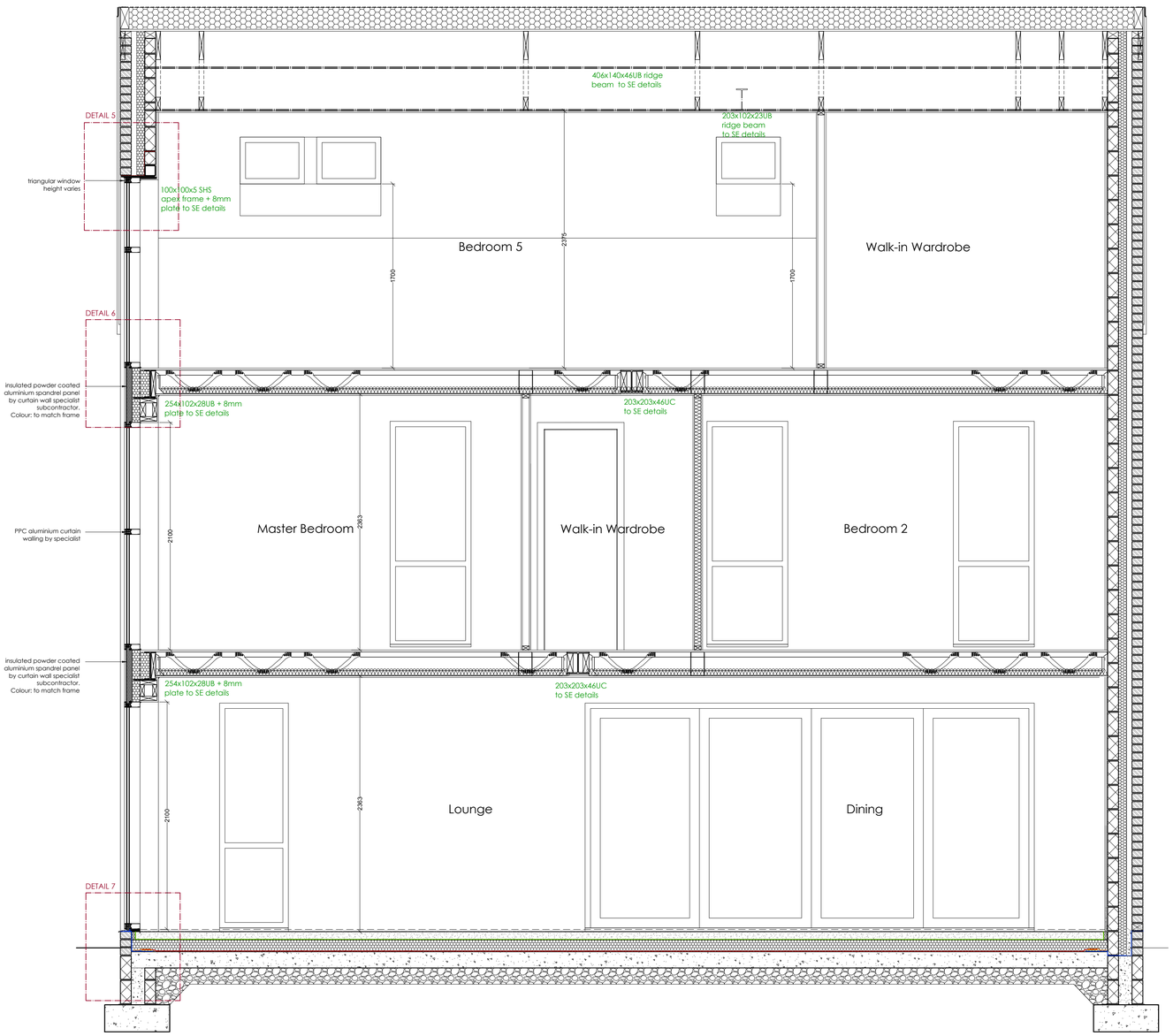
Date	Drawn	Check	Description	Rev.
10/05/21	***	***	amendments to co-odinate with structural engineers details	A



Section B-B

Construction Notes

NON LOAD BEARING INTERNAL PARTITIONS TO GENERAL AREAS
63x38mm treated C24 timber studs located at max 600mm centres (89x38mm stud if over 2.4m high) faced with 12.5mm thick SoundBloc plasterboard and 3mm plaster skim finish (alternative: taped and joining compound on tapered boards).All joints to receive scrim tape prior to skimming.
Treated SW noggins and ply patress to be inserted into studding where heavy objects are fixed to studding. Isowool (50mm) mineral fibre insulation to be fitted between studs to reduce sound transference where required.
Use Moisture Resistant plasterboard in wet areas
Change stud size if necessary to suit pocket doors

TYPICAL FIRST FLOOR CONSTRUCTION
18mm OSB/3 or 22mm P5 tongue and groove chipboard over WS200 Easi joist floor to specialist sub contractor design. 100mm Rockwool Flexi or similar to be fitted between the joists.
12.5mm Type A - British Gypsum wallboard ceiling fixed to joists, finished with 5mm plaster skim for joists at 400mm c/c or 15mm Type F - British Gypsum fireline board for joists at 600mm c/c.
Where floor joists run parallel with first floor partitions, 2 No. joists to be bolted together at maximum 600mm centres/to specialist details and located under partition.
Where floor joists run at right angles with first floor partitions, noggins to be incorporated to provide additional fixing points for sole plate
All ceiling penetrations to be sealed with intumescent protection to maintain 30 minutes fire resistance.
All strictly in accordance with manufacturer's recommendations.

LOFT FLOOR CONSTRUCTION
18mm OSB/3 or 22mm P5 tongue and groove chipboard over attic truss floor to specialist sub contractor design. 100mm Rockwool Flexi or similar to be fitted in floor void.
12.5mm Type A - British Gypsum wallboard ceiling fixed to joists, finished with 3mm plaster skim.
Where floor joists run parallel with first floor partitions, 2 no. joists to be bolted together at maximum 600mm centres/to specialist details and located under partition.
Where floor joists run at right angles with first floor partitions, noggins to be incorporated to provide additional fixing points for sole plate
All ceiling penetrations to be sealed with intumescent protection to maintain 30 minutes fire resistance.
All strictly in accordance with manufacturer's recommendations.

Where soil pipes or other services pass through fire rated floors and walls they must be encased to achieve 30 minutes fire resistance (to match penetrated structure). Soil pipes to be wrapped with 100mm sound absorption quilt within boxing comprising 2x 12.5mm plasterboard fixed back to 38x50mm SW framing. Duct casing to pass through compartment and any gaps filled with an intumescent foam/sealant. Where casing is not full storey height, pipe to be sealed with intumescent collar at floor penetration.

All junctions and penetrations to be fully sealed to ensure an air tight barrier and provide am minimum of 5PA air test

WINDOWS/ DOORS CONSTRUCTION
PPC aluminium frames fitted with sealed, low-e glazed units by Pilkington or similar. Maximum overall U Value of windows including frames to be 1.4 W/m²K Note: this is an area weighted average U-Value , not a centre pane value, G Value 0.4 max, light transmission 0.7 (70%) minimum. Colour of frames to be confirmed by Client. All accessible windows to have 6.8mm laminated outer plane to comply with BS7950 and must meet security standards compliant with PAS 24-1012.
Install 'Velux' or similar double glazed rooflight in position shown all in accordance with current legislation.
Primary entrance door to achieve a U-Value of 1.4 W/m²K and provide a minimum clear opening between face of door and door jamb of 775mm. Level threshold access to be formed, maximum threshold height 15mm.
All ground floor internal doors to have a minimum 750mm clear opening measured between door leaf and opposite door stop

GLAZING
To any situations where windows are below a level of 800mm above finished floor level and in doorways below a level of 1500mm above floor level including 300mm either side of such doorways, to be in toughened safety glass to BS6206:1981.

All new structural beams (other than roof support) to be fire protected to 30 minutes with instumescent paint

All materials and components to be used fully in accordance with manufacturer's recommendations and instructions. All timber used structurally and in exterior joinery, including roofing battens to be pressure treated against insect and fungal infestation

General Notes

CONSTRUCTION NOTES
- All works to be carried out in accordance with current Building Regulations, British Standards, Codes of Practice, using recognised good practice methods.
No variations should be made to the approved drawing, without the express permission of the L.A. building inspector.
- The contractor is to report any variations in cost or programme immediately, due to works authorised by the client, or Building Inspector, or unforseen items needed to be included.
- All relevant Health & Safety codes to be followed by the contractor throughout the duration of the works.
- All electrical works to be carried outin accordance with current I.E.E. Regulations.
- Plumbing works to be carried out in accordance with current Water Bye Laws and any gas installations to be carried out by a registered Corgi installer.
- The contractor is responsible for locating existing services on site and ensure that any diversions, terminations, extensions are carried out by an approved sub contractor.
- The Contractor must check dimensions prior to commencement of works and report any discrepancies.

RADON PROTECTION
Contractor to confirm with Building Control Officer whether basic protection is required prior to construction. If required, the following system should be constructed :
Basic radon protection to be provided to new works by installing 1200 gauge radon proof Visqueen barrier, lapped and sealed to horizontal compatible DPC dressed down inner skin, turned down to ground level within cavity and extended across cavity supported on lean mix concrete cavity fill with sloping top and through outer skin of cavity wall. Provide weep holes above barrier to external skin every 900mm
All joints/laps to be minimum of 150mm wide and sealed with an approved sealant to form a gas tight membrane. Any incoming services should be fully sealed against radon membrane. All radon works to be approved by Building Control Officer prior to covering up.

FOUNDATIONS
To comprise mass/strip concrete foundations constructed in accordance with Structural Engineer's design and details and founded on sub-strata of suitable ground bearing capacity all to the satisfaction of the structural engineer and Building Inspector (to BS8004:2015 Code of Practice for Foundations). Foundations to be taken down below invert level of any pipes passing under new works, and an opening provided in substructure walls to ensure a min. of 50mm clearance around pipe. 2no. concrete lintels to be provided over openings with min. end bearing of 150mm. Holes to be sealed with expanding foam or similar. Any steps to foundations to be not greater than 300mm rise, with an overlap of twice the height of step or 300mm whichever greater. Contractor to ensure that all trenches are level and free from debris prior to pouring concrete. Foundations below internal load bearing walls (if applicable) to be the same thickness as the perimeter walls with the width being the wall thickness plus 150mm either side laid at the same level as external wall foundations. Contractor to check site levels and agree any steps with Building Control and structural engineer.

DRAINAGE
CONTRACTOR TO ESTABLISH EXISTING DRAINAGE RUNS AND CONDUCT CCTV SITE SURVEY TO ESTABLISH NEW DRAINAGE REQUIREMENTS IN ASSOCIATION WITH NEW DRAINAGE SCHEME TO ENGINEERS DESIGN AND NEW CESS POOL BY SPECIALIST.

100mm diameter Hepworth or similar proprietary plastic pipework, laid on prepared trench beds and backfilled with selected material free of stones exceeding 40mm diameter. Foul drains laid to a min. fall of 1:40, storm drains laid to a min. fall of 1:60 or to the on-site approval of the Building Inspector. Confirmation with Building Control to be established as to final connection of storm drainage. Any new soakaways to be a minimum of 5m from any building or boundary. As necessary, install Hepworth or similar proprietary plastic inspection chambers, bed and surround in concrete in vehicular areas. Pipes passing through walls to have lintel over to leave a 50mm gap all around and then each end masked with a rigid sheet.
All pipework to be laid to even gradient and any changes in gradient should be combined with access point. Pipes should preferably be laid in straight lines with any slight bends being cleanable from the inside. Bends should be close to manholes and should be of large radius. Before backfilling a water or air test is to be carried out and monitored by Building Control Officer prior to backfilling. All bedding and backfilling materials should be agreed with Building Control Officer after excavation of trenches. All disused drains to be sealed for inspection prior to covering over.

SURFACE WATER DRAINAGE
to be in accordance with Approved Document H3.
Rainwater goods sized in accordance with AD H3 Tables 1 & 2
100mm square edged gutters and 50x75mm slimline rainwater down pipes, (TBC) . Brackets to gutters to be at max. 1000mm centres, and brackets to down pipes to be at max. 1800mm centres.
Locate downpipes in positions shown and connect to surface water system.
Install gully with trap if rainwater pipe permitted to discharge into a combined system.
All drainage should be agreed with the Building Control Officer

PLUMBING
All new above ground drainage to be installed in accordance with Approved Document H1 and BS EN 12056:2000 Parts 1 to 5.
'Marley' or similar minimum 110mm diameter vertical PVCu soil and vent pipes installed in locations shown. At least one soil and vent pipe to terminate above roof level to external air a minimum 900mm above any opening into the building within 3m and to be fitted with a durable perforated bird proof cage. 'Durgo' air admittance valves or similar approved installed above the highest water level, can be used thereafter as necessary (to BS EN 12380:2002). All PVCu wastes to have minimum 75mm deep seal traps: waste pipes, WC 100mm diameter. Sinks, bath, showers, washing machines and dishwashers 40mm diameter. Washbasins 32mm diameter. Where wastes exceed 1500mm to discharge point, diameter to be increased to 50mm. All in accordance with AD H1 Table 1

CAVITY TRAYS
WINDOWS AND DOOR OPENINGS
Install cavity trays over ALL external door and window openings including bay windows.
Position the cavity tray directly over the window/door head.
Double up the cavity trays if using natural stone/artificial stone heads - installing one below and one above the head.
Ensure the cavity insulation continues to cover behind the stone head.
Install weep holes at each end of a horizontal cavity tray at a maximum of 900mm centres .
ROOF ABUTMENTS
Install cavity trays at roof abutments, both horizontal and pitched.
For pitched roof abutments it's best to use purpose-made stepped cavity trays.
Provide a weep hole at the base of stepped cavity trays.
RENDERED AND TIMBER FRAME WALLS
Install cavity trays with stop-ends over openings and lower level abutments.
In rendered masonry walls, weep holes can be omitted as long as there is no fair faced brickwork above the rendered panels. NB weep holes must not be used to compensate for poor render.
In rendered timber frame walls, use weeps holes with open perp joints. The open joints should be the total depth of the 'perps' and installed at a minimum of 900mm centres or at least two per opening.

WINDOWS / DOORS
New windows to be provided as indicated on elevations to nominal sizes shown. Contractor is responsible for ensuring that structural openings and manufactured window sizes are co-ordinated. Windows to achieve 1.4 W/m² K maximum U-value or WER band C or better with double glazed panels. Windows and doors to be specified in accordance with BS 6375-1 for weather performance. Perimeter joints to be sealed both outside and inside with sealant appropriate to frame surface, substrate material, joint size and configuration, anticipated joint movement and exposure to weather. Installation to adhere to Window and Door Good Practice Guide. Contractor and window supplier to confirm to Building Control Officer that thickness of glass conforms to Section 1 of Approved Document N1 when used in large panels. Toughened / laminated glass to be used in glazed panels within 800mm of floor level, within 300mm of door edge, and in doors where some part of glazing is within 1500mm from floor level.
Doors / roof lights to achieve 1.4 W/m² K maximum U Value or DSER band C or better with double glazed panels and opening lights to provide 1/20th (5%) purge ventilation of floor plan area above floor level. New windows to be fitted with trickle ventilators to provide the following background ventilation standards:
5000mm² - to windows used in habitable rooms
2500mm² - to windows used in kitchens and utility rooms
All toughened and K glass panels to be kitemarked
Specialist supplier / installer to provide FENSA certificate (fenestration self assessment) on completion of works, confirming compliance with all statutory requirements, relevant British Standards and Codes of Practice, for both manufacture and installation.
Windows and doors to comply with requirements of Part Q Security - Dwellings Unauthorised Access
Doors: PAS24:2016, STS201 issue 5:2013, LPS1175 issue 7:2010 security rating 2, STS202 issue 3:2011 burglary rating 2 and LPS2081 issue 1:2015 security rating B. Certification from a UKAS accredited body to be provided on completion of the works.
Windows (easily accessible): PAS24:2016, STS204 issue 3:2012, LPS1175 issue 7:2010 security rating 1, and LPS2081 issue 1:2015 security rating A. Certification from a UKAS accredited body to be provided on completion of the works.
External photoelectric cell dusk to dawn, with switched manual override, security lighting to be provided near the entrance door; low energy with an efficacy greater than 40 lumins per circuit.

NOTE:
Primary entrance door to achieve a U-Value of 1.4 W/m²K and provide a minimum clear opening between face of door and door jamb of 775mm. Level threshold access to be formed, maximum threshold height 15mm.
All ground floor internal doors to have a minimum 750mm clear opening measured between door leaf and opposite door stop

STAIRCASE / GUARDING
To be designed in accordance with BS5393-1:2010 - Code of Practice for the design of stairs and Approved Document K - Protection from falling, collision and impact.
Total rise and going to be checked on site prior to stair manufacture.
Risers not to exceed 220mm**
Goings not less than 220mm**
**Note: max rise and minimum going cannot be used together as max pitch of flight is not to exceed 42º
Headroom min. 2000mm clear above flight pitch line.
Handrails 900mm high above pitch line.
Guarding to landings min 1100mm high.
Guarding and balustrading to be non- climbable and must not allow a 100mm diameter sphere to pass through at any point.

Guarding design should be capable of resisting at least the horizontal imposed force given in BS 6180:2011, Table 2 - Barriers in and about buildings.

VENTILATION
Habitable rooms to provide purge ventilation extracting a minimum four air changes per hour (ACH). Ref BS 5925:1991 for further opening design guidance to achieve four ACH.
Generally provision of min. 30º opening windows/external doors equating an area min. 5% of room floor area will achieve this (openings <30º : 10% floor area).
Background ventilation to be provided above 1.7m above floor level by installing trickle ventilators in all rooms with external walls, generally above windows.
Providing 5000mm² equivalent area in habitable rooms and 2500mm² in wet rooms. If habitable room vented through another room both rooms to have min 8000mm².

MECHANICAL VENTILATION
Kitchen to be be fitted with mechanical ventilation fan having a rate of 30 litres per second if located adjacent to hob or 60 litres per second if fan located elsewhere. Fan to be operated by sensor or controller.
Utility to be fitted with mechanical ventilation fan having a rate of 30 litres per second. Fan to be operated by sensor or controller.
Bathroom to be fitted with mechanical ventilation fan having a rate of 15 litres per second. To be operated via the light switch with a 15 minute extract overrun.
Internal WC/ensuite to be fitted with mechanical ventilation fan having a rate of 15 litres per second. To be operated via the light switch with a 15 minute extract overrun,.
Rooms with vents to have an air inlet gap of 10mm at the base of the door above floor finish.
Sanitary accommodation may use purge ventilation instead of intermittent extract where security is not an issue.
Any ducts in cold roof spaces to be suitably insulated.
Final locations to be agreed with Building Control Officer.
Whole house ventilation to all habitable rooms to be in accordance with Approved Document F Table 5.1b

FIRE DOORS
In three storey dwellings FD30 quality fire doors and frames to be fitted along protected route from second floor to external exit as indicated on plans.

FIRE DETECTION (SD) (HD) **EXACT DETAILS & LOCATIONS TO BE CONFIRMED PRIOR TO INSTALLATION**
Fire detection and fire alarm system to be in accordance with the relevant recommendations of BS9991:2015 Fire safety in the design, management and use of residential buildings, BS 5839 Part 6:2019 to at least a Grade D Category LD3 standard. Smoke alarms and heat detectors to be installed in locations shown on plans and in accordance with Approved Document Part B and BS EN 14604:2005 or BS 5446-2:2003. All smoke alarms to be mains operated with battery back-up and to be fixed to ceilings at least 300mm away from any walls and light fittings. Smoke alarms/detectors should be situated a minimum 1 per storey and within 7.5m of the doors of every habitable room, and within 3m of bedrooms doors.
Where the kitchen area is not separated from the circulation space by a door. A compatible, interlinked heat detector is to be provided to the kitchen, position to be agreed with Building Control.

SPRINKLER (MIST SUPPRESSION SYSTEM) SYSTEM (WALES)
The system should cover the whole flat development or dwelling (except fire separated garages etc.)
Automatic fire suppression mist sprinkler system in accordance with Approved Document Part B, Section 2:Residential Automatic Fire Suppression Systems to be installed by specialist installer. Designed and installed to BS 8458:2015 Fixed fire protection systems. Residential and domestic watermist systems Code of Practice for design and insulation.

Where mains water supply is to be used the designer must consult with the water undertaker to establish typical operating water pressure range and flow capacities available.
Design, installation and commissioning must be carried out by a competent person, defined as 'a person suitably trained and qualified by knowledge, understanding and practical experience'. A Compliance Certificate should be provided by a competent installer to demonstrate compliance with the British Standard.
Prior to installation and, as and when available, an M&E design for the proposed fire suppression (sprinkler)system should be submitted to Building Control for assessment.

PART L1A Conservation of Fuel and Power
New dwellings to comply with Energy Efficiency Requirements of AD L1A Regulation 25B (or 25C if 2019 superceeded Regulation in force).
In accordance with Regulation 27B the target fabric performance values for each element with the method to achieve them is recorded on the submitted drawings.
A SAP calculation to be submitted to Building Control to demonstrate compliance prior to commencement on site.
In accordance with Regulation 29 an Energy Performance Certificate is to be logged in the Central Government Register and Building Control advised of log on completion of the works.

PART J Combustion Appliances and Fuel Storage
Solid fuel appliances and associated flue including air combustion requirements and kilowatt rating; works to be undertaken under a competent persons scheme and the relevant certification must be provided. A Notice Plate to be sited in accordance with Part J.
A carbon monoxide alarm must be provided in accordance with either BS EN 50291:2001 and be powered by a battery to operate for the working life of the alarm or to BS EN 50291:Type A with a fixed wiring and incorporate a sensor failure warning device. The alarm must be located on the ceiling at least 300mm from any wall or on a wall as high as possible above any doors or windows but not within 150mm of the ceiling and between 1m and 3m horizontally from the appliance.
HEATING
Water filled central heating system with radiators. Heating system driven by gas fired Class 'A' condensing boiler (with SEDBUK rating of not less than 90%) with thermostat and fan assisted balanced flue, with guard. Outlet from fan assisted flue minimum 300mm from any opening into the building. Complete system to be to current regulations and Codes of Practice. Each zone/room to be individually temperature controlled via room thermostats or individual thermostatic valves on radiators. Hot water cylinder to have 35mm foam insulation. Any pipes, tanks etc within cold/unheated areas to be adequately insulated. Heating controls to include programmer, boiler interlock and room thermostat. Heating contractor is to provide information and details of all heating appliances together with 'benchmark' certification of all heating installations, commissioning and servicing, to both Building Control and the owner/occupier and certification for checking of hearths, fireplaces, flues and chimneys in accordance with Approved Document Part J for new dwellings.

ELECTRICAL INSTALLATION
All electrical installation work must be carried out professionally by a competant person registered with NICEIC. Installations should be designed installed and suitably enclosed and separated by the appropriate distances to provide mechanical and thermal protection so that they incorporate measures that afford protection for persons against the risks of electric shock, burn, or fire injuries.
Electric meter and cut out facility, should be located by the electricity distributor in a safe location where they are mechanically protected and safely maintained. Electricity distributor should take into consideration any flooding risks in low lying sites.
In accordance with Electricity Safety Quality and Continuity Regulations 2002, proposals for new installations must be agreed with the electricity supplier.

The electrical installation should undergo all necessary testing procedures and should comply with BS7671: 2008 and Approved Document P. Certificates and proof of compliance are to be provided to the client and Building Control prior to occupation.

All switches and socket outlets for lighting and appliances to be located between 450 & 1200mm above finished floor level.

PART R Physical infrastructure for high-speed electronic communications network
Suitable ducting to be provided through external wall to allow for connection from the access point to a the network termination point

COMMISSIONING
All services commissioning to be in accordance with Domestic Building Services Compliance Guide for heating and hot water and Domestic Ventilation Compliance Guide for ventilation.

WATER SUPPLY/EFFICIENCY
Water to be supplied by Local Statutory water undertaker complying with the requirements of the water supply (water fittings) regulations 1999.
The calculated potential consumption of wholesome water per person per day, relating to the dwelling must not exceed 110 litres per person per day.
In accordance with Approved Document G2 and Regulation 36 of the Building Regulations, a notice specifying the calculated potential consumption must be submitted to Building Control no later than 5 days after completion.

LIGHTING
Lighting units to be installed in accordance with client's specification and requirements, all fittings to be low energy type.

KITCHEN UNITS
Kitchen layouts are shown indicatively only and are the responsibility client/contractor to involve any specialist design where necessary. Contractor should co-ordinate all necessary hot / cold / services, drainage and power supplies to each appliance.

New Dwelling Land at St Ederyn's Church Old St Mellons, Cardiff	Job No. 20.059 Dwg No. AL(10)13	Rev. A
Title GA Section B & Notes		
Date Jan 2021	Drawn ***	Scale 1:25 @ A1

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