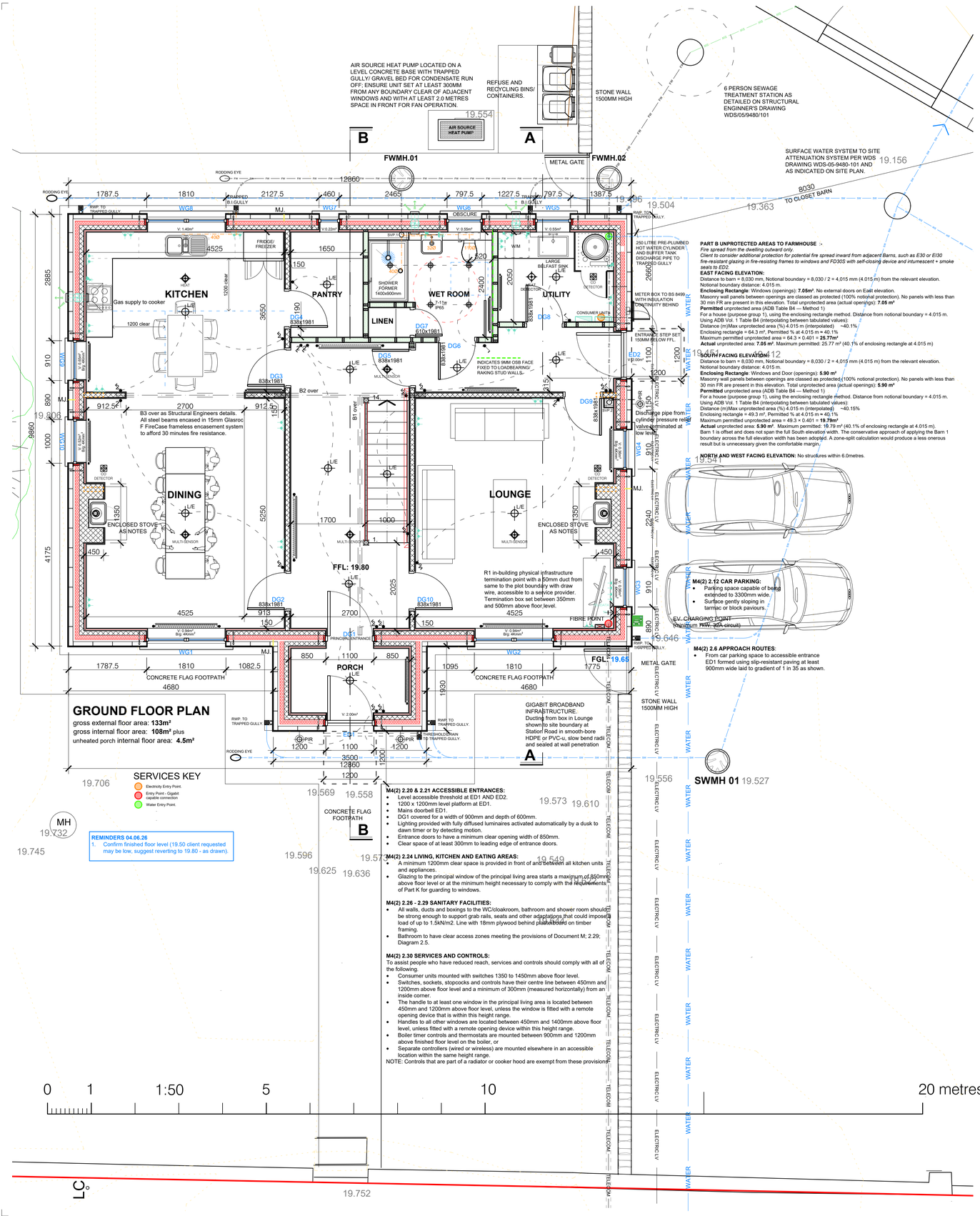

GENERAL PREPARATIONS
The area of the building is to be cleared of all existing organic matter. All existing foundations or the like which may impact upon the structural stability of the proposed structure are to be removed and back filled in lean mix concrete up to the underside of the new foundations.
FOUNDATIONS
Refer to Structural Engineer's drawings and specification
Placing of concrete: All concrete shall be distributed and placed in its final position as quickly as practicable with methods, which preclude contamination, segregation or loss of materials and compaction shall be completed before the initial set commences. Partially set concrete shall not be reworked or used. All concreting shall be continuous to completion or to an approved construction joint. During the first seven days of hardening, the concrete shall be prevented from drying too rapidly.
DAMP PROOF COURSES:
Either Hyload or Aquagard in girth to suit specific installation. Care to be taken to ensure all joints overlap minimum 150mm. Where vertical DPC overlaps tray to cill members ensure upper member overlaps to the outside of the lower member. Install cavity trays of adequate girth under all cills, between inner/outer lintels, behind all steps, over all air bricks, and in any other instance where water may require deflection to the outer leaf. Install in strict accordance with the manufacturers instructions.
DRAINAGE
Foul drainage connected to private package treatment plant as shown on Engineers drawing WDS-05-9480-101.
Surface water to on site attenuation system as indicated on Engineers drawing WDS-05-9480-101.
All drainage works to be carried out in strict accordance with the requirements of the Local Authority and in 110mm dia plastics pipework laid to fall of 1 in 40 generally for foul and 1 in 60 for surface water. Inspection chambers in 480 dia polypropylene with screw-down cast iron covers of type suitable for traffic conditions, where invert less than 900mm; where invert over 900mm use either concrete rings or engineering brick built chambers
All drainage runs to be on 150mm clean granular bedding with all joints etc. constructed and protected in strict accordance with manufacturers instructions for specific site soil conditions. All trenches are to be excavated minimum 150mm below inverts to receive base fill. Surround pipe and to 150mm over with selected granular material and to proposed ground levels in selected backfill and necessary surface finish.
The following areas of drains are to be protected with minimum 150mm C20P concrete bed and surround in accordance with manufacturers instructions including
for the provision of movement joints with impregnated fibreboard divisions at couplings and maximum 4.5 c/c.
A) Where drains have less than 450mm cover.
B) Where drains pass within bearing area of foundations or within 1000mm of building, whichever is greater.
Where drains pass through foundations fit precast concrete lintels over openings in sub-structure and form opening to provide a minimum of 50mm clearance around the pipework. Seal either side with 12mm Supalux masking boarding to protect against entry of vermin and fill materials. Infill void between with compressible sealant to prevent entry of gas.
Gullies to be in plastics with cast alloy gratings. All to be set in concrete as detailed by manufacturer. Access gullies complete with removable trap to allow rodding access. Inlet gullies with removable trap to allow rodding access.
Multiple top inlet to receive rainwater down pipe or waste pipe as required. Unused back inlets to be stopped.
Above ground drainage:
To be uPVC bracketed & supported in strict accordance with the manufacturer's details. Horizontal pipes to be laid to fall 1 in 100 with access for cleaning at all changes of direction.
Note the WCs connected to SVP are to have separate connection to baths and WHB and these connections are to be 200mm apart. All sanitary fittings to be installed with minimum 50mm deep seal anti siphon traps. No fitting is to discharge to SVP less than 750mm above invert of SVP. Ensure waste connections to soil pipes are separate from Wc. connections.
Soil drainage point - slow rest bend set in concrete with riser pipe and connection at floor level to soil vent pipe/stack as indicated.
STRUCTURAL STEELWORK:-
All fabricated structural steelwork delivered to the site shall incorporate appropriate "CE" marking in order to conform to the requirements of BS EN 1090.
WINDOWS & EXTERNAL DOORS
See notes on cross-section.
Egress windows provided where indicated in compliance with Part B1; 2.8 minimum clear opening size 0.45m wide x 0.75m high (0.33m2) and bottom of opening not more than 1.10m from floor.
KITCHEN AND SANITARY FITTINGS/ FINISHES: As Contractor's specification.
INTERNAL DOORS AND 2ND FIX JOINERY: As Contractor's specification.
Pass doors to have a clear open width of 775mm when the door is open at right angle (838mm door leafs).
FLOOR FINISHES: As Contractor's specification.
DECORATION: As Contractor's specification.
EXTERNAL WORKS: As Contractor's specification.
SECOND FIX JOINERY
Provisionally allow 95x15mm splayed or ogee profile skirtings; 15x70mm architraves; 15mm full width stops in redwood or MDF. and window boards in MDF. Include two rows shelves to stores.
ACCESS
The 'entrance' door is to have 'low rise' accessible type threshold with a drainage channel to allow for wheel chair access. Include a 'level' landing 1200x1200mm in front of the entrance door and the door to have a clear width of at least 850mm.
Level access from the 'set down' point to the 'entrance' door to be a firm and even surface with a gradient not exceeding 1:21. Where this cannot be provided a ramp approach may be used; either 1 in 12 for max. 2m or 1 in 15 for 5m with a minimum width of 900mm.
RADON - British Geological Report for CA19 1XG confirmed the property is not in a radon affected area**.**
STRUCTURAL ELEMENTS:-
- Foundations, sub-structure, superstructure, lintels, beams, wind posts, etc by WDS Ltd.
- Bed joint reinforcement in locations noted on WDS Ltd. drawing WDS/05/9480/NHF/203.
- Proprietary trusses, bracing, holding down straps, etc. by chosen supplier.

ELECTRICAL [PART P]
All electrical work required to meet the requirements of Part P (Electrical Safety) and BS 7671:2018+A3:2024 -- IET Wiring Regulations, 18th Edition. Designed, installed, inspected and tested by a person competent to do so. Prior to the completion of works that person is to provide the appropriate BS 7671 Electrical Installation Certificate for the works. A copy of the certificate is to be forwarded to the Local Authority Building Control Office.
At least one light per 25m² floor area or 1 in 4 is to be energy efficient.
External lighting to be self-extinguishing by use of photocells and timeclock and not more than 150W per fitting.
LIGHTING - Layouts are indicative only installation to provide the necessary illumination level as CIBSE Guidance.
The electrical layouts indicated are provisional only and are subject to Client amendment.
FIRE DETECTION/ ALARM
Property to be provided with a fire detection system in accordance with the relevant recommendations of BS 5839-6:2019 Code of practice for the design, installation and maintenance of fire detection and fire alarm systemsto at least a Grade D Category LD2.
The circulation and main living areas are to have a inter-linked Multi-Sensor detectors/sounders designed in accordance with BS5839 pt 6. Heat Detectors to be fitted in Kitchens. Detectors/alarms should be sited so that:- there is a alarm in the circulation space within 7.5m of the door to every habitable room. They are ceiling-mounted and at least 300mm from walls and light fittings. the sensor in ceiling-mounted devices is between 25mm and 600mm below the ceiling (25-150mm in the case of heat detectors or heat alarms).
Ensure that occupants are provided with information on the use of the equipment and of its maintenance.
The power supply for a alarms must be derived from the 'mains electrical supply and should comprise a single independent non-RCD circuit at the mains distribution board (consumer unit).

VENTILATION
In kitchens, bathrooms and en-suites provide System 3 extract fans as indicated.
Controllable trickle ventilators to be provided to habitable rooms with at least 4000mm² equivalent area as Table 5.2A Part F System 3.
HEATING AND HOT WATER
Heating and hot water supplied from :
Mitsubishi Electric Europe B.V. Ecodan 11.2 kW or equal located within 20 metres of house on a level concrete base with trapped gully/ gravel bed for condensate run off; size of unit 1050W x 480D x 1020H; heavily insulated flow and return pipework to indoor unit such as Uponor in 100mm dia. duct. Ensure unit set at least 300mm from any boundary clear of adjacent windows and with at least 2000mm space in front for fan operation. Located as indicated on floor and site plans. Subject to final confirmation on site.
HOT WATER:
Pre-Plumbed 250litre Cylinder / 50litre Buffer located as indicated on plan with full plumbing & electrical install kit. Run pipework from ASHP, to cylinder in 900mm deep duct externally with pipework fully insulated in high performance insulant recommended by manufacturer. Hot water storage at minimum 60°C, distribution above 50°C. Cold distribution to be below 20°C. Dead-legs to be eliminated at design stage.
Commissioning temperature checks to be recorded in Health and Safety File.
When unit confirmed details to be sent to SAP Assessor.
Installed in accordance with Building Standards Part G by a person with appropriate training and practical experience, i.e. SNIPEF of CITB Registered. Label system to identify the installer. System also to comply with the requirements of BS EN 12897:2006 with all required safety devices. **Run** discharge pipework from unvented unit in accordance with manufacturer's printed instructions.
HEATING SYSTEM:
Radiator system designed by specialist supplier with guaranteed design on system output for ASHP conditions.
Basic design temperatures: Design system to provide the following temperatures and air change rates with an external air temperature of -4°C:
- Living / Dining room: 21°C, for 1.5 air changes per hour.
- Bedrooms: 18°C, for 1 air changes per hour.
- Halls and landings: 18°C, for 1.5 air changes per hour.
- Kitchens: 18°C, for 2 air changes per hour.
- Bathroom/ En-Suites: 22°C, for 2 air changes per hour.

Provide HEVACOMP calculations Controls – As per Domestic Building Services Compliance Guide 2013 incorporating 2018 amendments –
Time & Temperature Zone Control – Full Zone control is a system of controls that enables the independent programming of the heating times and temperatures of two or more zones. This involves separate plumbing circuits, either with their own programmers, or separate channels in the same programmer, orprogrammable
TRV's or communicating TRV's that are able to provide time and temperature zone control.
Heating and hot water pipework to be insulated in strict accordance with manufacturers instructions to achieve levels to comply with Building Standards. All heating works in accordance with the Domestic Heating Compliance Guide 2nd Edition 2008.
Copper pipelines to BS EN 1057, Kitemark certified. Chrome plated where exposed to view. Temper: Half hard R250.
Pipework to be zoned with timer boiler interlock controls.
Thermostatic mixer valves are to be fitted to all hot water supplies to baths, bidet & showers. Valve to bath to limit the temperature at point of delivery to not more than 48°C. Testing to BS EN 14336. On completion of the works the systems are to be commissioned by a competent person who is to provide a test certificate. A full set of operating and maintenance instructions are to be left with the Client for the heating and hot water systems. Include allowance for appropriate Client induction on the operation of such systems.
ROOM STOVES
Supply and install a multi-fuel stove with a minimum efficiency of 72%, conforming to BS EN 13240:2001 Specification for Room Heaters Fired by Solid Fuel. Rated heat output not exceeding 4.5 kW (no draught stabiliser required). Stoves installed with heat-resistant plaster to the surrounding wall finish, and set on a hearth all as the notes below.
Stoves installed by a HETAS-registered competent person in full compliance with Building Regulations Approved Document J (Combustion Appliances and Fuel Storage Systems) 2010 edition incorporating 2013 amendments, and the manufacturer's instructions.
Hearth - Stoves set on a stone or tiled superimposed hearth laid on a constructional hearth of at least 125 mm thickness. The hearth shall extend at least 150 mm to each side of the appliance and at least 300 mm in front of the stove door, all in accordance with Approved Document J, Section 2 (Diagram 12).
Clearances to Combustible Materials - Minimum air space of 150 mm maintained between the body of the stove and any adjacent wall or combustible surface. A minimum separation of 25 mm maintained between the outer face of any flue pipe and any combustible material, in accordance with Approved Document J, paragraphs 2.13-2.16.
Flue and Chimney - Factory-made insulated metal chimney system as supplied or specified by the stove manufacturer shall be installed in full accordance with Approved Document J, Section 2, and BS EN 15287-1. Flue pipework shall comply with the requirements of Approved Document J, Section 2. The flue outlet shall terminate at least 600 mm above the ridge of the roof, or at the height shown on the approved drawings, whichever is greater, in accordance with Approved Document J, Diagram 17.
Combustion Air Ventilation - Where chosen stoves have a rated output exceeding 5 kW, a permanently open, baffled air ventilator providing a minimum free area of 1,650 mm² (2.5 in²) shall be supplied and fitted in accordance with Approved Document J, paragraph 2.34 and Table 2. A Rytons Cowled 125 mm Baffled AirCore® unit [maximum free area 6,390 mm²).
Regulatory Compliance and Notifications - As installation by a HETAS-registered operative constitutes a self-certifiable competent person scheme under the Building Regulations (England) 2010, the installer shall notify the Local Authority Building Control (LABC) and issue a HETAS installation certificate to the client on completion.
PIPEWORK
Water and heating supply pipework in copper to BS EN 1057, Kitemark certified or plastic to BS 7291 ; insulated using preformed polyethylene foam; thermal conductivity: 0.035 W/m·K.; thickness (minimum) achieving compliance with the Building Standards - Class 0 spread of flame when tested to BS 476-7.
WATER SUPPLY
Underground pipework in polyethylene. Water efficient fittings are to be provided to all WCs and WHBs within the dwelling.
PART G: The following specification requirements must be observed. Building Control confirmation of compliance will require confirmation that fittings as installed match or better the specified performance:
- WC cisterns: Dual-flush with full flush ≤ 4.0 litres and reduced flush ≤ 2.6 litres. Average flush volume (calculated as (full + reduced + reduced) ÷ 3) not to exceed 3.07 litres. Manufacturer's data sheet to be submitted to Building Control prior to completion.
- Basin taps: Maximum flow rate 6 litres/minute at 3 bar dynamic pressure at all wash-hand basins (Regulation 36 and AD-G paragraph 2.2). Aerators or flow regulators to be specified at fitting selection stage.
- Kitchen sink: Mono-block mixer tap to Belfast sink; flow rate not to exceed 10 litres/minute.
- Shower fittings (both installations): Thermostatic mixer shower with maximum flow rate 8 litres/minute at 3 bar. Thermostatically controlled to limit delivery temperature in accordance with Part G hot water safety requirements.
- Bath: 1700×700 mm as shown. Fill volume at 75% of brim-full capacity used in calculation (175 litres). If a deeper or wider bath is substituted, fill volume must be recalculated and this document revised.
- Washing machine: A+++ or equivalent energy-rated appliance with maximum programme cycle water consumption not exceeding 49 litres. Client/contractor to confirm appliance specification prior to installation.

Plumbing and associated water installations should be carried out and commissioned by persons who possess sufficient technical knowledge, relevant practical skills and experience for the nature of the work undertaken.
SAP / EPC -
Design Air Permeability - 4.5m³/ (h.m²) @ 50Pa. Pressure test and Certificate required on completion.
On completion the owner and/or occupier of the dwelling should be provided with written information on the maintenance and optimum efficiency of the heating and hot water systems.
An energy performance certificate requires to be provided and displayed within the dwelling on completion.
Should there be any departure from the baseline data used at design stage SAP calculations, a further calculation for as installed equipment will require to be undertaken.
PART O - Overheating calculations have been prepared demonstrating compliance 18.03.26.
CDM / HEALTH AND SAFETY (REFER TO DESIGNER RISK ASSESSMENTS)
- All excavations within 3 m of boundary require temporary highway-standard hoarding erected prior to commencement.
- Commission utility scan and CCTV drain survey prior to any works.
- Arboricultural Impact Assessment (AIA) to BS 5837:2012 required. Root Protection Zone to be marked on construction drawings. Services and drainage routes designed to avoid RPZ; if unavoidable, directional drilling or root-barrier specification to be used. No trenching within RPZ without arboriculturalist present.
- Tree surgeon to inspect crown condition and carry out required pruning and deadwood removal before construction commences. Exclusion zone of minimum 5 m from canopy edge during high-wind periods. Foundation design to account for proximity to tree

Site access point to be agreed with Cumberland Council Highways before commencement.

KEY TO SYMBOLS USED final locations to be confirmed by Client on site

POWER
M4(2) PROPERTIES - Switches, sockets, stopcocks and controls have their centre line between 450mm and 1200mm above floor level and a minimum of 300mm (measured horizontally) from an inside corner.

- Consumer Unit M4(2) Properties - mounted so switches are between 1350mm and 1450mm above floor level
- Single 13A switched Socket Outlet (E = External)
- Twin 13A switched Socket Outlet
- Double pole linked isolator switch
- shaver outlet

LIGHTING All installed lighting will be energy efficient with at least a power of 5(W) and an efficacy of 100(lm/w)

- 1 - way switch
- 2 - way switch
- pull chord switch
- L/E pendant fitting for 15 - 20W low energy lamps
- 7/11w L/E 240V recessed adjustable downlighter; Low Energy; 11W CFL or 7W LED (warm) with protective hoods over
- 7-11w IP65 12V Recessed down lighter IP65 rated; 7-11W LED with protective hoods over
- IP65 external light; photocell/ PIR controlled

GENERAL

- DATA/DATA Data or telephone outlet with Cat 5e cabling to network patch panel [location to be determined by Client]
- TV TV sockets with cabling back to aerial/booster system
- MULTI SENSOR/ HEAT DETECTOR Mains powered interconnected Multi-Sensor/ Heat detectors with battery back-up. Installed to BS5839-1 LD2 system; located within 7.5m of every habitable room door and at least 300mm from walls and light fittings.
- CO DETECTOR Carbon monoxide detector to BS EN 50291

HEATING
Radiator; complete with thermostatic control

VENTILATION
SYSTEM 3 - Continuous decentralized extract fans Greenwood Unity CV2.1. Extract rates as set out in Table 1.2 Part F(1).

- Kitchen: continuous 13l/s; boost capability of ≥ 30 l/s (with a ducted cooker hood) or ≥ 60 l/s (without).
- Utility: continuous 8l/s; boost capability of ≥ 30 l/s
- Bathroom: continuous 8l/s; boost capability of ≥ 15 l/s
- Sanitary: continuous 6l/s; boost capability of ≥ 15 l/s

Continuous rate: The sum of all extract ventilation in the dwelling on its continuous rate should be at least the whole dwelling ventilation rate given in Table 1.3.
2 bedrooms: 25 l/s, 3 bedrooms: 31 l/s, 4 bedrooms: 37l/s.
All installed by following guidance in Part F1(1) paragraphs 1.60 to 1.66. Wall or ceiling mounted with metal ducting. all ductwork passing through unheated roof void or wall cavity to be insulated to prevent interstitial condensation. Add terminal specification to drawing: weatherproof, low-resistance, insect-proof grilles; located ≥500mm from openable windows; do not discharge under eaves or into roof space.
dMEV to comply with NR 25 (bedrooms), NR 35 (living rooms), NR 45 (kitchen and utility).
Fans linked to switched fused spurs to allow isolation for maintenance and repair.
All dMEV units to be commissioned on completion with flow rates measured at both continuous and boost settings. Results to be recorded in commissioning certificate and O&M manual handed to client.

AMENDMENTS	DATE

// MCIAT
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Proposed new farmhouse at
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Drigg CA19 1XG

PROPOSED FARMHOUSE - GROUND FLOOR PLAN

STATUS // PLANNING	DATE // 11.03.26
DRAWING NO. // 484 - 100	REV // 0
SIZE. // A1	SCALE // 1: 50

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