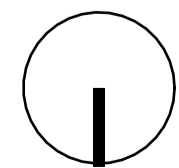


| Ground Floor Room Schedule | |
|----------------------------|--------------------|
| Name | Area |
| GARAGE | 23 m ² |
| UTILITY | 10 m ² |
| LIVING ROOM | 24 m ² |
| KITCHEN / DINING | 24 m ² |
| HALL | 27 m ² |
| W/C | 3 m ² |
| OFFICE | 9 m ² |
| Grand total: 7 | 120 m ² |



PROPOSED GROUND FLOOR LEVEL

1 : 50

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 dwelling is constructed to minimise unwanted air leakage through the new building fabric.

HEALTH AND SAFETY
The contractor is reminded of their liability to ensure due care, attention and consideration is given in regard to safe practice in compliance with the Health and Safety at Work Act 1974.

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.

BASIC RADON PROTECTION
Provide a 1200g (300 um) radon membrane under floor slab lapped 300mm double welded and taped with gas proof tape at joints and service entry points. Carry membrane over cavity and provide suitable cavity tray and weep holes.

SITE INVESTIGATION
A survey of the site is to be carried out by a suitably qualified person including an initial ground investigation, a desk study and a walk over survey. A copy of all reports and surveys to be sent to building control for approval before works commence on site. Any asbestos, contaminated soil or lead paint found on the site is to be removed by a specialist. Asbestos is to be dealt with in accordance with the Control of Asbestos Regulations 2006.

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 be taken to avoid danger to health and safety caused by contaminants and ground gases e.g. landfill gases, radon, vapours etc or in the ground covered, or to be covered by the building.

BEAMS
Supply and install all structural elements such as 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 Nulifire 5 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.

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. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1, 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 manufacturer's standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

OPENINGS AND RETURNS
An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally).

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 100mm 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
Walls below ground constructed from 100mm Plasmor Aglite Ultima 7.3N/mm². 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 GARAGE FLOOR
Subject to suitable ground conditions and site investigation use a ground bearing floor slab. Solid garage floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 150mm ST2 or Gen1 ground bearing slab thickened 300mm at garage entrance, concrete mix to conform to BS EN 1992-1-1:2004 with 1 layer of 252 steel mesh positioned mid span. Slab to be laid over a 1200 gauge polythene DPM as required. DPM to be lapped in with DPC in walls. Ensure a 1:80 fall is provided to floor from back of garage to front garage door.

SUSPENDED BLOCK AND BEAM FLOOR
Remove top soil and vegetation, apply weed killer - provide 50mm concrete ground cover if required by BCO. The underside of beams not less than 150mm above the top of the ground. PCC beams to be supplied and fixed to beam manufacturer's plan, layout and details (details and calculations to be sent to Building Control and approved before works commence). Minimum bearing 100mm onto DPC and load bearing walls. Provide concrete blocks to BS EN 772-2, wet and grout all joints with 1:4 cement/sand mix. Provide double beams below non-load bearing partitions. Lay 1200g DPM/radon barrier, with 300mm laps double welded and taped at joints and service entry points using radon gas proof tape, over beam and block floor. Lay floor insulation over DPM, 150mm Celotex XR4000 applied as a rigid material. 25mm insulation to continue around floor perimeters to avoid thermal bridging. Lay 500g separating layer over insulation and provide 75mm sand/cement screed over and prepare for floor finishes as required. The top surface of the ground cover under the building shall be above the finished level of the adjoining ground.

Ventilation - Provide cross-ventilation of the 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 is the greater. Sleeper walls shall be of honeycombed construction or have provision for distribution of ventilation.

FULL FILL CAVITY WALL
To achieve minimum U Value of 0.23W/m²K
New cavity wall to comprise of 100mm suitable coursing stone. Full fill cavity with 125mm Rockwool Cavity insulation as manufacturer's details. Inner leaf to be 100mm block. Plasmor Aglite Ultima 4.2N or equivalent. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar. Wall between garage and house finished with 12.5mm Gyproc fireline plasterboard on dabs with 5mm skim.

DPC
Provide horizontal strip polymer (nylon) damp proof course to both internal and external skins 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 where cavity is closed.

WALL TIES
All walls constructed with stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 5628 and BS EN 845-1.

CAVITIES
Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

CAVITY BARRIERS
30 minute fire resistant cavity barriers to be provided at at tops of walls, gable end walls and vertically at junctions with separating walls & horizontally at separating walls with cavity tray over installed according to manufacturer's details.

DORMER CHEEK AND FACE TIMBER FRAME WALL
To achieve minimum U Value of 0.17W/m²K
Code 5 Lead finish in accordance with lead development fixed to 8mm plywood sheathing board on vertical 25 x 38mm 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 100mm x 50mm head and sole plates and vertical studs (with noggins) at 400mm ctrs or to s/engineer's details and calculations. Insulation between and inside studs; 100mm Celotex GA4000 between plus VCL and 62.5mm Celotex PL4000 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.

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 EN 1996-1-2:2005 Eurocode 6. Design of masonry structure.

PITCHED ROOF INSULATION AT CEILING LEVEL
Pitch 40° (imposed load max 0.75 kN/m²)
To achieve U value of 0.13 W/m²K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Suitable roofing tiles on 25 x 38mm tanalised sw treated battens on sarking felt supported on grade C24 rafters to structural engineers specification. Rafters supported on 100 x 50mm sw wall plates. Insulation at ceiling level to be 100mm Rockwool insulation laid between ceiling joists with a further 150mm layer and 150mm layer over (cross direction). Total insulation thickness 400mm
Construct ceiling using sw joists at 400mm centres, finished internally with 12.5mm plasterboard and min 5mm thistle multi-finish plaster. Provide polythene vapour barrier between insulation and plasterboard. Provide opening at eaves level at least equal to continuous strip 25mm wide in two opposite sides to promote cross-ventilation. Mono pitched roofs to have ridge/high level ventilation equivalent to a 5mm gap via proprietary tile vents spaced in accordance with manufacturer's details.
Restraint strapping - 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.

PITCHED ROOF
Vented roof - pitch 40°
To achieve U-value 0.13 W/m²K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Suitable roofing tiles on 25 x 38mm tanalised sw treated battens on sarking felt to relevant BBA Certificate. Supported on grade C24 rafters to Engineer's details and calculations. Rafters supported on 100 x 50mm sw wall plates. Insulation to be 150mm Celotex XR4000 between rafters between and 52.5mm Celotex PL4000 under rafters. Taped and sealed to provide continuous VCL.
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. Fix 12.5mm foil backed plasterboard (joints staggered) and 5mm skim coat of finishing plaster to the underside of all ceilings using galvanized plasterboard nails.
Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.

STRAPPING FOR PITCHED ROOF
Gable walls should be strapped to roofs at 2m centres. All external walls running parallel to roof rafters to be restrained at roof level using 1000mm x 30mm x 5mm galvanised mild steel horizontal straps or other approved to BSEN 845-1 built into walls at max 2000mm centres and to be taken across minimum 3 rafters and screw fixed. Provide solid noggins between rafters at strap positions. All wall plates to be 100 x 50mm fixed to inner skin of cavity wall using 30mm x 5mm x 1000mm galvanized metal straps or other approved to BSEN 845-1 at maximum 2m centres.

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 (e.g. 100mm Rockwool or Isovol 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.

INTERNAL LOADBEARING MASONRY PARTITIONS
Construct load bearing internal masonry partitions using dense concrete blocks built off concrete foundation. Concrete mix to conform to BS EN 206-1. Depth to engineer's details and dependent on ground conditions to be agreed with BCO. Wall tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish.

INTERMEDIATE FLOORS
Intermediate floor to be 25mm t&g flooring grade chipboard or floorboards laid on Posijoists to manufacturers specification (see engineer's calculation for sizes and details). Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floor joists. Ceiling to be 12.5 Gyproc FireLine plasterboard with skim plaster set and finish. Joist spans over 2.5m to be strutted at mid span using 38 x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). In areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade in accordance with BS7331:1990. Identification marking must be laid upper most to allow easy identification. Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x 3/4 depth solid noggins between joists at strap positions.
Over garage intermediate flooring to be insulated in-between and below Posi joists to minimum U-value of 0.11 W/m²K. Finished with 25mm T&G floorboards. Insulate between posijoists with 165mm Celotex XR4000 insulation. Finish below with 65mm Celotex GA4000 rigid insulation and 12.5mm Gyproc fireline plasterboard with 3mm skim to provide 30mins min fire resistance between garage and house.

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| Revisions | | | |
|-----------------|----------------------|---------------|-------------|
| Revision Number | Revision Description | Revision Date | Issued by |
| A01 | For comments | 18/11/2021 | WBH DJT |
| A02 | To Client | 30/11/2021 | WBH RWDC |
| A03 | Structural Revisions | 19/01/2022 | WBH DJT |
| A04 | Structural Revisions | 09/02/2022 | WBH DJT |

Client
Mr D Thompson
Towngate Developments

Project Title
Proposed New Residential Dwelling

Site Details
Land to the rear of 3A and 5A West Street
Helpston
PE6 7DU

Title
Proposed Ground Floor Level

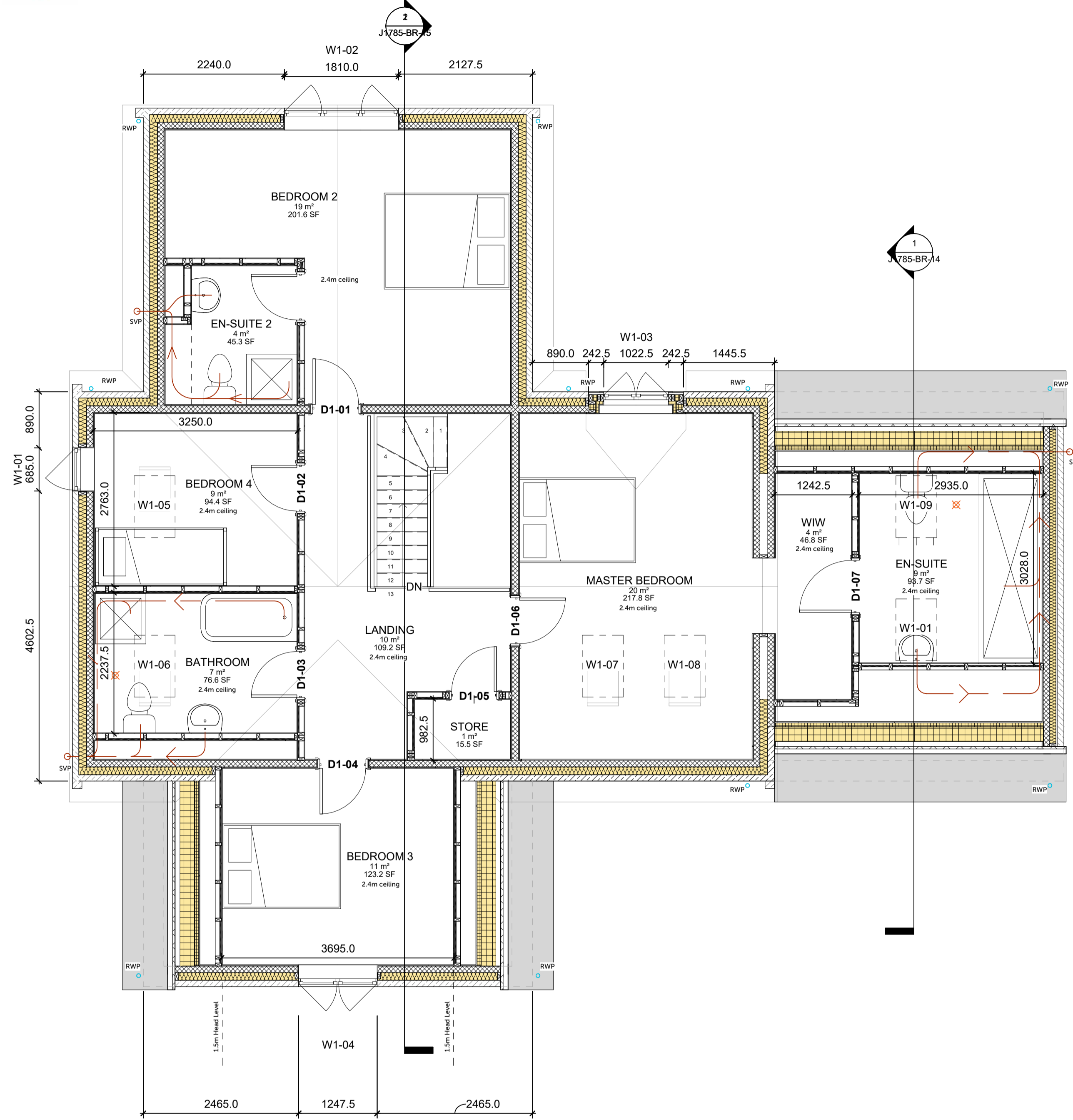
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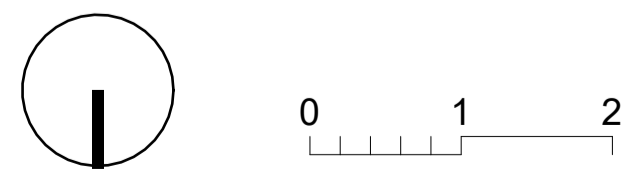
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| First Floor Room Schedule | |
|---------------------------|-------------------------|
| Name | Area |
| BEDROOM 2 | 19 m ² |
| BEDROOM 4 | 9 m ² |
| BATHROOM | 7 m ² |
| LANDING | 10 m ² |
| MASTER BEDROOM | 20 m ² |
| WIW | 4 m ² |
| EN-SUITE | 9 m ² |
| BEDROOM 3 | 11 m ² |
| STORE | 1 m ² |
| EN-SUITE 2 | 4 m ² |
| Grand total: 10 | 95 m² |



PROPOSED FIRST FLOOR PLAN LEVEL
1:50

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
Internal energy efficient light to be fitted as calculated in the DER and in compliance with the Domestic Building Services Compliance Guide. Provide low energy light fittings not less than three per four (excluding infrequently accessed spaces used for storage, such as cupboards and wardrobes). Low energy light fittings should have lamps with a luminous efficacy greater than 45 lamp lumens per circuit-watt and a total output greater than 400 lamp lumens. Fixed internal lighting to be pin based fluorescent or compact fluorescent lamps or low energy bayonet or Edison screw base compact fluorescent lamps.

HEATING
All radiators to have TRVs. 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 by laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.

AIR SOURCE HEAT PUMP (ASHPs)
External pipework between the dwelling and the ground heat exchanger should be insulated following the TIMSA guidance. Pipe sizes should be in accordance to manufacturer's recommendations. The load-bearing capacity of surface to take the heat pump, hot water cylinder and thermal store (where fitted) equipment to be assessed and access for maintenance should be provided. Increase the rating of the mains electrical power supply if required to accommodate the electrical current drawn by the heat pump. Fix permanent labels and flow arrows to pipework, valves, etc. Where the heat pump is to be backed up by another heat source, the control of that source must be interlocked to ensure that it can never operate as the priority or 'lead' device. Ensure that the system is commissioned properly and tested for correct operation by a member of the Microgeneration Certification Scheme. All electrical work to be undertaken by a Part P registered Electrician i.e. NAPIT, ELECSA and NICEIC. Installation to be BS EN 14511: Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling (4 parts), BSI 20. Provide operating instructions and maintenance recommendations for the homeowner. Health and safety Care should be taken to address all issues, including: the risk of Legionnaires' disease.

ESCAPE WINDOWS
Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. Windows to have an unobstructed openable area that complies with:
- minimum height of 450mm and minimum width of 450mm.
- minimum area 0.33m².
- 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.

SMOKE DETECTION
Mains operated linked smoke alarm detection system to BS EN 14604 and BS 5839-6:2019 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/ stores 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.

ROOF LIGHTS
Min U-value of 1.3 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 manufacturer's instructions with rafters doubled up to sides and suitable flashings etc.

WINDOWS AND DOORS
Windows to be double glazed with argon filled gap and with a soft coat low-E glass. Window Energy Rating to be Band A or better and to achieve U-value of 1.3 W/m²K.
Opaque doors to achieve U-value of 1.0 W/m²K.
Semi glazed doors to achieve U-value of 1.3 W/m²K. Glazed areas to be double glazed with 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.

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.

WHOLE BUILDING VENTILATION - CONTINUOUS MECHANICAL EXTRACT
Continuous mechanical system to be installed in accordance with manufacturer's details. Details of system to be given to BCB. The whole dwelling ventilation rate for the supply of air to the habitable rooms in the dwelling should be no less than specified in table 5.1b Approved Document F1. System to include either manual or automatic controls (i.e. humidity sensors) to operate between trickle and boost modes. Mechanical extract system to be performance tested to BS EN 13141-6. Controllable background ventilators to be fitted in each habitable room providing a minimum equivalent area of 2500 mm². Air flow measurement test and commissioning sheets from Section 5 of the Domestic ventilation compliance guide to be completed by the person responsible for commissioning and a notice to be given to the BCB. Ventilation system to be installed in accordance with the Domestic ventilation compliance guide and installation checklist should be completed by the system installer. Domestic ventilation compliance guide lists, including, sufficient information about the ventilation system and its maintenance requirements, the inspection checklist, air flow measurement test and commissioning sheet, to be given to the owner at handover to form part of the information pack. Access to be provided for maintenance and cleaning of ductwork. Systems to ensure that they use no more fuel and power than is reasonable in the circumstances in accordance with Approved Document L. Any ducting passing through a fire resisting wall/floor or fire compartment to be adequately fire stopped, provided with suitable dampers and/or fire collars or in fire resisting trucking in compliance with Approved Document B. Air transfer To ensure good transfer of air through the dwelling there should be an undercut of minimum area 7600mm in all internal doors above the floor finish. This is equivalent to an undercut of 10mm for a standard door.

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.

EXTRACT TO UTILITY ROOM
To utility room provide mechanical ventilation ducted to external air capable of extracting at a rate of 30 litres per second. 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 overrun 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 BATHROOM
Bathroom to have mechanical vent ducted to external air to provide min 15 litres / sec extraction. Vent to be connected to light switch and to have 15 minute over run 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.

RAINWATER DRAINAGE
New rainwater goods to be new 113 x 51mm UPVC half round gutters taken and connected into 76mm 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 USING CRATES
SW drainage taken to soakaway. Size to be determined by percolation test carried out by trained individual.

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.

INSPECTION CHAMBERS
Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.

ABOVE GROUND DRAINAGE
All new above ground drainage and plumbing to comply with BS EN 12056-2 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 3m 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 within 200mm of the WC connection. Supply hot and cold water to all fittings as appropriate.

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.

SOIL AND VENT PIPE
Svp to be extended up in 110mm dia UPVC and to terminate min 900mm above any openings within 3m. Provide a long radius bend at foot of SVP. Internal soil vent pipes to be wrapped in 25mm un-faced mineral fibre and enclosed in minimum two layers of 12.5mm plasterboard (15g/m² mass per unit area) to provide adequate sound proofing. Soil and vent passing through floors to be enclosed in ducts comprising of timber framing faced with fire line plasterboard to achieve half hour fire resistance. All ducts to be fire stopped at floor levels using mineral wool quilt packing.

PIPEWORK THROUGH WALLS
Where new pipework passes through external walls the pipe work is to be provided with 'rocker pipes' at a distance of 150mm either side of the wall face. The 'rocker pipes' must have flexible joints and be a maximum length of 600mm. Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.

TARGET AND DWELLINGS EMISSIONS RATES
Target emissions rate (TER) to be submitted to building control in compliance with The Standard Assessment Procedure (SAP) and Approved Document L1A before works commence on site. To comply with Regulation 26 and Regulation 26A the dwellings emissions rate (DER) must not exceed the TER and the dwelling fabric energy efficiency (DFEE) is to be no greater than target fabric energy efficiency (TFEE). The DER, based on the buildings as constructed and incorporating any changes made during construction, and a registered Energy Performance Certificate (EPC) accompanied by a recommendation report in compliance with SAP 2012 and Regulation 29, is to be given to the owner of the building and submitted to building control, no later than 5 days after the work has been completed.

LIMITING THE EFFECTS OF SOLAR HEAT GAINS IN SUMMER
Reasonable provision is to be taken to limit solar gains in compliance Approved Document L1A. Excessive Solar gains to be checked using SAP 2012 and consideration given to provision of adequate daylight as detailed in BS 8206 -2 Code of Maintaining Adequate Level of Daylight.

AIR PERMEABILITY AND PRESSURE TESTING
Reasonable provision shall be made to ensure the extension is constructed to minimise unwanted air leakage through the new building fabric. The new dwelling to be pressure tested by a specialist registered with the British Institute of Non-destructive Testing in compliance with Regulation 43 of the Building Regulations. The measured air permeability to be not worse than 10 m³/(h.m²) at 50 Pa or in compliance with the TER design limits, ensuring the DER calculated using the measured air permeability is not worse than the TER. Where the dwelling is not to be tested an assessed air permeability to the value of 15 m³/(h.m²) at 50 Pa is to be assumed for the purpose of the TER. If the required air permeability is not achieved, then remedial measures should be undertaken and a new test carried out until satisfactory performance is achieved. A copy of the test results to be sent building control no later than 7 days after the test has been carried out.

CONSIDERATION OF HIGH-EFFICIENCY ALTERNATIVE SYSTEMS FOR NEW BUILDINGS - REGULATION 25A
On commencement of the works, Building Control to be given documentation to confirm consideration has been given to the technical, environmental and economic feasibility of using high-efficiency alternative systems such as decentralised energy supply systems based on energy from renewable sources where available, renewable sources and heat pumps.

PROVISION OF A GROUND FLOOR W/C
Wheelchair accessible W/C to be provided on the principal entrance storey. A minimum 500mm clear space to be provided either side of the centre of the WC pan and 750mm minimum clear space in front of the pan to allow sufficient space for wheelchair approach and turning. The washbasin and door is to be positioned so as not to impede access or manoeuvrability. Door into WC to be outward opening.

ACCESSIBLE SWITCHES, SOCKETS, CONTROLS ETC.
All electric sockets outlets, controls and switches etc to be positioned between 450mm and 1200mm above floor level. Accessible consumer units should be fitted with a child proof cover or installed in a lockable cupboard.
ACCESSIBLE LEVEL DOOR THRESHOLDS INTO THE BUILDING
Entrance door to have an accessible level threshold provided with a weather bar (maximum height 15mm) with suitable drainage channel. Landings to have a fall of 1:40-1:60 away from the door. Principal entrance door to have a minimum 775mm clear opening between the door leaf and doorposts.

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| Revisions | | | |
|-----------------|----------------------|---------------|-----------|
| Revision Number | Revision Description | Revision Date | Issued by |
| A01 | For comments | 18/11/2021 | WBH DJT |
| A02 | To Client | 30/11/2021 | WBH RWDC |
| A03 | Structural Revisions | 19/01/2022 | WBH DJT |
| A04 | Structural Revisions | 09/02/2022 | WBH DJT |

Client
Mr D Thompson
Towngate Developments

Project Title
Proposed New Residential Dwelling

Site Details
Land to the rear of 3A and 5A West Street
Helpston
PE6 7DU

Title
Proposed First Floor Level

Drawing Number
J1785-BR-11
Print Size
1:50 @A1



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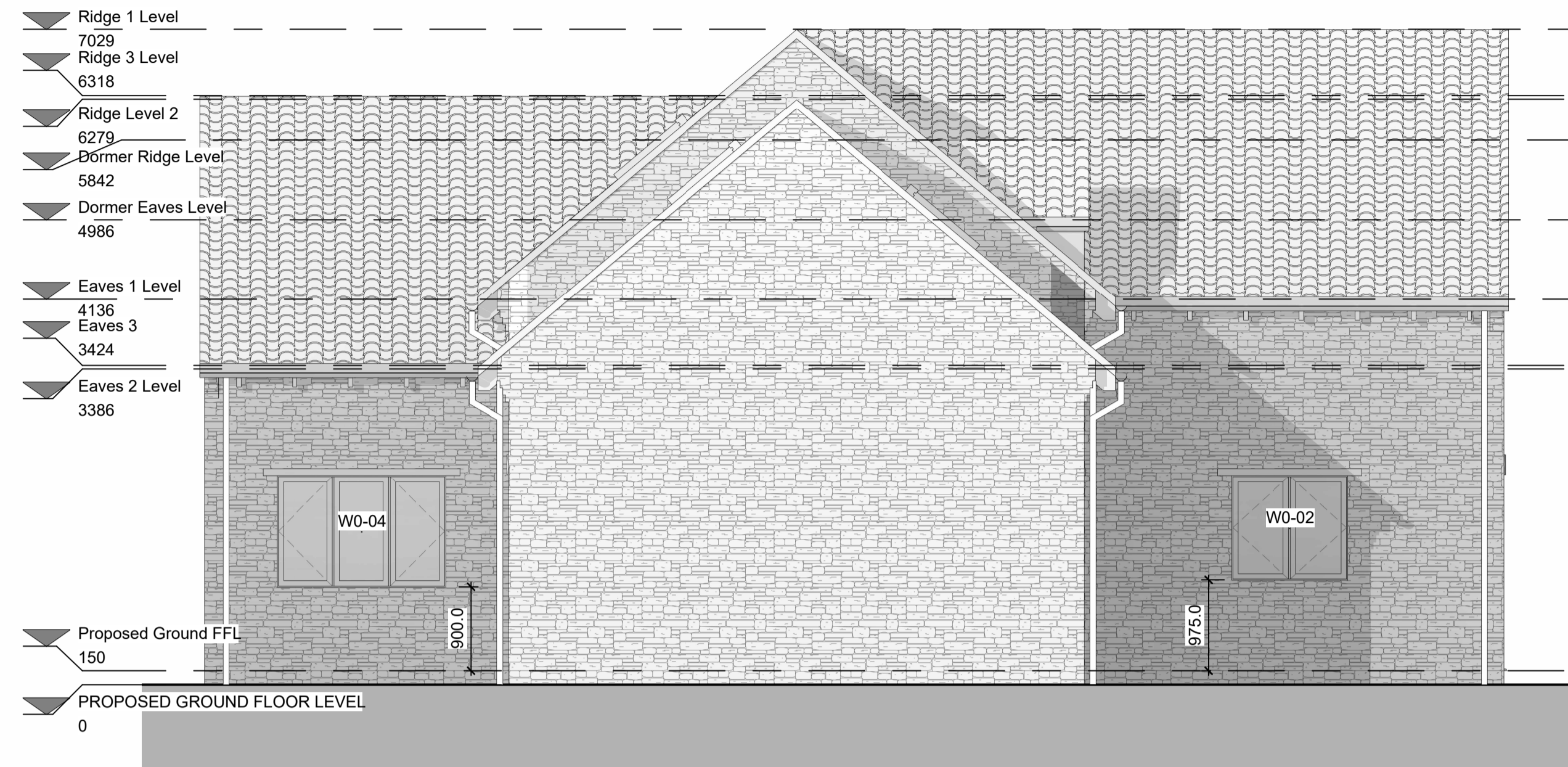
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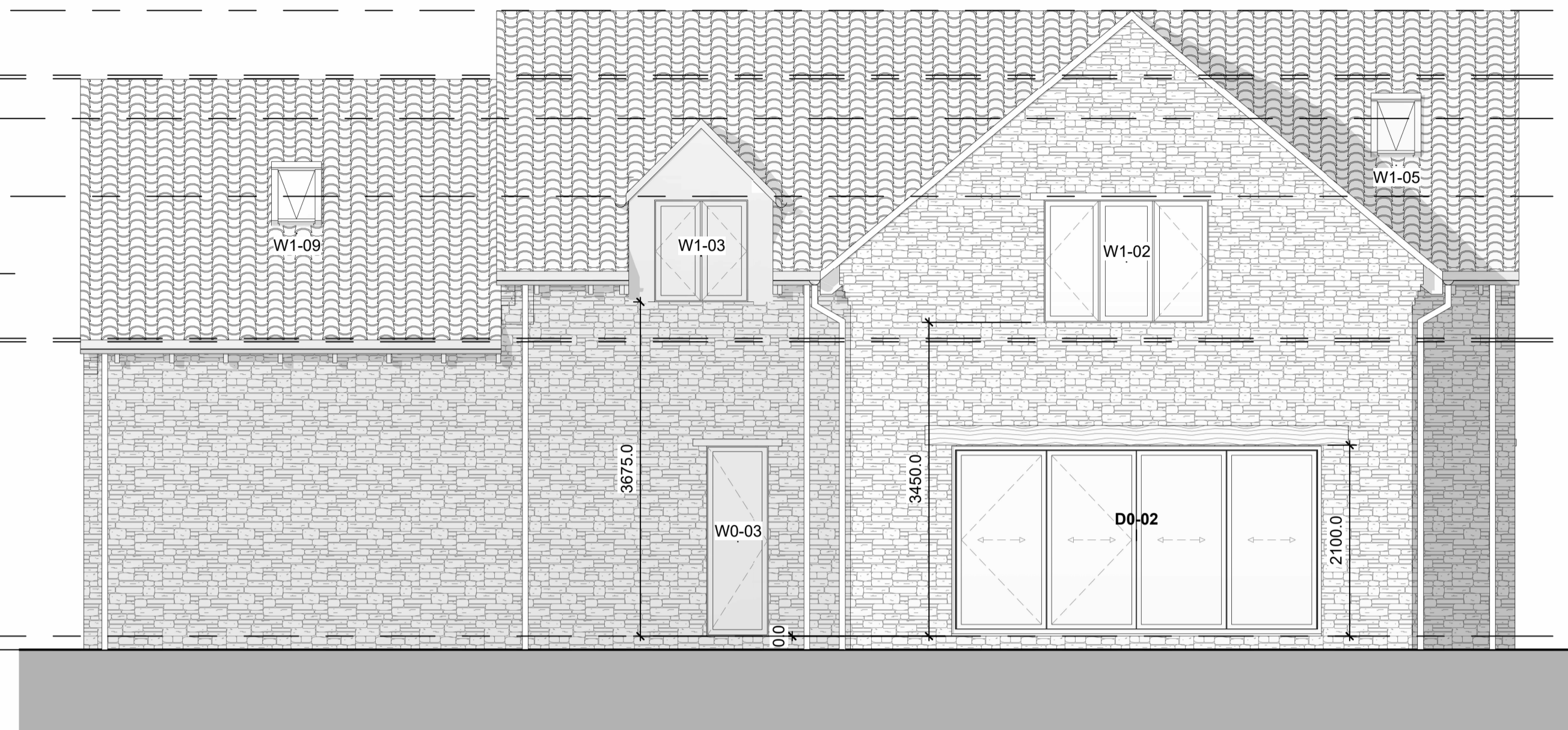


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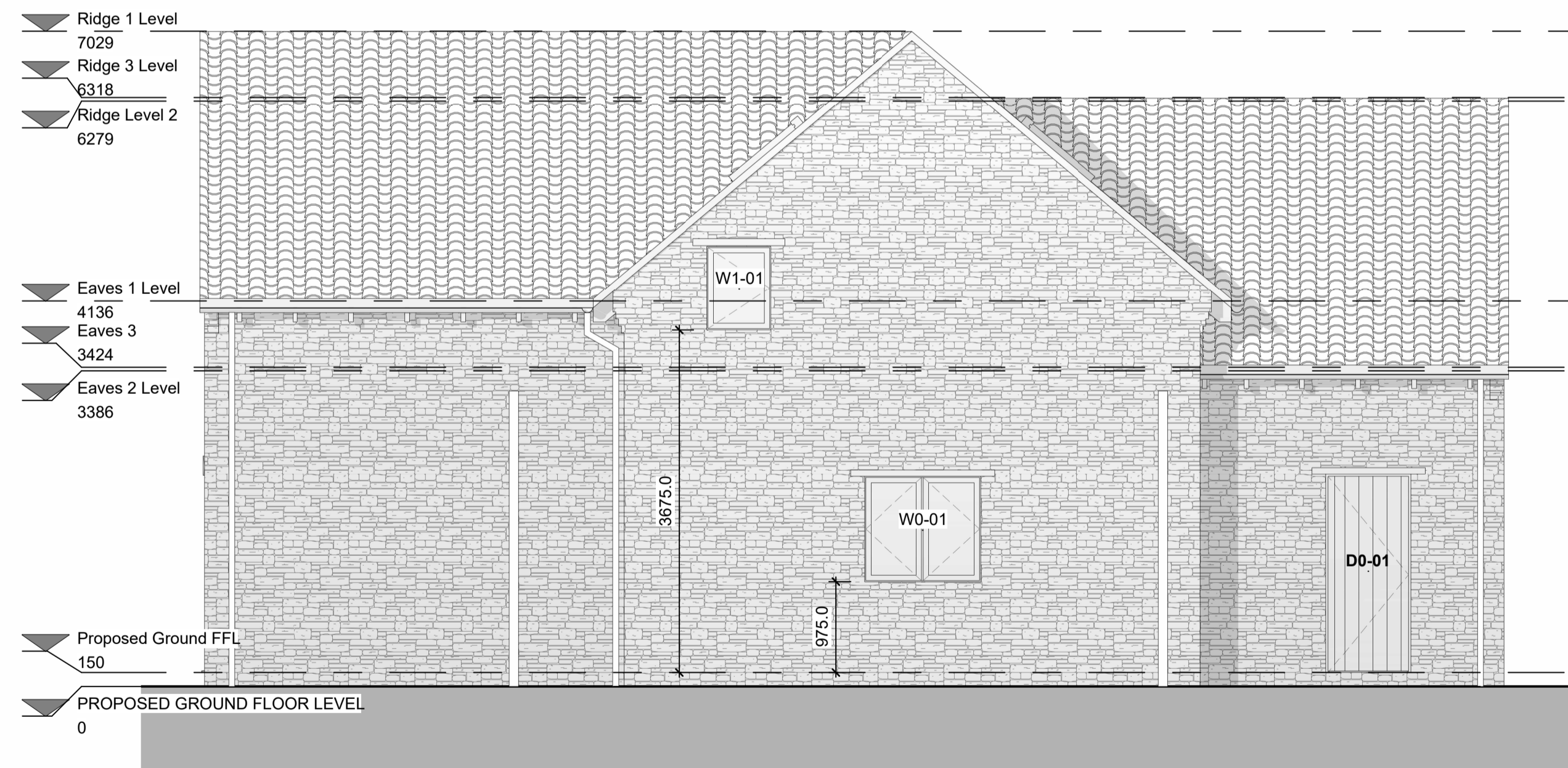
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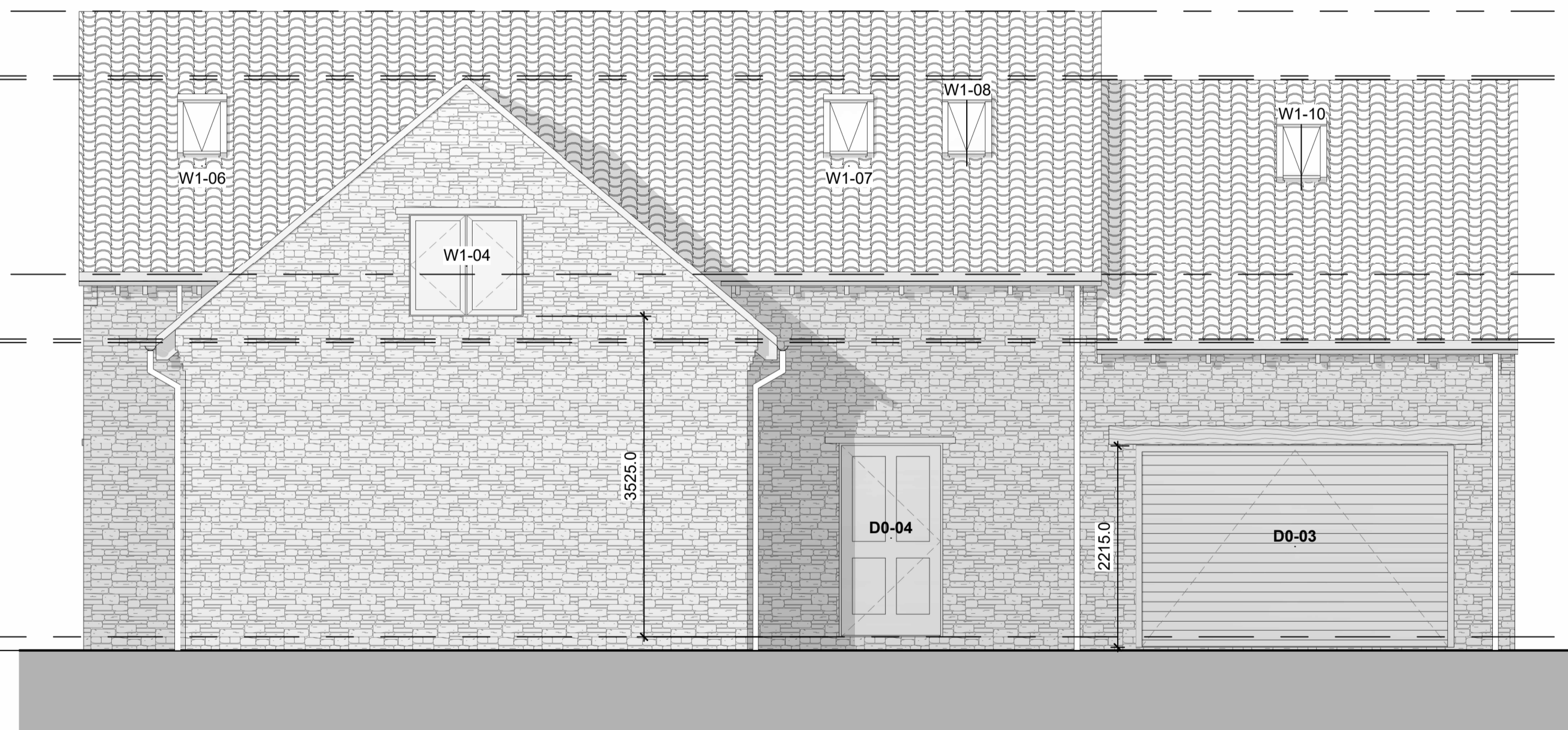
Proposed East Elevation
 1 : 50



PROPOSED SOUTH ELEVATION
 1 : 50



Proposed West Elevation
 1 : 50



PROPOSED NORTH ELEVATION
 1 : 50

| Revisions | | | |
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Client
Mr D Thompson
 Towngate Developments

Project Title
Proposed New Residential Dwelling

Site Details
 Land to the rear of 3A and 5A West Street
 Helpston
 PE6 7DU

Title
Proposed Elevations

Drawing Number
J1785-BR-13

Print Size
 1:50 @A1



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