC units to achieve a 'U-value' of 1.0W/m²K or better and be manufactured to a design tested to meet the requirements of PAS24:2012 and in accordance with BS6262 and for safety glazing EN12150. Cavity around all openings to be closed with a Thermabate cavity closer together with a dpc used to lap with frame of opening and extended into cavity. Main Entrance Door should have either a door viewer, or clear glass within the door, and be fitted with a door chain or door limiter, in accordance with Part Q section 1. Provide level access to dwelling with an approach gradient of 1 in 20 or shallower, ensuring an adequate channel drain is installed at door opening to prevent water ingress and an accessible threshold is provided to the door.
Entrance door to have a minimum opening of width of 775mm measured between doorstop and face of open door.

24. Internal Doors:
Provide 35mm thick timber doors internally, allowing min clear opening of 775mm, corridors to have a min clear width of 900mm when door is approached head on or 1050mm when approach is not head on.

25. Electrical:
All electrical switches and sockets in habitable rooms are to be fixed no lower than 450mm from floor and no higher than 1200mm from floor.
All electrical works to be by an approved NICEIC contractor and to be in accordance with IEE rules and regulations.
The design installation, inspection and testing of the electrical installation will be carried out in accordance with BS7671 2001 and approved document part 'p'.
Distribution board to be located between 1.35-1.45m above finished floor level in line with Part M.

26. Lighting:
Provide pendant type standard light fittings to all rooms, with energy efficient bulbs fitted in 100% of the light fittings in main dwelling spaces.

24. Ventilation:
Whole Dwelling Ventilation Rate to be 31 litres per second.
Ventilation Strategy - background ventilators and intermittent extract fans.
Provide mechanical extraction in rooms listed below capable of extracting at the rate show, all to be ducted to outside airn:

Kitchen	30 litres per second via Cooker Hood
	or 60 litres per second via Whole room extract
Utility room	30 litres per second
Ground floor Wc	6 litres per second
Bathroom	15 litres per second
En-Suite	15 litres per second

Trickle ventilation installed in the heads of windows to achieve at least the below equivalent areas;

Habitable Rooms	8000mm²
Kitchen	8000mm²
Bathroom / En-Suite	4000mm²

in Rooms without windows extracts to be operable via the light switch and have a 15 minute overrun.

25. Heating:
Air Source Heat Pump together with hot water cylinder to run wet heating system and hot water system, system to be designed by suitably qualified person. All new radiators to be added into the proposed dwelling to be fitted with thermostatic valves (TRV's), Provide Radiator / Heated Towel rail to Kitchen, bathroom and en-suites to be confirmed by client. Heating system to be installed in accordance with manufacturers requirements and recommendations.
Air Source Heat Pump to comply with the standards of the Microgeneration Certification Scheme.

26. Smoke Detection:
Provide Automatic interlinked smoke detection and alarm system with mains supply together with battery back up.
Ensure the system provided meets requirements set out BS5446.
To be connected via a separate fuse on main distribution board. Provide smoke detectors to the top and bottom of stairs.
With recommendation to provide heat detector to kitchen.

27. Fire Escape Windows:
A minimum of 1no. window fitted into all first floor rooms excluding en-suites and bathrooms to be an escape window, escape windows to have a minimum total clear area when opened of 0.33m² with a minimum clear opening of 450mm in any direction (example of clear opening area - 450x750mm) escape windows should be designed to remain in the open position without needing to be held by a person making their escape. The lowest part of the opening to be located no higher than 1100mm above finished floor level.

28. Rainwater:
New rainwater goods to be 112mm dia round section PVCu eaves gutters with 65mm dia round downpipes fixed in positions shown to discharge into new trapped storm water gullies.
Rainwater goods to be BS4514. New storm water gullies to discharge into new storm water drainage system as per consulting engineers specification and details.
Driveways to be surfaced in Marshalls Tegula Priora Permeable Block Paving or equal Permeable Block Paving.

29. Soil and waste pipes(Drainage):
All drains are to be laid to the satisfaction of the building control. All pipework to be flexibly jointed uPVC or similar approved on a bed & surround of granular material in accordance with manufacturers recommendations, drains running below the new slab to be surrounded with min 100mm granular fill to maintain flexibility.
100mm Dia drains to be approx fall of 1 in 40 and any drain passing through substructure brickwork to be protected with R.C Lintels over, with voids filled to prevent entry of vermin.
Above ground drainage to Comply with BSEN12056 (Gravity Drainage Systems inside buildings).

Waste waters from Kitchen to connect into external gulley,
Waste waters from First floor Bathroom and En-suite to connect into internal soil vent pipes as indicated to terminate through roof via tile vents. Ground floor W.C to connect into separate stub soil pipe as indicated fitted with Air Admittance Valve (AAV).
All sanitary wares to be connected into drainage system via deep seal traps to a diameter suitable for the appliance and in accordance with manufacturers recommendations.
All Waste waters to be connected into new foul water drainage system as per consulting engineers specification and details.

30. Service Ducting:
In line with Part R of the building regs & requirements of guidance document PAS2016. Service ducting for fibre optic cabling should be installed from site boundary to external wall of the dwelling with pre-installed pull-cord and secure end plugs, ducting is to be kept to a min depth of cover of 350mm. A 20mm electrical conduit is to be installed through external wall vertically above end of service duct and capped off internally.

31. EV Charging:
In accordance with Part S of the building regs, provide EV charging point to minimum 1no. associated parking space (exact location to be confirmed). Vehicle Charging system to comply with Section 6 - Be designed & installed in accordance with BS EN 61851, have a minimum nominal output of 7kW, be fitted with a universal socket (untethered connection), have indicator to show status using lights or visual display, minimum of a Mode 3 specialised system for electric vehicle charging running from a dedicated circuit or equivalent as defined in BS EN IEC 61851-1, comply with requirements in the IET's Code of Practice: Electric Vehicle Charging Equipment Installation & BS 7671.

32. General Notes:
All plumbing work to be in accordance with BS5572.
Hot water supply to any fixed sanitary ware to be designed and installed with measures to ensure the temperature of water delivered cannot exceed 48°C.

Close all cavities at eaves level with a fire resistant material.

Provide mastic to all external reveals of openings in cavity walls.

Opening light casements of windows per room to be equal to or greater than 5% of floor area.

All Lintels and structural beams to be fire protected to a minimum 30 minute standard.

All materials and workmanship specified are to be fixed in strict accordance with manufacturers recommendations, as well as all current relevant British Standard Specifications, codes of practice, Building Regulations Requirements, BRE guidance and NHBC Standards if applicable.

The Following Certificates to be submitted to building control prior to completion:
- P1 BS7671 Design, Installation, Testing and Commissioning of Electrical Installation.
- Installation, Testing and Commissioning of Fire Detection System.
- Installation, Testing and Commissioning of Heating and Plumbing System.
- Installation, Testing and Commissioning of Gas Installation.
- G1 Water Efficiency Calculations.
- SAP Calculations & EPCs.

External Materials

1. Ibstock Aston Red Bricks.
2. Upvc windows.
3. Cast Stone window cills.
4. Upvc patio doors.
5. Composite entrance door.
6. Marley double roman concrete roof tiles - Smooth Grey.
7. Anthrcite Grey Upvc fascia.
8. Black rainwater goods.
9. Vertical tile hanging.
10. Stormking GRP entrance canopy.
11. Arched brickwork heads.
12. Brick Corbelling.
13. Velux Rooflight.

Notes: -
* Denotes obscured glazing

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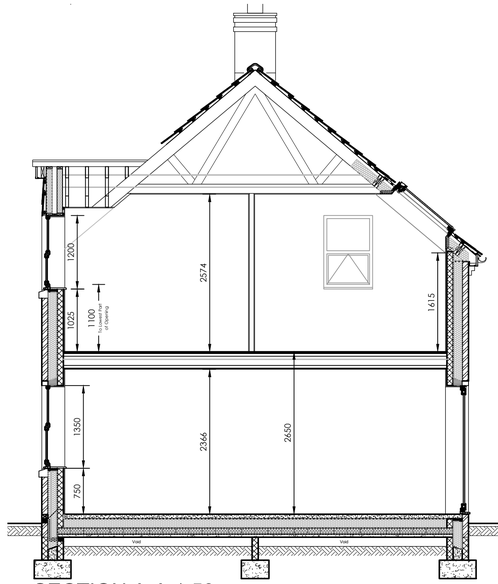
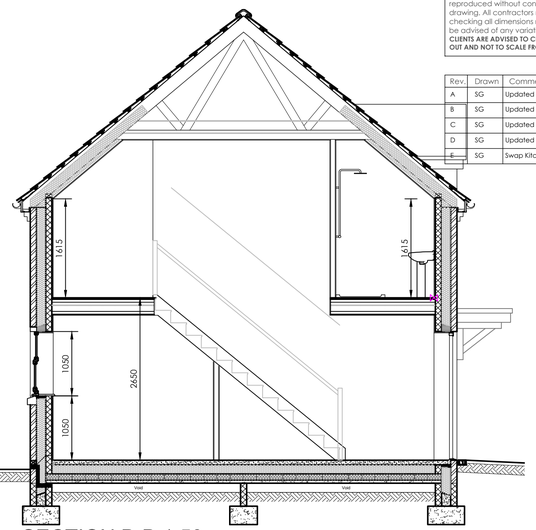
CLIENTS ARE ADVISED TO CLARIFY DIMENSIONS WITH THE ARCHITECT PRIOR TO SETTING OUT AND NOT TO SCALE FROM THE DRAWING

Rev.	Drawn	Comments	Date
A	SG	Updated Roof Insulation.	24/07/2024
B	SG	Updated Ground Floor Construction to Beam & Block.	01/08/2024
C	SG	Updated Notes 13 & 31.	28/10/2024
D	SG	Updated Notes 7 & 25, raised roof height.	24/01/2025
E	SG	Swap Kitchen and Living Space	11/02/2025



SECTION A-A 1:50



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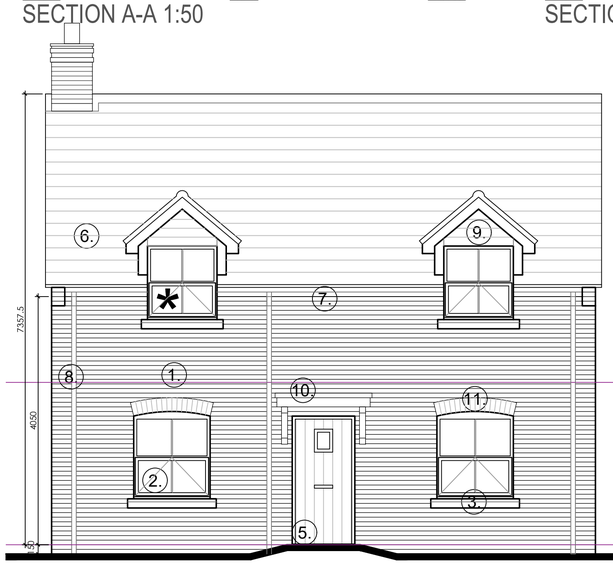
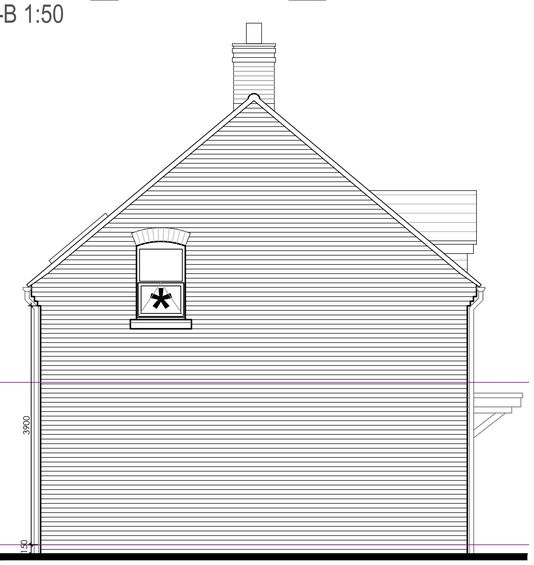
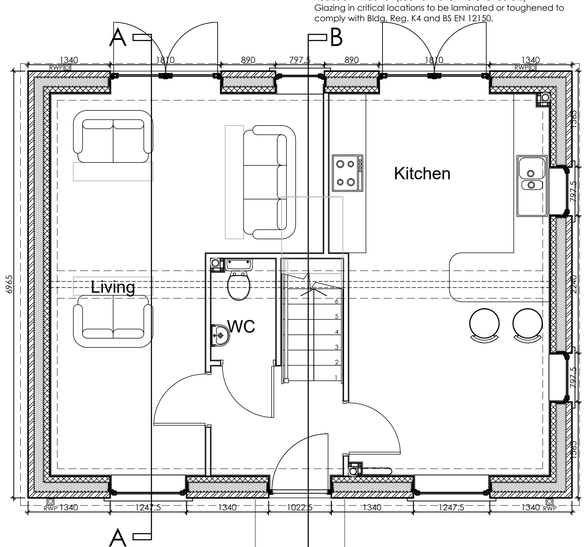


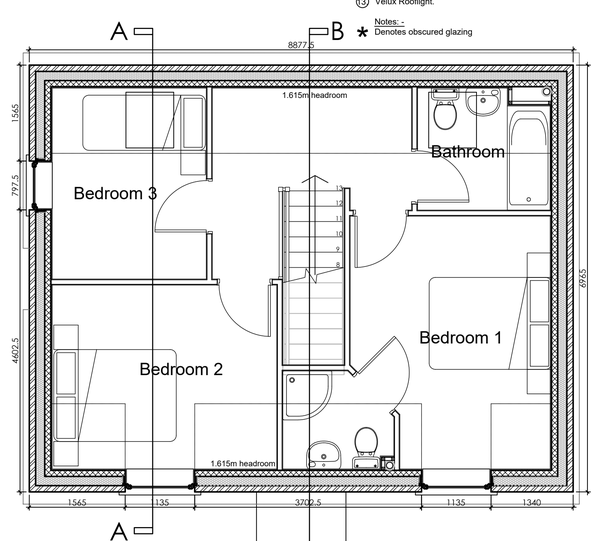
FRONT ELEVATION 1:50



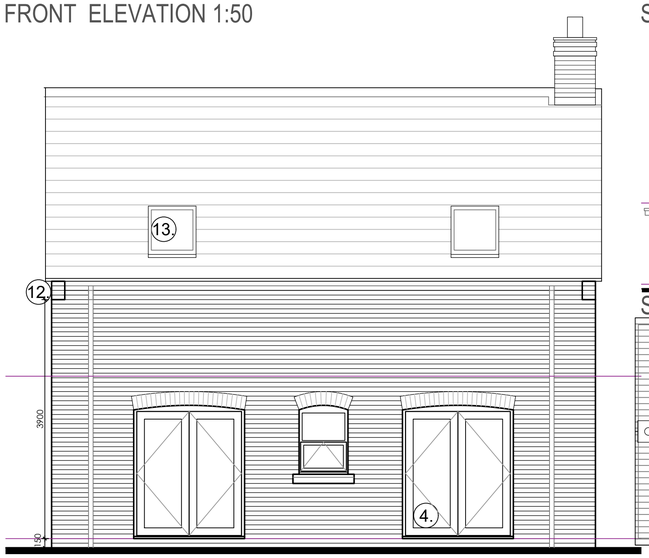
SIDE ELEVATION 1:50



GROUND FLOOR PLAN 1:50



FIRST FLOOR PLAN 1:50



REAR ELEVATION 1:50

SIDE ELEVATION 1:50

ROOF PLAN 1:100

1:50
1m 0 1m 2m 3m 4m 5m

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BUILDING REGS

Client
Paul Downward

Project
Former Lord Hill,
Market Drayton

Title
Plans and Elevations as Proposed
Plot 2

Status
Building Regs

Date July 2024 Drawn SG

Scale @A1 1:50 Checked

Project No 01399 Drawing No. AL(0)03 Rev E

File Ref: 01-WEF