SPECIFICATION

GENERAL NOTES

CDM REGULATIONS
The client must abide by the Construction Design and Management Regulations 2015. The client must appoint a contractor, if more than one contractor is to be involved, the client will need to appoint (in writing) a principal designer (to plan, manage and coordinate the planning and design work) and a principal contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project).
Domestic clients

The domestic client is to appoint a principal designer and a principal contractor when there is more than one contractor, if not your duties will automatically transferred to the contractor or principal contractor.
The designer can take on the duties, provided there is a written agreement between you and the designer to do so.
The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works:
(a) Last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project. Or:
(b) Exceeds 500 person days.

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.
Plumbing to comply with BS 5572.
Electrical work to comply with the current edition of the IEE Regulations.
Generally structural timbers to be SW or whitewood C24 grade to BS 4978. To be C16 where specified by the Engineer.

All softwood to be vacuum pressure impregnated.
Softwood for joinery to BS 1186 part 1, screws to BS 1210, nails to BS 1202.
Carpentry to comply to CP 112.
All brickwork below DPC level to be Class B engineering bricks.

GENERAL.

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.

Do not scale off the drawings.
All heights, levels, sizes and dimensions to be checked on site before any work is put in hand.

Locate existing services/drainage runs prior to construction. Existing services through site to be protected during construction. There is an OH power line on site near entrance follow HSE guidelines for electrical safety at work.

The manufacturers recommendations are to be followed in respect of the installation and fixing of all products and any discrepancies between those recommendations and any other requirements of the specification and/or drawings are to be notified to the designers.

CONSULTANTS
The following consultants are to be appointed by the contractor/client to inform the design process as required; this list is not exhaustive:
Structural engineer to indemnify existing structures and proposed sub and superstructure - Including Temporary Works for support.
Civil Engineer to design foul and surface water drainage runs. This may extend to ground investigation and peculation testing for soakaway designs.
M+E consultant to design the mechanical and electrical systems for the proposal. M+E information indicated on plans is for costing purposed only and not for construction.
Quantity Surveyor (QS) to manage the project budget and monthly valuations/invoices raised by the contractor.

PRINCIPAL CONTRACTOR
Secure perimeter to be maintained on site to prevent unauthorised access. Temporary Scaffolding to comply to relevant standards and all boards to comply to BS2482:2009.
Principal Contractor to undertake R&D and produce subsequent risk assessment prior to starting on site. Contractor to confirm hazardous materials and services on site (Reports/CAT searches as per HSG47 Notes and so forth) and check all dimensions on site. Ensure all materials are stored on site as per manufacturers guidelines. Contractor to follow safe sequence of steel installations; as per Structural Engineers guidance & HSWA Guidance. Waste to be sorted on site and recycled where possible. Client to confirm retention of any white goods or furniture prior to start. Plant and equipment shall be attenuated as per BS5528-1:2009 with operatives shall be suitably qualified to carry out task in hand. All work to be carried out in accordance with current Building Regulations approved documents (Wales)

BUILDING REGULATIONS - WALES
Ensure a Building Regulations application is submitted to the LABC or Third-Party Certifier prior to works commencing on site. Principal contractor to arrange periodic inspections with building control on behalf of the client. All works to be carried out in accordance with Approved Documents Wales, latest revisions. Ensure all Pre-Planning conditions are resolved prior to commencement on site.

DETAIL DRAWINGS
Standard details within this document are not to scale and for guidance only. Contact architectural designer to obtain scaled, site- specific drawings as required. All notes should be read in conjunction with the drawings and any discrepancies reported to the designer for resolution. Timber Framer should be appointed to design the overall structure and all documentation relayed to the architectural designer for confirmation.

SITE PREPARATION

DEMOLITION
Measures to be put in place during and after the demolition to ensure the protection of the public, public amenities and adjoining properties.
Such measures to include:
• The shoring of adjoining buildings.
• The control of dust and noise generation.
• The weatherproofing of any parts of adjoining buildings which are left exposed by the demolition.
• The repairing and making good any damage to any adjacent building effected by the demolition.
• The removal of material or rubbish resulting from the clearance and demolition of the site.
• The disconnection, sealing or removal of any drain or sewer, as required.
• The making good of any disturbed ground.
• Any arrangements necessary for the disconnection off all services (e.g. gas, water, electricity).
Consultation with the Health and Safety Executive, and Fire Authority should be sought if burning structures or materials on site. If the demolition is more than 50m3 in volume a formal notice of demolition is to be given to building control at least six weeks before any demolition work starts, in accordance with The Building Act 1984: Sections 80-83.
Consultation to be undertaken with the occupiers of adjacent buildings where applicable and a Party Wall agreement put in place. A planning application to demolish to be made where required.
All demolition work to comply with the Construction (Design and Management) Regulations 1994 and a Health and Safety plan is to be provided by the principal contractor. A photographic survey of surround structures shall be the responsibility of the contractor.

SITE INVESTIGATION

NO SITE INVESTIGATION HAS BEEN UNDERTAKEN
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 also be taken to avoid danger to health and safety caused by contaminants and ground gases e.g. landfill gases, radon, vapors etc. on or in the ground covered, or to be covered by the building.
BUILDING REGULATION NOTES (to read in conjunction with the contract specification)

FOUNDATIONS
To be raft foundations to as Engineers design and calculations and to the Building Inspectors approval.

GROUND FLOOR TO MAIN HOUSE
To comprise:-
- 65mm screed
- Underfloor heating
- VCL
- 150mm Celotex FR5000 floor insulation - tape joints with insulating tape
- 1200 guage polythene damp proof membrane
- Raft foundation.
Damp Proof Membrane taken up walls and lapped with wall DPC to form continuous waterproof barrier.

To have a 'U' value of 0,11w/K or better, to comply with the Approved document L1A

12mm Celotex RR insulation vertically to the perimetre of the external walls to prevent cold bridging (as detailed on drawings).

EXTERNAL WALLS
325mm cavity walls comprising:-
- 19mm rendered 100mm blockwork external leaf
- 150mm cavity
- Cavity part filled with 100mm GA4000 Celotex insulation
- 100mm dense 7/KN blockwork inner leaf
- plaster and skim finish, painted white, to be agreed

CAVITIES
Stainless steel cavity wall ties to BS1243 at 600mm horizontal and 450mm vertical staggered centres generally and 225mm vertically at openings and corners, to timber frame manufacturer's design and spec. Wall ties should be capable of accommodating any anticipted diffential movement, fixed to stud not sheating.
Cavity below ground level filled with lean mix concrete to within 225mm of finished floor level.
Form weep holes at 900mm centres to perpendicular joints at ground level.
Incorporate DPC horizontally to each leaf at floor level and vertically at openings.
Lap 1200 gauge polythene DPM with wall DPC's to form a continuous moisture barrier.
Straight runs of block work in excess of 6m to have movement joints in accordance with BS 6093.
Form thresholds to external door openings using bricks as detailed on drawings.

FIRST FLOOR
To consist of 22mm fin thickness 'chipboard' floor boards generally on joists that SE spec and design.
Joist ends built into new cavity wall to have a end bearring of 100mm.
Double joists and trimming joists formed using joists bolted together at 900 centres with 12mm galv ms bolts and washers.
Double joists to be provided below partitions and bath. Trimming joists to be provided to stair opening and landing edge. Cross noggins the same size as joists to be provided where partitions run at right angles to joists.
Provide herringbone strutting at mid span or two at third span positions where shown on drawings using 175 x 50 sw blocks.
Strap joists to walls at 2000mm centres with 30 x 5mm galvanised ms straps at right angles to span screwed over at least 3 joists and with hooked ends built into inner leaf of cavity wall.

LOAD BEARING STUD PARTITIONS

Load bearing partitions to be built of foundations as shown on drawings.
Non load bearing partitions to be built off floor slab.
Incorporate DPC at floor level to load bearing partitions and lap with DPM.

Stud partition to kitchen/dining room, WC to incorporate 100mm mineral Rockwool RW2 fire/sound insulation infill between studs.

NON-LOAD BEARING STUD PARTITIONS

Stud partitions to comprise 75 x 50mm sw studs at 400mm horizontal centres with cross noggins at 600mm vertical centres finished both sides with 1 layer 9,5mm plasterboard and 3mm skim.
Stud partitions to bathroom & en-suite walls to incorporate 100mm mineral wool infill between studs, waterproof plasterboard dry lining behind tiling.

SOUND
All internal walls and internal first floors to be fully insulated with 100mm ROCKWOOL RW2 insulation inbetween joists and studs.

CEILINGS AND INTERNAL WALLS
1 layer of 12,5mm plasterboard with 3mm skim smooth finish.

FIRE
All habitable rooms above the ground floor should have an obstructed openable area that is at least 0.33SqM, be a minimum of 450mm high and 450mm wide. The bottom of the openable area should not be more than 1100mm above the floor.

All habitable room doors to the dwellings opening onto the stairwell to be half hour fire resistant, with positive self closers.

LINTELS
Cavity wall lintels to be Catnic or similar insulated steel tray lintels, with integral dpc's of depth appropriate to span, and loadings in accordance with the manufacturer's recommendations. 150mm minimum end bearing. Form weep holes at 900mm centres to perpendicular joints over lintels.

All lintels to internal partition walls to be precast or prestressed concrete appropriate to span and loadings in accordance with the manufacturers recommendations. 150mm minimum end bearing.

Openings greater than 1200mm increase lintel end bearing to 225mm
All to manufacturers design and specification.

WINDOWS AND DOORS - CLIENT TO CONFIRM
Windows to be VELFAC 200 series windows, with double or triple glazed sealed units, with opening lights as indicated on elevation drawings. Windows frames to be SET AS DETAILED.
Glass to all windows to be low emission 'K' glass or similar approved and to have a whole unit 'U' value of 1.4Wm2K or better and to have a low g factor 0,5 to comply with the Approved document L1A.
All windows to have trickle ventilators in window frame head.
Toughened glass to be fixed to all external doors AND WINDOWS.
Installation to be in strict accordance with manufacturers specification.
Weatherseal window head, jambs and cill to be Compriband 600.

Doors and windows, to meet the security requirements of British Standards publication PAS 24:2012

FRONT DOOR TO BE A MINIMUM 775mm WIDE

EXTERNAL SLIDING DOORS
Sliding Doors to be as clients requirements, Smart Systems Visoglide Plus profile, with double glazed sealed units, to have a whole unit 'U' value of 1.5Wm2K or better and to have a low g factor 0.5, toughened double glazed units as indicated. All accessories for the correct installation in accordance with the manufacturers specification.
http://www.smartsystems.co.uk

Front door to be softwood timber as elevations, set in hardwood frame. To include Exitex MDS/140 Mobility Inward Door Sill 1m - Aluminium - 19121 low level threshold on DPC.

RAMP TO FRONT ENTRANCE
1 in 12 ramp up to a 900 x 900mm landing. 150mm Concrete Brushed finished on 100mm compacted Hardcore.
Front door to have brick laid as soldier course with low rise 'bump over' threshold by door manufacturer . With a vertical DPC at wall/ramp junction, see detail showing upvc gutter set within concrete ramp.

PAVING SLABS
To be 600x600x50mm pc, paving slabs laid to falls to gullies on 75mm sand bed, 10mm joints between slabs in 1:6 mortar.

STAIRCASE - SEE 1:20 SECTION FOR STAIR DIMENSIONS
Timber from ground to first floor, to have maximum rise 200mm, maximum going 240mm, clear headroom 2000mm vertically, 900mm wide overall stringes set into depth of stud walls, handrail minimum 900mm above flight and a minimum 900mm to landing. Balusters to be formed using solid studwork and skim plaster finish with ss stopbeads at all edges.

JOINERY
Skirting, window head batten, internal window cills and architraves to openings to be softwood, all to be painted.
Skirting to be 19x250mm flat edge.
Architraves to be 19x100mm flat edge section.
Curtain Rail to be 25x100mm section, to be agreed.
Window cills to be 225x20mm section with square edge.

ROOF STRUCTURE
Trussed rafters at 600mm maximum centres to BS. 5268 part 3 1985, with the bottom cord capable of taking a uniformly distributed imposed load of 1,5Kn/Msq with galvanised ms plate connectors and 100 x 25mm diagonal and lateral bracing to BS 5268.
All to specialist manufacturer's design.
100 x 50mm wall plate (as drawings) strap fixed to walls using 30 x 5 x 900mm galvanised ms straps at 2000mm centres
End 3 trusses rafters and ceiling ties abutting gable walls stap fixed to masonary using 30 x 5 x 1500mm galvanised ms straps at 2000mm centres. Provide noggins between trusses at strap positions to support straps.
Form storage platform over bottom chord of trusses using 22mm chipboard base on 100 x 50 sw bearers at 400mm centres.

NOGGIN AND STRAPS
Provide noggins at ceiling level in roof void to fix plasterboard, light fittings and hatch access.
- Noggins in roof comprise of: Light Fittings 75x50mm.
- Trimming to roof lights 50x147mm

ROOF FINISH MAIN HOUSE
Artifical Slate Marley 600mm x 300mm Thrutone Man-Made Fibre Cement Slate - Graphite, all to be laid in accordance with the manufacturers recommendations on 50 x 25mm treated sw battens on sarking felt to BS 747 type F.
Roofing felt to be continuous over ridge, hips and valleys, dressed down into gutter and fixed to top side of softwood roof trusses.
Incorporate 'Cavity tray' over fascia ventilator - OFV25 to give 25mm continuous slot ventilation.

LEAD FLASHINGS
To New Extension
Provide ridgid cavity tray type dpc with 150mm upstand and Code 4 lead flashing to:-
- Canopy roof/main wall abutment
- Valleys
- Dormers
- Incorporate lead slate flashing where flue pipe passes through roof.

CONSERVATION OF FUEL AND POWER.
Roof Insulation
Cold roof construction, Horizontal roof voids to be insulated with 250mm Rockwool insulation quilt laid in 2 layers, 100mm thick between rafters and 150mm over rafters. 12.5mm plasterboard and 3mm skim nailed into rafters. All to give minimum U value of 0,16 W/sq.mK
Internal sloping soffit roof to be insulated with 150mm Celotx XR4000 insulation boardsset between rafters 42,5 Celotex PL4000 insulated plasterboard with 3mm skim finish. All to give a 'U'-value of 0,20w/m2/degC or better.
50mm minimum air space to be maintained above insulation.
50mm minimum air space to be maintained above insulation using treated sw spacer battens fixed to sides of rafters.

Glass to all windows to be low emission 'K' glass and to have a 'U' value of 0,20Wm2K or better, to comply with the Building Regs 2000, Document L1.
Windows to Area of double glazing not to exceed 25% of the perimeter wall area.

Hot water storage vessels and hot water pipe runs in the roof void to be insulated.

Walls to be insulated as described elsewhere and to have a 'U' value of 0,35 Wm2K or better.

VENTILATION
Natural ventilation opening lights to Habitable rooms, kitchens and toilets to be provided of at least 1/20th of the floor area of the room.
Mechanical ventilation equivalent to 68 litres per second is to be provided to bathroom, 15l/s to WC and 60 litres per second to kitchens..
Vent ducts to incorporate condensation traps and outfall pipework.
To avoid the build up of condensation in the warm roof structure breathable Intello Plus VCL allows venting to inside when conditions require. Trickle vents to be provided to all windows to achieve 8000mmSq background ventilation in habitable rooms.

SPRINKLER SYSTEM
Sprinkler system to be designed and installed by a competent person to comply with Approved Document B in Wales

CONSERVATION OF FUEL AND POWER.
U values as listed above comply with Approved Document L1A in Wales

AIR PRESSURE TESTING.
Air Pressure tightness of 5 and is to be carried out in accordance with The Building Regualtions 2013, Approved Document L1a, Section 2 : Quality of construction and commissioning.

ABOVE GROUND PLUMBING AND DRAINAGE - Employers requirements:
Single stack AAV system to be provided and fitted in accordance with the manufacturers recommendations comprising 100mm upvc pipe vented in accordance with part H1 of the Building Regulations, 32mm wastes to basins, 40mm wastes to sinks and 100mm outlets to wc pans. 50mm traps to wc pans, 75mm deep seal traps to all other fittings.
Resealing traps to be provided to 32mm wastes exceeding 1500mm in length and 40mm wastes exceeding 3000mm in length. Where visible, white internally, black externally

RAINWATER DISPOSAL- Employers requirements:
Rainwater system and gutters to be min 115mm half round dia as detailed, installed in accordance with the manufacturers recommendations.

BELOW GROUND DRAINAGE - Employers requirements:
Underground drainage to to be OSMA (or similar approved) Upvc drainage system and fittings laid in accordance with the manufacturers recommendations, to BS 4660:1973.

Foul Drains laid to 1 in 40 max falls. Surface water drains laid to 1 in 80 minimum falls.

Inspection chambers and covers to be Osma 450mm dia. universal inspection chambers including base, shaft and 4D.491 cover and frame or similar approved. All bedded and backfilled to Osma's recommendations.

Manhole with dropshaft to accomodate change in level from site to mains sewer to be provided

Rodding Eyes to be Osma sealed rodding eye and cover ref: 4D 356 or similar approved.

PIPEWORK UNDER THE BUILDING
All pipework under the building to be encased with a minimum of 150mm thick concrete of ST4 strength placed in one operation, to incorporate 18mm thick compressible expansion board at regular intervals as dictated by pipe joints.

WALL PENETRATIONS- Employers requirements:
All drains which pass through walls to have a 600mm long rocker pipe and RC lintols over.
Fill gap between around wall penetrations with expanding form.

EXTERNAL GULLIES- Employers requirements:
Provide and lay PVC-U Osma (or similar approved) plain hopper gully (4D.700) connected to universal pipework, laid on a 75mm thick 1:2:4 square concrete bed. Black

Backfill around gully with selected material, grating to be set in path 10mm below finished level to aid surface water discharge into prescribed underground drainage. To include trap insert.

SOIL & VENT- Employers requirements:
Stub stacks are to terminate above flood level of cisterns via 4S.304 air admittance valve.

HEAT PRODUCING APPLIANCES - Employers requirements:
Space and Hot Water Heating :
To be Worcester Bosch Greenstar condensing boiler to be 90% efficient, and minimum 5" dia flue ducted out to the elevation; with underfloor heating system on the ground floor and rads and the first floor - positions and sizes to be as M&E consultant.

Towel rail in bathroom to be plumbed into central heating but have electrical heating element for use in summer.
Heating zones: provide 3 different heating zones: Bed 1, Bed 2 and rest of house with thermostats in each zone.

The whole of the installation to meet the requirements of the current British Standard Code of Practice.

ELECTRICAL INSTALLATIONS- Employers requirements:

Power and Lighting
All light & power fittings to be supplied by MK or similar approved.
All power points to be double switch socket outlets.
All power outlets to be double pole.
The responsibility of design, adequacy and suitability of each system shall be the contractors. All to meet the requirements of Part P, to design, install, inspect and test all electrical work in accordance with BS 7671.

Internet
The houses will have an access point linked by ducting to a network termination point. As Diagrams 1(a) The access point is on an outside wall and connected by a through-wall duct to the network termination point

Extract Fans.
Extract fans to be fitted as indicated on plan.

HYGIENE - Employers requirements:
The hot water system is to be vented.

HOT WATER LIMITED TO 48 DEGREES

MATERIALS AND WORKMANSHIP

All materials and workmanship are to comply with the relevant and current British Standards, Codes of Practice, current edition of the Building Regulations, and shall be to the approval of the Building Inspector.
Plumbing to comply with BS 5572.
Electrical work to comply with the current edition of the IEE Regulations.
Generally structural timbers to be SW or whitewood C24 grade to BS 4978. To be C16 where specified by the Engineer.

All softwood to be vacuum pressure impregnated.
Softwood for joinery to BS 1186 part 1, screws to BS 1210, nails to BS 1202.
Carpentry to comply to CP 112.
All brickwork below DPC level to be Class B engineering bricks.

GENERAL.
Do not scale off the drawings.
All heights, levels, sizes and dimensions to be checked on site before any work is put in hand.

Locate existing services/drainage runs prior to construction. Existing services through site to be protected during construction. There is an OH power line on site near entrance follow HSE guidelines for electrical safety at work.

The manufacturers recommendations are to be followed in respect of the installation and fixing of all products and any discrepancies between those recommendations and any other requirements of the specification and/or drawings are to be notified to the designers.

George and Co.

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1017.13	spec		
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