

BUILDING REGULATIONS NOTES & Materials Schedule

A New Dwelling

At

Tile Barn Farm Hill Lane . Barnham . West Sussex

Dwg No: 007- 608

Date: - 08.09.2021

Rev: (C) – rev.23.09.21 (Drainage)

Status: Draft - Building Control Issue

PRELIMINARIES

- This document has been prepared for the sole purpose of gaining Building Regulations Approval & forms part of a set of drawings & documents. It does not purport to be construed as either a Performance Specification or Schedule of Works, for either Tender or Contractual purposes.
- This document does not purport to be sufficient information from which to build without the provision of comprehensive drawings, specification & schedule of works along with adequate contractual arrangements in place.
- This document should not be used for any contractual purposes.
- This document, together with the drawings attached should be read in conjunction with the Structural Engineer's drawings, calculations & all other consultants as applicable to the project, has been prepared to satisfy compliance with the requirements of the current Building Regulations & to obtain formal approval by the Local Authority Building Control Department, &/Or, to obtain formal approval from the National House Building Council (NHBC) Building Control Department.

REGULATIONS & STANDARDS

All construction shall comply with the following (non-exhaustive) list of statutory documents, the applicable version to be current at the date of construction.

- Town & Country Planning Act 1990
- Local Authority Byelaws
- The Building Regulations 2010
- European Standards, British Standards & Codes of Practice
- Construction (Design & Management) Regulations 2015
- Equality Act 2010
- Control of Substances Hazardous to Health (COSHH) Regulations 2002
- Health & Safety at Work Act 1974
- The Workplace (Health, Safety & Welfare) Regulations 1992
- Fire Precautions Acts 1971
- Institute of Electrical Engineers Regulations for electrical installations
- Environment Act 1995
- Water Act 2014
- Clean Air Act 1993
- The Gas Safety (Installation & Use) (Amendment) Regulations 2018
- Housing Grants, Construction & Regeneration (Amendment) Act 2011
- Party Walls etc Act 1996
- Copyright (Designs & Patents) Act 1988

DRAWINGS

The following Building Regulations Notes together with the drawings attached, which should be read in conjunction with the Structural Engineer's drawings, calculations & all other consultants as applicable to the project, have been prepared to satisfy compliance with the requirements of the current Building Regulations & to obtain formal approval by the Local Authority Building Control Department.

GENERAL DESIGN & CONSTRUCTION CONDITIONS

PLANNING APPROVAL. Prior to works commencing on site, it is essential the Contractor make themselves fully aware of the grant of planning permission & conditions attached to that permit.

No deviation from the consented scheme shall be made without prior written consent from the local planning authority.

The Client/Contractor is responsible for ensuring that all conditions & pre-commencement planning conditions have been discharged prior to works starting on site.

Both client & contractor are responsible for ensuring that all subsequent planning conditions attached to the planning permit are satisfied prior to the building being occupied.

BUILDING REGULATIONS. It is advised that Building Regulation approval is obtained prior to the commencement of works.

The Contractor shall acquaint himself fully with the Building Regulations Consent prior to commencement of works on site.

All works shall be carried out to approval of the local authority Building Control Department or approved inspector & comply with the Current Approved Building Regulations Documents. All materials & workmanship to comply with current British Standards, Codes of Practice.

STRUCTURAL ENGINEER. The Structural Engineer shall submit their structural design package directly to the Local Authority's Building Control Department.

All structural details must be in strict accordance with Structural Engineer's design &/or specification. The Main Contractor is responsible for ensuring that all structural elements & stability of the building are in accordance with Structural Engineer's design &/or specification.

DIMENSIONS. All dimensions shown on the drawings are indicative.

Generally, drawings are based on survey drawings & information prepared by others.

Where dimensions are indicated, they are to be used for guidance information only & do not purport to be construed as working details for construction purposes. Do not scale drawings.

All dimensions & levels on all drawings must be checked & verified on site before commencement of works.

Unless advised to the contrary, any dimensions indicated, are in Millimetres. Angular dimensions are to the nearest half degree.

Unless advised to the contrary, all dimensions are between structural brickwork & blockwork or timber stud faces.

Any discrepancies between drawings &/Or documents shall be reported to client/the building supervisor.

This document should be read in conjunction with supporting drawings & documents produced.

MATERIALS & WORKMANSHIP

All materials used for a specific purpose should be assessed for suitability using the following aids: (See Approved Document: Regulation 7: Materials & Workmanship for full details)

- British Standards or European Standards &/Or other acceptable national & international technical specifications & technical approvals.
- Product Certification Schemes (Kite marks)
- Quality Assurance Schemes
- British Board of Agreement Certificates (BBA)

- CE marking under the Construction Products Regulations
- CE marking under other EU Directives & Regulations
- Local Authority National Type Approvals (System Approval Certification)
- In certain circumstances, materials & workmanship can be assessed by past experience, for example a building already in use- providing it is capable of performing a function for which it was intended- subject to building control approval.

All materials must be fixed in strict accordance with manufacturer's printed details.

Workmanship shall be in strict accordance with Regulation 7 and BS 8000:

Workmanship on Building Sites: shall be in compliance with Parts: 1 to 16.

Where materials, products & workmanship are not fully specified or described, they are to be 'fit for purpose' stated or inferred & in accordance with recognized best practice.

Testing to be carried out if required by building control to ensure workmanship is appropriate.

The Contractor is responsible for confirming the positions of all existing drainage & service runs, taking & checking all site levels, dimensions, etc prior to ordering materials & commencement of the works.

All structural timbers shall be minimum C16 (SC3) grade or C24 (SC4) as indicated & treated with preservative including cut ends.

Where proprietary materials are specified, they are to be used in strict accordance with the Manufacturer's detailed recommendations & instructions.

Where items are to be fabricated off-site, on-site dimensions & levels are to be taken & confirmed by the contractor, prior to ordering materials & commencement of the works.

All new services are to be provided in accordance with their relevant Statutory Undertaker's requirements.

Where noted as 'approved' refers to a company certified by regulatory body.

The Main Contractor is responsible for structural stability & final weatherproofing of all elements.

It is the responsibility of the building owner or tenant to comply with the requirements of the "Party Wall Act": 1996 etc. in respect of excavation & construction in proximity to certain buildings or structures & connected purposes.

New dwellings are to comply with Part M of the Building Regulations with regards to access into the dwelling & sanitary facilities for disabled people.

THERMAL EFFICIENCY

Thermal efficiency & insulation requirements shall comply with Part(s) L1A (in New Dwellings) & L1B (in Ex.Dwellings) of the Building Regulations (2016).

For **New dwellings** thermal calculations will be provided to ensure that the construction complies with: Part L1A of the Building Regulations 2018).

To be generally minimum:

- Wall U-value 0.18w/m²K.
- Party Wall U-value 0.20w/m²K.
- Roof U-value 0.13w/m²K.
- Floor U-value 0.13w/m²K.
- Window/door U-value 1.40w/m²K.

The building fabric & services performance specification shall be within reasonable limits.

Solar shading & other measures shall be in place to limit risks of summer overheating to reasonable limits.

Fabric insulation & air tightness, as built, shall be as intended.

Satisfactory information shall be provided enabling occupiers to achieve & maintain energy efficiency.

For new dwellings thermal calculations will be provided to ensure that the construction complies with Part LA of the Building Regulations.2010/2016

SAP Calculations & Energy Performance Certificates shall be provided for each dwelling & submitted to Building Control for their approval.

The Annual CO2 emission rate of the completed dwelling, as calculated using SAP, shall not exceed the target set by reference to a notional building.

All notes generally to comply with relevant sections of the current Building Regulation Documentation.

HEALTH AND SAFETY

THE HEALTH & SAFETY AT WORK, ETC. ACT 1974

The Health & Safety at Work Act 1974 (HSWA) is enforced by the Health & Safety Executive.

The HSWA requires persons in control of premises to make broad provisions for the health, safety & welfare of people including visitors & other users of the premises. The HSWA also requires all persons at work (i.e. contractors) to ensure, so far as is reasonably practicable, the health & safety of themselves & any other people who may be affected by their work.

All Contractors must comply with all current Health & Safety legislation, & the Health & Safety Executive's Approved Codes of Practice, including but not limited to:

- Management of Health & Safety at Work Regulations 1999
- The Construction (Design & Management) Regulations 2015
- Control of Substances Hazardous to Health (COSHH) Regulations 2002
- The Personal Protective Equipment at Work Regulations 1992

THE CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015 (CDM)

The Construction (Design & Management) Regulations 2015 came into force on 6th April 2015 & applies to all commercial & domestic construction projects.

When undertaking construction work, which includes alterations, extensions, routine maintenance, new build or demolitions, all parties involved have legal duties under the Construction (Design & Management) Regulations 2015 (CDM 2015) & as such should make themselves aware of their responsibilities under the regulations.

This project must be managed & delivered in such a way that the risks to Health & Safety of all persons engaged are eliminated or reduced to a level which is acceptable under current Health & Safety legislation. All those involved in the construction phase have a statutory duty to comply with the Health & Safety Plan, & to provide the Principal Contractor with any information which they have, which is needed to keep the plan up to date. Anyone wishing to seek advice on compliance should contact the Principal Contractor or The Principal Designer.

Under the Construction (Design & Management) Regulations 2015 & the supporting Approved Code of Practice, the Principal Contractor is required to develop a Construction Phase Health & Safety Plan for the construction phase of the project. This plan, which collates information from various sources into a single document, should not be read in isolation & reference should also be made to the Pre-Construction Health & Safety Information provided by the appointed Principal Designer.

A Project is notifiable to the Health & Safety Executive (HSE) if they exceed 30 construction days with 20 or more workers working simultaneously, or if the project exceeds 500 person days.

WHERE A PROJECT IS NOTIFIABLE

The client shall appoint the "Principal Designer" to perform the duties under CDM Regulations to plan, manage, monitor & coordinate the health & safety during the pre-construction phase.

The employer/client shall appoint the "Principal Contractor" to perform the duties under CDM Regulations to prepare the Construction Phase Health & Safety Plan & the Health & Safety File. The 'Principal Contractor' is responsible for informing the Health & Safety Executive that the works have commenced.

Further guidance & information on Duty Holders responsibilities under The Construction (Design & Management) Regulations, 2015 can be obtained from the Health & Safety Executive at www.hse.gov.uk.

ASBESTOS, CONTAMINATED MATERIALS, LEAD PAINT ETC

Any suspected asbestos/contaminated material/soil/lead paint is to be inspected by a specialist. Asbestos is to be removed & disposed off-site by a licenced specialist contractor, as required under the Control of Asbestos Regulations 2012.

Further information regarding the above can be obtained from the Health & Safety Executive at www.hse.gov.uk

THE PARTY WALL ACT 1996

Introduction: The Party Wall etc Act 1996 (the Act) is a law that must be followed in certain circumstances. The Act does not apply to all building work, but its requirements are quite separate to those of Planning & Building Regulations. Professional advice about the Act should be considered by both building owners & neighbours (neighbours affected are called 'adjoining owners' under the Act).

Where the Act applies: The following are examples of where a building owner is required by law to serve a formal notice on adjoining owners. A notice must show the details of the relevant proposals & other necessary information, & is only valid for one year:

- When building work is planned on a boundary with a neighbouring property.
- When work is planned directly to an existing wall or other structure which is shared with another property.
- When an excavation is planned within three metres of a neighbour's building or other structure, where it will be to a lower level than the underside of the neighbour's foundation.
- When an excavation is planned within six metres of a neighbour's building or other structure, where that excavation would cut a line drawn downwards at 45° from the underside of the neighbour's foundation.

For further guidance, refer to The Party Wall etc Act 1996 (published by HMSO, ISBN 0-10-544096-5) & The Party Wall etc Act 1996 Explanatory Booklet (published by the Department for Communities and Local Government).

ECOLOGY -- PROTECTED SPECIES (BATS ETC)

Many buildings have features which are of value to wildlife & which may be used by legally protected species including European Protected Species (e.g. Bats, Dormice & Great Crested Newts). Where these species are present, legal protection extends to their places of shelter & a license from Natural England may be required before works start. It is therefore advisable to take appropriate measures to avoid harm to protected species & a potential offence under the relevant legislation. Natural England is the relevant advisory organisation & can be contacted at www.naturalengland.org.uk or contact the Councils Sustainability Team. National Bat Helpline on 0845 1300 228. Where necessary, proprietary bat habitat boxes/roosts should be installed in compliance with licensed ecologist requirements.

PROTECTION OF THE WORKS

Adequate precautions should be taken on site to protect the work, particularly the laying of concrete & other wet trades or processes in accordance with the product manufacturer's details or specialists' requirements in the following circumstances.

When the air temperature is below or likely to fall below 2°C (additional consideration should be made for wind chill & freezing conditions)

- No concrete shall be placed into or onto frozen surfaces or excavations
- Ready-mixed concrete shall be delivered to site at a min. temperature of 5°C in accordance with BS 5328
- No frozen materials shall be used in the works
- Works shall not continue until it is free of frost & frozen materials
- Where there is a possibility that new work will be affected by frost or freezing before it has set. Curing periods may need to be extended in accordance with product manufacturer's details

Short, long term protection & storage of material on site should be in accordance with the product manufacturer's details. The use of admixtures must be carried out in accordance with the product manufacturer's details. Adequate precautions should be taken to protect the works in accordance with the product manufacturer's details or specialists' requirements. Typically, polythene sheeting/hessian should be used to protect works in progress from becoming saturated & prevent drying out from direct winds & sun. Wetting may also be required to ensure that mortars/ rendering/ plastering/ screeds/ slabs etc do not dry out too quickly & cause failure.

BUILDING REGULATIONS NOTES

• FOUNDATIONS

All new foundations shall be in accordance with the Structural Engineer's design details & Calculations, Soil Reports, NHBC guidelines & comply with Part A, Section E of the current Approved Building Regulations Documents.

New FOUNDATIONS - (Traditional concrete strip or trench-fill)

- All to be in accordance with the structural engineer's design & details.
- 450/600mm (wide) concrete trench fill. Min.1000mm deep below ground level.
- Final depth to suit ground conditions.
- Concrete to BS 8500, designated mix: GEN 2 or if otherwise, to structural Engineer's details.
- External load-bearing cavity sub-structure walls, as indicated: 2No. skins (min.7.3kN blockwork up to two storey structure) dense concrete blockwork, 100mm outer & 100mm inner.
- 135mm cavity filled with lean mix/designated mix: GEN 1 concrete up to 225mm below DPC, with drainage weep holes (65x10mm wide at 900mm ctrs.) in external skin.
- Internal load-bearing sub-structure walls: 100mm/140mm single skin dense concrete or 200mm trench blockwork as indicated. To Engineer's detail.
- Durable Brickwork below DPC level to be suitable class F1.S1 or F1.S2 Engineering Bricks.
- DPC min.150mm above finished ground level.
- Final size & position of foundations & sub structure walls are to be compatible with suspended beam & block floor detail, and in accordance with Structural Engineer's details.
- Foundations within 1000mm of adjacent drains to be min.1000 deep or below invert level of drain.
- It is understood that there are no trees within the vicinity of the works which are likely to affect the new foundations.
- All Blockwork to be laid in strict accordance with manufacturer's recommendations & instructions.

All to be in accordance with the Structural Engineer's design & comply with Part A, Section E of the current Approved Building Regulations Documents.

• DAMPROOF MEMBRANES

- All Damp-proof components & materials shall comply with the relevant current British Standards & Codes of Practice. (BS 743 & BS 8102:1990)
- All installations shall be undertaken in strict compliance with the manufacturer's recommendations & instructions & to the approval of The Local Authority Building Control Department.

All to comply with Part C of the current Approved Building Regulations Documents.

DPC -

- Built into external walls min.150mm above finished ground level. Joints to have min.150mm overlaps & linked to DPM in floors using (RIW Sheetseal 226) or similar approved DPM, min.300mm wide, applied in accordance with manufacturer's recommendations & instructions.

DPM - (over beam & block structure)

- To be: 1200 gauge sheet polythene with min.150mm overlapped taped joints turned & linked to DPC in walls using RIW Sheetseal 226 or similar approved DPM, min.300mm wide.
- Applied in accordance with the manufacturer's recommendations & instructions.

• FLOORS

Generally, all floors are to be in accordance with; the Structural Engineer's design Calculations &/or NHBC guidelines, to comply with Part-A (Section 1B), Part-B, Part-E and Part-L of the current Approved Building Regulations Documents.

Ground Floor U-Valves to achieve min. U-value 0.13w/m²K (new build)

GROUND FLOOR - (suspended concrete Beam & Block)

Beam & Block floor to be supplied & installed by a specialist manufacturer in accordance with their size & design calculations & laid to manufacturer's recommendations & approval by Building Control.

A Specification for type & size of Beam & Block Floor shall be prepared by the specialist manufacturer & submitted to Building Control for approval prior to start of works on site.

The Floor shall generally comprise:

- Remove topsoil vegetation & apply a non-selective weed killer.
- Maintain min.150mm continuous cross-ventilated air gap between underside of floor beams & ground.
- Sub-floor void to be ventilated via air bricks or proprietary vents at 1800 centres to achieve minimum 1500mm² per metre run of wall in opposing walls above ground level.
- Pre-cast concrete beam & block floor structure.
- 1200 gauge polythene DPM laid above the beam and block floor, and linked to DPC in walls.
- 130mm thick suitable Insulation Kingspan Kooltherm K103 or similar approved below screed level.
- Separating layer of sheet polythene min.125 microns or 500 gauge.
- 75mm thick sand cement screed finish with anti-crack mesh reinforcement within middle third.
- Allow 20mm zone for Flooring finish (timber/tiles) bonded to finishing screed.
- Within the new floor finishing screed lay underfloor heating coils secured in position using proprietary fixing clips. Installation of underfloor heating coils to be laid in strict accordance with the heating engineer's and manufacturer's instructions and recommendations.
- The external ground level to be reduced to a depth of min.150mm below new DPC level.
- Within new floor construction lay min.100mm ducting to provide adequate Combustible air supply to fire through ducting in floor through to grill at external wall from external air, with total free area min 50% of the fire throat opening area to current BS via air bricks. To be confirmed on site prior to commencement of works & comply with Approved Document Part J of the Building Regulations.
- This floor construction achieves U-value = 0.12w/m²K.

All to comply with Part A and L1 of the current Approved Building Regulations Document.

GARAGE FLOOR - (suspended concrete beam & block)

Beam & Block floor to be supplied & installed by a specialist manufacturer in accordance with their size & design calculations & laid to manufacturer's recommendations, structural engineer's details & approval by the Local Authority Building Control Department.

A Specification for type & size of Beam & Block Floor shall be prepared by the specialist manufacturer & submitted to Building Control for approval prior to start of works on site.

Floor shall generally comprise:

- Remove topsoil vegetation & apply a non-selective weed killer.
- Maintain min.150mm continuous cross-ventilated air gap between underside of floor beams & ground.
- Sub-floor void to be ventilated via air bricks or proprietary vents at 1800 centres to achieve minimum 1500mm² per metre run of wall in opposing walls above ground level.
- Pre-cast concrete beam & block floor structure.
- 1200 gauge polythene DPM laid above the beam & block floor & linked to DPC in walls.
- Finished floor level to be min.100mm below adjacent floor level of habitable rooms/dwelling.
- Power float smooth finish to 1:80 falls towards doorway.
- 80mm thick concrete screed to BS 8500. Designated mix RC30. Consistence Class S2.
- Reinforced with A142/A393 mesh reinforcement bars placed centrally within the slab.

All to comply with Part A and L1 of the current Approved Building Regulations Document.

FIRST FLOOR - (Timber joists)

Timber floor structure to be in strict accordance with Structural Engineer's size/design calculations & laid to approval by the Local Authority Building Control Department.

- The First structure shall achieve min 30minutes fire resistance & min 40dB airborne sound insulation, & 60dB impact sound insulation.

Floor shall generally comprise:

- 22mm thick T&G flooring grade boards or chipboard (moisture resistant in Bathrooms & WC nailed or screwed to:
- C24 grade floor joists as indicated at 400 ctrs. to Engineer's details.
- Joists built off galvanised hangers or built into walls or timber bearers bolted to wall, with min.150mm end bearings.
- Provide solid noggins to all floor joists spanning 2.5m or more at 2m staggered ctrs.
- No joists or trimmers to be let into separating walls.
- Double up joists under partition walls/skilling's to comply with Building Control requirements.
- Double up joists under bath/sanitaryware etc to comply with Building Control requirements.
- C24 trimmers to stairs as required.
- 12.5 Gyproc plasterboard & set coat to ceilings.
- Size & position of steel beams, connections etc, to be in accordance with Structural Engineer's details.
- Lay 100mm thick suitable (Isover apr 1200 acoustic roll) or similar approved mineral fibre quilt between the joists using proprietary retaining clips to achieve Rw 40dB, & satisfy the requirements of sound between floors, to comply with Part E of the Approved Building Regulations Documents.

Floor structure to comply with Part A of the current Approved Building Regulations Documents.

SEMI-EXPOSED FIRST FLOOR - (Floor above an unheated space (Integral Garage)

- A heated habitable space/room floor above an un-heated space below ie Garage, shall comply with current Approved Building Regulations Documents A:(1B), E, B & Document L.
- New Dwellings: Semi-Exposed wall U-Values to achieve min. 0.20w/m²K & min.40dB sound reduction
- Allow 150mm Kingspan Thermafloor TF70 insulation board or similar approved laid between the joists using proprietary retaining clips, to achieve min.0.20 w/m²K
- Ensure a min.25mm air ventilation gap between the insulation & underside of the floorboards.
- Under board with two layers of 12.5mm thick suitable Gyproc fire-line board with staggered taped & filled joints in strict accordance with manufacturer's instructions to achieve ½ hour fire resistance.
- The floor timber floor structure shall be as above and in accordance with Engineer's details.

Floor structure to comply with Part A of the current Approved Building Regulations Documents.

• EXTERNAL WALLS

Generally, all Walls shall be in accordance with the Structural Engineer's design Calculations &/or NHBC guideline & shall comply with current Approved Building Regulations Document A, Section 1B, Approved Documents E, B & relevant Approved Document L.

External wall U-Values to achieve min. 0.18W/m²K

PARAPET WALLS

- Proprietary painted metal coping/cladding to gable piers as indicated to be supplied & installed by specialist manufacturer with proprietary mechanical fixing & detailing.
- DPC installed under copings, with a minimum 150mm overlap between adjacent sections of the DPC.
- Return/close insulated cavity or install insulated cavity closers to openings to prevent the DPC from sagging - type H by cavity trays or similar approved.

All to comply with Part: C of the current Building Regulations Approved Documents.

EXTERNAL CAVITY WALLS - (timber cladding on blockwork)

- The external cladding/material is subject to Local Authority Planning Approval prior to commencement of the works.
- **335mm** wide cavity walls as indicated achieve min. 0.18w/m²K

- To be laid in accordance with current British Standards & Masonry Codes of Practice.
- Faced externally with suitable either/or;
- 30mm thk, pre-treated Oak or similar hardwood vertical cladding to side flank walls.
- 20mm thk, pre-treated natural Western Red-wood Cedar cladding to end gable walls & recesses areas.
- 38 x 25mm pre-treated horizontal softwood battens.
- 38 x 25mm pre-treated softwood vertical counter battens.
- Maintain through ventilation behind cladding at head & foot of walls with proprietary anti-bug vents.
- Tyvek or Kingspan Nilvent suitable approved breathable.
- **NOTE;** Also allow for 25mm thick colour washed two-coat sand & cement waterproof render finish to recessed entrance and balcony flank walls as indicated. Colour - TBC
- 100mm thick suitable standard (Tarmac) or similar block external skin.
- 50mm clear cavity
- 85mm thick suitable Kooltherm K108 insulation by Kingspan or similar approved rigid insulation board with suitable retaining clips
- 100mm thick suitable (Tarmac Toplite GTI) block inner skin or similar approved.
- Blockwork compressive strength to be in accordance with structural engineer's details.
- Stainless steel insulation retaining wall ties in 125mm cavities with insulation retaining clips.
- Wall ties to current BS. and Generally: vertical - 450mm; horizontal - 750mm; at reveals - 225mm.
- 15mm two-coat plaster finish internally.
- Build in door & window openings in positions shown.
- Provide all vertical & horizontal DPCs minimum 150mm wide to close reveals.
- Return/close insulated cavity work at door & window reveals or install insulated cavity closers to openings, type H by cavity trays or similar approved.
- Provide movement joints in block/brickwork in accordance with manufacturer's recommendations &/or structural engineer's details.

This wall construction achieves 0.18W/m²K & complies with Part L1 of the current Approved Building Regulations.

• SEMI-EXPOSED WALLS

A Wall between a heated habitable space/room & un-heated space ie Garage, shall comply with current Approved Building Regulations Documents A:(1B), E, B & Document L. New Dwellings: to achieve min. 0.20w/m²K

- The Semi-exposed masonry walls between integral garage & dwelling achieves min.0.20w/m²K.
- 200mm non-loadbearing fair-face blockwork garage side.
- 50x75mm studwork inner skin.
- 75mm Kingspan Kooltherm K-12 between studs.
- Over boarded with second layer 32.5mm Kooltherm K-118 factory bonded to 12.5mm taper edge plasterboard & set to dwelling face.

This construction achieves 0.20w/m²K & complies with Part L1 of the current Approved Building Regulations.

• WALL TIES

Stainless steel insulation retaining wall ties in cavities with proprietary insulation retaining discs.

Wall ties to be Type 4 stainless steel to current British Standard. Generally:

- Horizontal staggered centres, max 750mm (600mm at the base of the insulation).
- Vertical staggered centres, max 450mm, closing to 225mm ctrs. within 150mm opening reveals & movement joints.

In accordance with current Building Regulations Approved documents.

- **MOVEMENT JOINTS**

- Build-in Movement Joints as required &/or to Engineer's details.
 - Joints in outer blockwork to be 10mm wide. Fitted with a 75mm Long x 10mm deep compressible strip with the last 20mm of external side finished with suitable sealant in colour to match surrounding mortar.
- All in accordance with current Building Regulations Approved documents.***

- **CAVITY CLOSERS**

To comply with current Approved Building Regulation Documents L.
All cavities in external walls to be closed at eaves using a non-combustible material & at door & window reveals by either returning the brick/blockwork against an insulated DPC or using a proprietary insulated cavity closer, type H by cavity trays or similar approved all fitted in accordance with manufacturer's instructions & recommendations.

All to comply with Part L1 of the current Building Regulation Approved Documents.

- **CAVITY TRAYS**

- Lintols to be installed with a cavity tray over, incorporating stop ends or turn up over lintols, extending min.50mm beyond end of lintol, or fitted in accordance with manufacturer's instructions/recommendations.
- Provide weep holes over external door & window openings at max.450mm ctrs with min.2No.weep holes per opening.
- Generally; 'Ruberiod' Polymer pre-formed, or similar approved, cavity trays with preformed weep vents.

- **LINTELS**

- All lintols & Beams to be in strict accordance with Structural Engineer's size/design calculations & to approval by the Local Authority Building Control Department.
- Generally standard suitable galvanised mild steel insulated lintels fabricated from galvanised steel to current British Standards.
 - DPC trays over openings in external cavity walls fitted in accordance with manufacturer's instructions.
 - All lintels to comply with BS 5977 Part 2: 1983 & the surrounding support masonry to be of good quality & comply with BS 5628.
 - All lintels are to be sized in accordance with the manufacturer's span tables & fitted in strict accordance with the manufacturer's recommendations & instructions.
 - Provide weep holes at max.450mm ctrs. Min.2 No weep holes per opening.
 - Minimum 150mm end bearings.
 - Concrete padstones to be pre-cast C.30 grade mass concrete/to Structural Engineer's details.
 - Internally; lintels to single skin masonry walls to be pre-cast concrete over door openings to Eng.details.
 - Structural columns & beams in positions shown to be in accordance with engineer's calculations.

All to comply with Part A of the Building Regulations Approved Documents.

- **THERMAL BRIDGING**

To comply with current Approved Building Regulation Documents L.
Provision is to be made to limit the thermal bridging which occurs around window & door openings in external walls & the following areas:

1. All vapour control membranes in timber-framed construction are to be sealed.
2. All frames to opening elements of doors, windows, loft hatches & roof windows are to be fitted with draught excluders.
3. All junctions of frames to structures, to opening elements of doors & windows are to be sealed with a suitable mastic/silicone sealant.
4. All boxing for concealed services to be sealed at floor and ceiling levels.
5. All piped services to be sealed where they penetrate or project into hollow constructions or voids.

- **INTERNAL WALLS**

All internal walls to be in strict accordance with Structural Engineer's size/design calculations & laid to approval by the Local Authority Building Control Department.

All walls to comply with current Approved Building Regulation Documents B and E.

GROUND FLOOR WALLS - (Blockwork)

- All internal walls to achieve min 40dB sound reduction
- 100mm suitable lightweight blockwork, min 3.5N/mm² & 7.3N/mm² as indicated.
- Blockwork compressive strength to be in accordance with structural engineer's details.
- Non-loadbearing walls built off concrete oversite.
- Loadbearing built off dense concrete sub-structure walls off foundations, as indicated to Engineer's details.
- 13mm two-coat plaster finish.

FIRST FLOOR WALLS – (Studwork)

- All internal walls to achieve min 40dB sound reduction
- 100 x 50mm C24 grade softwood studwork with studs at 400 ctrs.
- Built off floor construction with 100 x 50 sole plate and head plates.
- 100 x 50mm Noggins at mid height.
- 100mm thick suitable mineral fibre insulation between studs.
- 12.5mm plasterboard taped joints and plaster skim internal finish.

- **ROOF (Pitched)**

To comply with current Approved Building Regulation Documents A and L (October 2010)

New Dwellings:

Roof voids. = U-Value to achieve min. 0.13w/m²K

Sloping ceilings. = U-Value to achieve min. 0.13w/m²K

PITCHED ROOF – (Cut Timber)

- The entire roof structure is to be constructed in accordance with the Structural Engineer's design/calculation & relevant Codes of Practice.
- The roof cladding/material is subject to Local Authority Planning Approval prior to commencement of the works.
- Roof covering - Allow for Natural Slates, Heather-Blue in colour & ridge.
- Slates to be fixed in accordance with current British Standards & codes of practice.
- Fix slates min. every third course & at verges, abutments etc.
- The end slate of every course should be nailed.
- Fix slate: 2 No.40 x 2.5mm aluminium alloy nails per slate.
- Ridge Tile: to be laid butt jointed on sand/cement mortar bedding supported on slip tiles with continuous sand/cement mortar bedding.
- Slates on:
- 38 x 25 treated softwood battens
- Allow for Breathable membrane Kingspan Nilvent or similar approved underfelt with minimum 150 overlaps, secured with stainless steel staples.
- Traditional cut timber roof structure & fixings etc shall generally comprise:
- Steel Ridge Beam to be in accordance with Structural Engineer's details & specification.
- Rafters as indicated C24 grade 50x195mm at 400 ctrs to Engineer's details & specification.
- Rafters to be min 10mm greater depth than full fill insulation to allow sag in breathable membrane
- Wall Plates 100x 50mm bedded on inner/ouiter skin & strapped down with 30x5mm galvanised straps at 2.0m ctrs.
- All other timbers C16 grade as indicated well spiked together as Engineer's specification.
- All sizes & spacing of roof timbers to comply with Approved Document Part B of the current Building Regulations Approved Documents.

To horizontal ceilings: To achieve 0.13w/m²K

- 150mm thick suitable mineral fibre quilt insulation laid between, joists as indicated
- 18mm chipboard decking above to storage attic space.
- 12.5 Gyproc plasterboard & set coat to ceilings.

To skelings: To achieve 0.13w/m²K

- 100mm thick suitable Celotex GA4000 (GA4100) rigid insulation board or similar approved laid between sloping rafters with,
- 45mm thick Celotex PL4000 (Celotex PL4045 – 45mm PIR factory bonded to 12.5mm tapered edge plasterboard, or similar approved, fixed to underside of rafters.
- 12.5mm Duplex plasterboard taped joints & plaster coat finish to ceilings and skelings.
- Roof ventilation to be in accordance with current British Standards.
- Maintain 50mm air gap between top face of insulation and top face of rafters.
- Provide 25mm equivalent continuous eaves ventilation with proprietary vent and fly screen.
- Provide 5mm equivalent ridge ventilation with ridge tile vents.
- Provide all necessary Code 5 leadwork.
- The whole of the roof structure is to be fixed in accordance with the structural engineer's instructions & relevant Codes of Practice.

Roof structure to comply with Part A of the current Building Regulations Approved Documents.

- **ROOF (Flat)**

To comply with current Approved Building Regulation Documents A and L (October 2010)

New Dwellings:

Flat Roof = U-Value to achieve min. 0.13w/m²K

FLAT ROOF & Balcony- (Single-ply membrane on timber **non**-vented Warm Roof)

- The entire roof structure is to be constructed in accordance with the Structural Engineer's design/calculation & relevant Codes of Practice.
- The roof cladding/material is subject to Local Authority Planning Approval prior to commencement of the works.
- All to comply with current Approved Building Regulation Documents A & L.
- New Flat Roof construction to achieve minimum 0.13w/m²K
- Roof Covering – Allow for Sarnafil or similar suitable single ply membrane colour 'grey' to achieve AC designation & comply with current BS476, all laid to manufacturer's specification & bonded to:
 - 120mm thk Kingspan Thermarof TR27 laid in accordance with manufacturer's instructions on
 - Or
 - 19mm exterior grade plywood decking.
 - 25mm Kingspan Thermarof TR27 LPC/FM (sitting room)
 - 70mm Kingspan Optim-R (over sitting room)
 - Vapour check membrane
 - 18mm exterior grade plywood sub-decking
 - Softwood Firings to fall 1:40
 - C24 grade 50x220mm joists at 400 ctrs. In accordance with Engineers details & calculations.
 - 12.5 plaster board & skim coat to ceiling. (Sitting Room Below)
- To soffit of entrance balcony – Allow for:
 - 25x38mm pre-treated softwood battens/framework fixed to underside of timber structure
 - 12.5mm suitable Moisture resistant Gyproc Masterboard/Gypwall Board or similar approved.
 - 25mm thk. Colour-washed two-coat sand & cement render finish. Colour TBC.
- All timbers well spiked together.
- Provide all necessary Code 5 leadwork to roof /wall junctions & upstands.

- All leadwork to be in accordance with the instructions & recommendations of the Lead Development Association & to Local Authority approval.
- No ventilation of roof structure required. This is a warm roof construction.

Roof construction achieves 0.13W/m²K and complies with Part L1 of the Building Regulations.

• **LEADWORK**

- All Lead shall to be: Rolled Sheet Lead to BSEN 12588:2006
- Generally, Code-5 Sheet lead to Stepped cavity trays/flashings, cover flashing & soakers.
- Stepped cavity trays/flashings, cover flashing & lead soakers: one to each course of slate.
- Lengths of lead flashing etc with maximum 1500 lengths & minimum 100 weltd overlap joints.
- Lead upstands & cover flashings dressed up min.150 into brickwork secured with lead wedges 450mm ctrs.
- Stepped Flashings to be secured into brickwork with lead wedges one to each step.
- Provide 50mm wide copper/stainless steel fixing clips at 300mm – 500mm ctrs. to all free edges, apron flashings, cover flashings, hip & ridge flashings and bottom edge of cladding panels.
- All clips to be fixed with sufficient tolerance for thermal movement.
- Provide weep holes through external skin of masonry walls above cavity trays.
- Coat(s) of ‘Calder’, or similar approved, Patination Oil to all lead-work immediately after installation.
- All to current British Standards and Codes of Practice.

All leadwork to be in accordance with the instructions and recommendations of the Lead Sheet Association (01622 872432), and to Local Authority approval.

• **LOG BURNING STOVE**

Allow for a Wood-burning appliance to be installed in accordance with manufacturer’s specifications & to approval of Local Authority engineer. Generally:

- 125mm thick suitable non-combustible hearth, min 150mm side projections & 500mm forwards of fireplace recess, final clearance/hearth to Log-burning stove manufacturer’s specification.
- Stainless steel twin walled insulated chimney to suit appliance
- Lead flashings as necessary to roof penetrations, in accordance with LSA recommendations with
- No structural timbers to be within 40mm of the flue.
- Outlet to flue to terminate minimum 600mm above ridge or min 2300mm within roof pitch.
- Chimney flue fitted with cowl.
- Combustible air supply to fire through ducting in floor through to grill at external wall from external air, with total free area min 50% of the fire throat opening area to current BS via air bricks.
- Where a hearth, fire place, flue or chimney is provided or extended, a durable **Notice Plate** containing information on the performance capabilities of the hearth, fireplace, flue or chimney shall be affixed in a suitable place in the building for the purpose of enabling combustion appliances to be safely installed in accordance with Part: J4 of the Building Regulations.
- It is the Contractors responsibility to provide a completed check list for “Checking & Testing of Hearths, Fireplaces, Flues & Chimneys” & submit to Building Control in compliance with Part: J Appendix A of the current Building Regulations.

All to comply with Part J of the Building Regulations Approved Documents.

• **STRUCTURAL BEAMS & POSTS.**

Structural Engineer’s calculations & design package shall accompany this document & drawing as part of the Building regulations application submission.

STRUCTURAL STABILITY - (Steel Beams & Posts)

- All Structural Engineer’s calculations & specification/details are subject to approval by the Local Authority Building Control Department prior to commencement of works on site.
- Allow for fire protection to steels as appropriate (see fire protection notes).
- All new structural beams & posts in position shown to be in accordance with structural engineer’s calculations with end bearings/fixings as indicated within structural calculations.

STRUCTURAL STABILITY - (Timber)

- All Structural Engineer's calculations & specification/details are subject to approval by the Local Authority Building Control Department prior to commencement of works on site.
- All floor & roof timber structure members in position shown to be in accordance with structural engineer's calculations with end bearings/fixings as indicated within structural calculations.
- All spans are measured as clear dimensions between supports.
- The timber floor & roof structure has been sized in accordance with & to comply with the span tables as set out in Appendix A of the approved Building Regulations Document.

• **STRAPPING - (Galvanised metal)**

- To comply with current Approved Building Regulations Document A, Part: 1C33-39.
- Refer to structural engineer's specification.

Generally:

- Hot-dipped 30 x 5mm galvanised mild steel anchoring & strapping to current BS at the following locations:

- where joists run parallel to walls at 2m centres incorporating noggins to walls & joists
- at plate level at 2m centres
- at ceiling tie level to wall at 2m centres

- All new structural beams and posts in position shown to be in accordance with structural engineer's calculations with minimum 150mm end bearings.

All to comply with Part A (1c33-1c39) of the Building Regulations Approved Documents.

• **STAIRS**

To comply with current Approved Building Regulations Document K.

- New purpose made softwood/hardwood stairs, handrail & balustrades, as indicated.

All dimensions to be checked & verified on site prior to construction of stairs.

Stairs shall generally comprise:

- Rise - max. 220mm
- Going - min. 220mm
- Pitch - max. 42 degrees (private stairs)
- Width - min. 800mm between handrails and or walls
- Headroom - min. 2 meters above pitch line of stairs.
- Handrail - continuous to one side & min. 900mm above pitch line on stairs
min. 1100mm height to landings
- Balustrades - max. 100mm spacing between vertical balusters
- The relationship between the dimensions of the rise & going is that twice the rise plus the going (2R+G) is to be between 550mm and 700mm.
- The requirements for steepness of stairs will be satisfied if the rise is between:
155 - 220mm used with any going between 245 - 260mm, or
165 - 200mm used with goings between 223 - 300mm.

- Internal balustrade & guarding to be min. 1100mm high for protection against falling to resist a horizontal force of 0.36kN/m at the handrail & comply with Part K, Sections K2 & K3 of the Building Regulations.

All to be in accordance with BS 5395: Parts 1 & 2 & comply with Part K1 of the current Building Regulations Approved document.

• **GUARDING & EXTERNAL BALUSTRADE**

- Non-climbable pedestrian guarding to be provided where it's capable of preventing injury by falling from a height of more than 600mm, i.e. edge of floors, gallery, low window cills (below 800mm) & balcony etc.
- For domestic use provide 900mm & 1100mm high guarding internally & 1100mm high externally.

The guarding must comply with the minimum forces set out in BS6399: Part 1 1996, or BS EN 1991: Part 1 & BS6180: 1999 & to comply with Part K, Sections K2 & K3 of the Building Regulations 2000.

- Where glazing is used in the guarding it must be toughened glass or laminated safety glass and comply with Part N of the Building Regulations Approved Documents.
- External balustrade and guarding to balcony or flat roof, to be min.1100mm high from finished floor level for protection against falling and to resist a horizontal force of 0.74kN/m at the handrail, and to comply with Part K, Sections K2 and K3 of the Building Regulations Approved Documents.

• DOORS & WINDOWS

- The new external doors & windows shall be powder coated aluminium frames with double glazed sealed units, all supplied & installed by a specialist contractor. Final colour; Anthracite Grey – TBC.
- The material, colour & profile of the windows is subject to Local Authority Planning Approval prior to commencement of the works.
- Build in doors & windows openings in positions shown.
- New external doors shall have a maximum u-value of 1.8 w/m²K
- Return/close insulated cavity work at door & window reveals or install insulated cavity closers.
- All Windows to provide natural (rapid) ventilation equal to min.5% (1/20th) of room's floor area.
- Windows in habitable rooms to incorporate trickle ventilation units equal to min. 5000mm².
- Windows in non-habitable rooms to incorporate trickle ventilation units equal to min. 2500mm².
- All internal Doors to have a min.10mm gap below door to aid air circulation.
- Unless stated otherwise; All Windows to be fitted with double glazed sealed units.
- Front Doors fitted with multi-point locking facility & permit emergency egress without use of a key.
- Secondary Entrance doors should be held closed on a latch & open-able by a handle both sides & dead-lock facility via a key.
- Bi-fold & glazed doors shall allow for multi-point locking facility.
- Seal Tolerance gaps between frames & surrounding structure with exterior grade silicone mastic.
- Electronically operated (with manual override) GARAGE door to be purpose made in matching powder coated aluminium frames & paint finish.
- Electronically operated (with manual override) solid oak ENTRANCE GATES.
- Internal doors to generally comprise 45mm thick oak doors.
- Allow for fire-check doors where indicated.
- Internal skirting boards generally 195mm x 22mm MDF white painted finish.
- Internal architraves generally 70mm x 18mm MDF white painted finish.
- All doors & windows to be Pas 24 Certified & provided by the selected door/window suppliers & manufacturer. In compliance with Part Q of the Building Regulations 2015

Doors:

- Should be secure door sets.
- Letter plates should not exceed a maximum size and should prevent people trying to remove keys from inside.
- Main entry doors should have a door viewer or other means to see callers.
- Frames should be mechanically fixed to the structure of the building and lightweight frames should incorporate a resilient layer.

Windows:

- Easily accessible windows should be secure and frames should be mechanically fixed to the structure of the building.

Approved Document Q requires that reasonable provision is made to resist unauthorised access to new dwellings or to any part of a building from which access can be gained.

• ROOF WINDOWS – Conservation Rooflights

- Build in new conservation roof windows into existing roof slope in positions shown.
- Rooflights shall be Part-L compliant & tested for water tightness to EN 1027:2000 – met class E1050
- Rooflights shall comprise carbon steel sections with a protective coating & polyester powder coated paint finish. Top hung units to be fitted with double glazed units.
- All fitted in strict accordance with manufacturer's instructions and recommendations.
- Include for all proprietary fixing kits, flashings and cover flashings to manufacturer's instructions.

- All rooflights fitted with 24mm thick double-glazed sealed units to achieve whole unit u-value 1.2W/m²K in accordance with EN ISO 10077-2:2012.
- External face of glass to be self-cleaning.
- All rooflights to be electronically operated with remote control & manual override along with automatic self-closing rain sensors.
- All rooflights to be fitted with electronically operated sun blinds.

Approved Document Q requires that reasonable provision is made to resist unauthorised access to new dwellings or to any part of a building from which access can be gained.

• GLAZING

- To comply with current Approved Building Regulation Documents B and K.
- Build in doors & windows in positions shown.
- All windows to be glazed with sealed double-glazed units to achieve min. 1.5W/m²K or window energy banding B & D
- Low-E glazing to comply with current British Standards.
- Sealed Double-glazed units (6mm internal pane, 16mm air gap, 6mm external pane) to achieve min. 1.5W/m²K.
- All factory sealed glazed units to be condensate drained.
- Doors with more than 50% glazed to achieve min. 1.5W/m²K.
- Safety Glazing: up to 800mm above finished floor level to internal windows/glazed panels & up to 1.5m to doors & side panels within 300mm all to comply with BS 6206, Class A material.
- If any window opening is below 800mm above finished floor level *either* the glazed in-fill panels should be designed to comply with BS 6180: 1999 for protection against falling or a window restrictor is fitted to the window for protection against falling to comply with Part K2/3 of the Building Regulations. This restrictor must have the facility to be disengaged.
- The guarding must comply with the forces set out in BS6399: Part 1 1996.
- Where glazing is used in the guarding it must be toughened glass or laminated safety glass & comply with the Building Regulations Approved Document Part K.

All glazing to comply with BS 6206 & Part B of the Building Regulations Approved Documents.

• VENTILATION - (Dwellings)

A new dwelling shall be provided with Purge & Background ventilation, calculated in accordance with Part: 'F' of the Approved Building Regulations Document.

All to comply with Part F Section 1 of the Building Regulations.

PURGE VENTILATION.

- New Windows & Rooflights to have an openable area of natural (**Purge**) ventilation in excess of 5%, or 1/20th of room's floor area, if the window opens more than 30°, or 1/10th of room's floor area, if the window opens less than 30°.
- Internal Rooms with mechanical extractor to have an air inlet 10mm gap at the bottom of the door.

BACKGROUND VENTILATION

- Controllable trickle (**Background**) Ventilation via Trickle vents within the heads of the Window frames shall be provided at the following rates;

(i) HABITABLE ROOMS - 5000mm² trickle ventilation.

(ii) NON-HABITABLE ROOMS - 2500mm² trickle ventilation. (Bathrooms/WC's Utility Rms).

MECHANICAL VENTILATION.

- All to be in accordance with manufacturer's instructions &/or the M&E service engineer's recommendations & specifications & fitted in accordance with & approval of a registered specialist engineer.
- Mechanical extractor fan ducting through cold area roof voids shall be insulated to prevent condensation.
- Extraction ductwork to be installed and securely fixed with no sagging.

CLOAKROOMS & BATHROOMS

- To have a mechanical extractor fan linked to light switch to provide 3-Air changes per hour & 15 ltrs/sec capacity ducted to outside air with min. 15 minute over-run.
- Allow for a min 10mm air gap under door to internal rooms.

UTILITY ROOM

- Mechanical extractor fan, rate 30 ltrs/sec ducted to outside air & terminate via roof or wall vent.

KITCHEN

- Cooker hood extractor, rate min 30 ltrs/sec ducted to outside air as before.

All to comply with Part F Section 1 of the Building Regulations.

VENTILATION CONTROLS

A Specification for type to be used, shall be prepared by the specialist manufacturer & submitted to Building Control for approval prior to start of works on site.

- Controls to be either Manual or Automatic & in accordance with the manufacturer's recommendations.
- Automatic controls shall have a manual override facility.
- Vents shall automatically activate via a Humidity Stat & include a manual override switch.
- Background vents shall be fitted with Open/Shut covers for manual operation.

VENTILATION DUCTS.

- All extraction ducts to be securely fixed with no sagging.
- Where vertical ducts pass through an insulated roof space, provide a condensation control.
- Where extraction ducts pass through an un-insulated roof space, the duct shall be insulated to prevent condensation, using an insulating material to achieve min. 0.045W/m²K
- Where the extract ducts run through ceiling voids, provide 100x50mm vents to terminate through an external air brick or tile vent.

CARBON MONOXIDE DETECTORS.

- Provide Carbon Monoxide detector alarms to all rooms installed with a Solid Fuel burning appliance.

• ELECTRICAL INSTALLATIONS

- All electrical installations to comply with BS 7671:2008 17th Edition (formerly the IEE Regulations).
- In new residential buildings, all wall mounted light switches & electrical sockets to be sited between 450mm & 1200mm above finished floor level.
- All electrical work to comply with the requirements of Part P (electrical safety) of the Building Regulations & must be designed, installed, inspected & tested by a person competent to do so.
- Prior to completion, Building Control shall be satisfied that Part P has been complied with. This work will require an appropriate BS7671 Electrical Installation Certificate to be issued for the work by a person competent to do so upon completion of the works.

All to comply with Part P of the current Approved Building Regulations.

INTERNAL LIGHTING

- Energy efficient light fittings should form **75%** of the light fittings in the property.
- Provision should be made to include internal energy efficient lighting to the new dwelling's habitable rooms.
- Fittings shall be capable of only accepting lamps having a luminous efficacy greater than 40 lumens per circuit-watt, in rooms or circulation areas most frequently used. This number to be not less than: 1 per 25m² of floor area, or 1 per 4 fixed light fitting, whichever is greater.

All to comply with Part L1 of the Building Regulations.

The following table should be used as a guide to establishing No. of fittings per location:

No. Rooms Created	Recommended min. No. of locations
1-3	1
4-6	2

- Hall, stairs & landings count as one room; excludes garages, lofts & outhouses.
- External energy efficient lighting linked to PIR sensor to the new dwelling where lighting can be expected to have most use (i.e. porch, driveway, passageway).
- All ceiling mounted down-lights to be installed with a min.25mm continuous air gap around & away from structures & services to allow heat dissipation.
- Where Down-lights are installed within insulated ceilings, the fittings shall be enclosed with fire protection hoods.
- All down-lights to be low energy or LED type, but not mixed.
- Down-lights in Bathrooms to comply with the required IP rating.

EXTERNAL LIGHTING

- To be either fitted with a photocell & timer control, allowing for automatic on/off control dependant on daylight levels, or to be outlets that can only be fitted with lamps having a greater luminous efficacy greater than 40 lumens per circuit-watt.

ELECTRIC VEHICLE CHARGING FACILITY

- To demonstrate compliance with a planning Pre-occupation condition, the facility for an outside vehicle charging point will be installed. Details of this and its position are indicated on the site plane. The final position will be confirmed on site.
- The installation shall comply with the requirements of Part P (electrical safety) of the Building Regulations & be designed, installed, inspected & tested by a person competent to do so.
- Prior to completion, Building Control shall be satisfied that Part P has been complied with. This work will require an appropriate BS7671 Electrical Installation Certificate to be issued for the work by a person competent to do so upon completion of the works.

All to comply with Part P of the current Approved Building Regulations.

INTRUDER ALARM SYSTEM

- Supply & install new Intruder Alarm system in compliance with PD6662: 2004, EN50131-1: 2004, interior grade 3 and BS8473, with the option of a remote central monitoring facility.

• INFRASTRUCTURE for high speed Electronic Communication Networks

- Building work must be carried out to ensure that the building is equipped with a high-speed-ready in - building physical infrastructure, up to a network termination point for high-speed electronic communication networks.
- The access point for single occupancy building is to be on an outside wall and connected by a through wall duct to a network termination point.
- A suitable position for at least one network termination point should be identified for each building/unit. Suitable ducting provided.

All shall be compliant with Part R of the Building Regulations

• HEATING & HOT WATER

- To comply with current Approved Building Regulation Documents L & J.
- All to be in accordance with the M&E engineer's design & specification. & installed fitted in accordance with & approval of a registered specialist engineer.
- All work to be carried out by an approved registered specialist engineer, while a copy of commissioning certificates shall be issued to Building Control for approval on completion of the works.
- Heated wholesome water shall be supplied at the following locations:
 - (i) All sanitaryware (Wash hand basins, sinks, Baths Showers etc.)
 - (ii) In areas where food is prepared.

- All services & pipework to be concealed within either full or partial wall boxing framed in suitable softwood studwork & faced with 12.5mm plasterboard & skim coat finish.
- Allow for removable access panels in boxing as necessary.

HEATING & HOT WATER – (Total Heat recovery/Air-source Heat Pump)

- Allow for an Air-source heat-pump system to for Heating & Hot Water serving the new House, supplied & installed by a specialist manufacturer in accordance with their size & design calculations.
- A Specification for type & size of the heating system shall be prepared by a specialist manufacturer & submitted to Building Control for approval prior to start of works on site.
- All to be installed by a registered specialist engineer.

The system shall generally comprise:

- Allow for an appropriate *Daikin Altherma* total heating & hot water system or similar approved manufacturer/system based upon heat-pump technology. All installed in strict accordance with manufacturer's instructions & recommendations. A manufacturer's heating specification will be issued for approval prior to the commencement of works.
- All installations to comply with current British Standards & Building Control approval.
- Hot water cylinders & all heating pipes in unheated spaces to be insulated to BS 5422, BS 5615.
- Water cylinder capacity to suit accommodation with appropriate pressure requirements provided.
- The central heating system to comply with BS 5449 & codes of practice for domestic premises.
- Within the new floor finishing screed lay underfloor heating coils secured in position using proprietary fixing clips all in strict accordance with the heating engineer's & manufacturer's recommendations.

This is work will require an appropriate commissioning Certificate to be issued for the work by a person competent to do so, on completion of the works to demonstrate compliance with approved document part L2.

All to comply with Part L & J of the Buildings Regulations Approved Documents.

• **KITCHEN & BATHROOMS**

- The Kitchen & Bathroom layouts, positions of fittings & appliances indicated on the attached drawings have been prepared to satisfy compliance with the requirements of the current Building Regulations & to obtain formal approval by the Local Authority Building Control Department.
- Where applicable, we suggested referral to Specialist supplier for full details & positions of all appliances etc.

• **WATER SUPPLY, EFFICIENCY & SANITARY INSTALLATIONS**

WATER SUPPLY.

- It should be noted that there is an existing Mains water supply currently serving the site.
- The mains water shall be supplied & stored in accordance with the requirements of the Water Fittings Regulations: 1999 at the following locations:
 - (iii) Any place where drinking water is drawn off.
 - (iv) All sanitaryware (Wash hand basins, sinks, Baths Showers etc.)

WATER EFFICIENCY.

- Water supply/consumption for a new dwelling shall have potential limited to max.125 litres/person/day.
- In order to show compliance, the contractor shall complete & submit to Building Control, a Water Efficiency Calculator for New Dwellings, no later than 5 working days after the construction works are complete & before Building Control can issue a Completion Certificate.

• **SANITARY INSTALLATIONS**

- All installations to comply with Part H1, Section 1 of the Building Regulations Approved Documents.
- All pipework to be insulated to provide necessary sound Protection.
- SVP to be wrapped in 25mm mineral wool insulation within framed ducting & boxing.

- All services & pipework to be concealed within either full or partial wall boxing framed in suitable softwood studwork & faced with 12.5mm plasterboard & skim coat finish.
- Allow for removable access panels in boxing as necessary.

SANITARY INSTALLATIONS - (new)

All pipework & sanitary installations to comply with BS EN 12056-2: 2000.

- 100mm dia UPVC Soil & Vent Pipe to bathrooms/W.C.s
- Air admittance valves fitted to soil stub-stacks.
- 100mm branches to WCs
- 40mm dia wastes to bath/sink/shower, max. 3.0m run or 4.0m run if 50mm dia waste.
- 32mm dia wastes to basins, max. 1.7m run or 3.0m run if 40mm dia, or 4.0m run if 50mm dia.
- All fitted with 75mm deep seal or anti-siphonic vented traps.
- No waste branch connection to SVP within 200mm below centre line of W.C. connection.
- Lowest connection to SVP min 450mm above invert.
- Where indicated A.A.V's shall be fitted at min.150mm above the highest appliance outlet.
- Provide rodding eyes as necessary in change in direction of branch waste pipes.
- Reduce vent pipe to 75mm and terminate through tile vent in roof slope, min. 900mm above openable window if within 3000mm horizontally.
- Soil pipes to be insulated & boxed in with removable panels at joints & branches.

All installations to comply with Part H1 Section 1 of the Building Regulations Approved Documents.

- **FOUL DRAINAGE** - (new private system connected to Ex.mains sewer in road)
 - Pre-commencement Planning Condition-13 requires details of the proposed foul drainage system along with a Method Statement to be submitted to Arun District Council planning/drainage Engineer for approval prior to commencement of the works.
 - This document, along with the attached drawings has been prepared to demonstrate & satisfy compliance of the foul drainage proposals with the requirements of the current Building Regulations, & to obtain formal approval.
 - The main/drainage contractor shall prepare a Method Statement & submit to his document ADC planning department for Approval prior to commencement of the works.
 - As indicated allow for a new private onsite drainage system and connected to the existing mains public sewer in Hill Road.
 - The main contractor/drainage contractor is responsible for obtaining all necessary licences & approvals to connect to the main sewer prior to the commencement of works.
 - The positions & invert levels of **all** new drain runs & inspection chambers/Manholes must be confirmed & checked on site by the contractor/drainage contractor prior to the commencement of works on site. The new drainage shall generally comprise;
 - New UPVC below ground Foul drainage system as indicated; with flexible joints & laid to fall min.1:40 incorporating access & inspection chambers to discharge into the existing mains sewer in Hill Road.
 - A Specification & Method Statement for the drainage connection to the public sewer shall be prepared by the main contractor & submitted to Building Control for approval prior to start of works on site.
 - Pipes to be bedded & haunched in min.100mm thick granular material first 100mm of back fill free from stones & first 400mm free of large stones.
 - Pipes with less than 450mm cover to have concrete protection 75mm thick,100mm above pipe.
 - Where pipes pass through external walls provide pre-stressed concrete plank lintels over with minimum 50mm space to be left round wall opening, this space to be masked with rigid sheet both sides of wall.
 - Provide manholes & inspection chambers & or rodding eyes at change in direction of drain runs.
 - All drainage pipes, gullies & inspection chambers are to withstand an air or water test to the satisfaction of the Local Authority.

Drains to be thoroughly cleaned through on completion of the works.

The whole of the drainage system to comply with BS 8301 and Part H of the Building Regulations Approved Document: 1992.

NEW MANHOLES & INSPECTION CHAMBERS

To be in positions indicated & generally:

- **Inspection chambers:** To be in UPVC such as (*Osmia*) or similar with internal size 475 dia max depth 1000mm to BS 7158.
- **Manholes:** To be constructed in 102 or 215mm (if deeper than 900mm) Class B engineering brickwork, on 150 thick concrete base.
- Benching to rise vertically from top edge of channel & rounded with min 25mm radius & not less than height of soffit & finished with cement mortar 1:1.
- Manholes deeper than 1m, to have step irons at 300mm centres horizontally & vertically.
- Top iron 450 below cover level, and lowest within 300 of benching.
- All manholes to be fitted with medium duty covers to BS 497.

Manhole construction to BS 3921 and in accordance with Part H 1 of the Building Regulations.

- **SURFACE WATER DRAINAGE** – (private system with Soakaways)
 - Pre-commencement Planning Condition-12 requires details of the proposed surface water drainage system along with a drainage Engineer's calculations & specification to be submitted to Arun District Council planning/drainage Engineer for approval prior to commencement of the works.
 - This document, along with the attached drawings & supporting documents have been prepared to demonstrate & satisfy compliance of the foul drainage proposals with the requirements of the current Building Regulations, & to obtain formal approval.The new drainage shall generally comprise;
 - A new private onsite surface water drainage system to discharge into soakaways.
 - The positions & invert levels of **all** new drain runs & inspection chambers/Manholes must be confirmed & checked on site by the contractor/drainage contractor prior to the commencement of works on site.
 - Rainwater to discharge into;
 - 100mm dia half-round aluminium gutters & fittings in black powder-coated paint finish.
 - 63mm dia aluminium downpipes & bends.
 - To connect into new 100mm dia UPVC below ground drainage pipes bedded and haunched in min.100mm granular fill.
 - First 100mm of back fill free from stones and first 300mm back fill free from large stones.
 - Pipes with less than 450mm cover to have concrete protection 75mm /100mm thick above pipe.
 - New soakaways minimum 5m distance from buildings with design, capacity & specification by Specialist drainage Engineer; Ground Management Ltd.
 - The new soakaways are within the property boundaries.
 - The new soakaway as indicated to be a trench soakaway size: 3mx12mx1.2m deep beneath the gravel driveway.

A Specification for the proposed surface water drainage layout & type/size of the Soakaway has been prepared by a specialist drainage Engineer & will be submitted to Building Control for approval prior to start of works on site.

- The capacity of the new soakaways, in positions indicated to be in accordance with the Drainage Engineer's design details/calculations based upon ground investigation results & percolation test results.
- The whole system to be in accordance with the design details & calculations prepared by Specialist drainage Engineer; Ground Management Ltd, & approval by LA Building Control Department.

All to comply with Part H 3 of the Building Regulations Approved Documents.

- **REFUSE STORAGE** – (New dwellings only)
 - Pre-commencement Planning Condition-6 requires details for the provision of Refuse Bins on site, & to be submitted to Arun District Council planning dept. for approval prior to commencement of the works.

•This document, along with the attached drawings & supporting documents have been prepared to demonstrate & satisfy compliance for Refuse Bin/Storage on site with the requirements of the current Building Regulations, & to obtain formal approval.

The new dwelling shall have the provision for 2 No. 204ltr. capacity wheelie Bins, one for general refuse & the other for recycling use.

•Containers should be sited max 30m from the dwelling & max 25m from refuse lorry access.
All to BS 5906 and Part H 4 of the Building Regulations Approved Documents.

- **FIRE PROTECTION & MEANS OF ESCAPE** - (Dwelling house)
All to comply with BS 5446 or BS 5839 Part 1 & Part B1 of the Building Regulations 1991.

SMOKE & HEAT DETECTION

Provide an automatic self-contained smoke & fire alarm detection system throughout, with integral sounders installed in accordance with BS 5839-6: 2004.

Generally;

- Grade D Category LD3 with mains operated & interlinked system with standby battery backup facility to BS 5446-2: 2003 Part 1 and 2 (B1).
- Positioning of smoke & heat alarms to BS 5839-6: 2004.

Generally:

- Ceiling mounted smoke alarms to be provided within each floor circulation spaces in positions indicated, Generally:

- (i) 7.5m min. of doors to every habitable room.
- (ii) 3.0m of bedroom doors.
- (iii) 300mm min. distance from walls & light fittings.

All to be fitted in accordance with manufacturer's instructions.

Details of the Specification & positions for automatic self-contained smoke & fire alarm detection system shall be prepared by the main contractor or specialist manufacturer & submitted to Building Control for approval prior to the commencement of works on site.
All to comply with BS 5446 or BS 5839 Part 1 & Part B1 of the Building Regulations 1991.

ESCAPE WINDOWS

- All windows intended as means of escape in the event of fire shall have an unobstructed opening size minimum 735mm height x 450mm wide, i.e. area min. 0.33m².
- The bottom of the window opening should be not more than 1100mm & less than 800mm above finished floor level except in the case of roof windows.

Any window provided for escape purposes to comply with Part B1 of Buildings Regulations 1991.

FIRE DOORS

Provide FD30S (½ hour) fire resistant door to integral garage.

- i. Fire doors fitted with automatic self-closing devices & 25mm thick stops glued & screwed to frames.
- ii. Incorporate an intumescent cold smoke strip rebated into the edge of the door to provide a fusible link with the frame in case of fire.
- iii. FD30S fire door to internal door to garage fitted with self closing device.

All to comply with BS 476 Part 22 and Part B of the Building Regulations.

STRUCTURE

All structural steel beams/columns to be encased in minimum 12.5mm thick Gyproc fire-line board using proprietary fixings in accordance with manufacturer's instructions with taped & filled joints to achieve minimum ½ hour fire resistance.

All to comply with BS 476 and Part B of the Building Regulations.

FIRE COMPARTMENTATION

- i. **Ceiling - Garage:** Where indicated, floor/ceiling to achieve minimum ½ hour fire resistance. Under board with 12.5mm thick Gyproc fire-line board with taped & filled joints in strict accordance with manufacturer's instructions & recommendations.
- ii. **Walls - Garage:** The Semi-exposed masonry walls between integral garage & dwelling to be 200mm non-loadbearing blockwork, with garage side 50x75mm studwork inner skin, 75mm Kingspan Kooltherm K-12 between studs, & faced with 12.5mm thick Gyproc fire-line board with taped & filled joints to achieve minimum ½ hour fire resistance.
- iii. **Fire stopping:** Pipes, ducting & cables passing through compartment walls & floors to be in accordance with Section 11, Part B3 of the Approved Building Regulation Documents.
- iv. **Soil and vent pipes:** To be encased with fire retardant material.

All to comply with BS 476 & Part B of the Building Regulations.

UNPROTECTED AREAS

For a new building not exceeding three storeys in height, intended to be used as a dwelling house which is 1000mm or more from any point on the relevant boundary, the following determine the max. unprotected areas permitted, in accordance with Part B4 of the Building Regulations:

Min. Distance (m) from Boundary	Max. Permitted unprotected areas (m²)
1	5.6
2	12
3	18
4	24

VEHICLE ACCESS & FACILITIES FOR THE FIRE SERVICE

- Vehicular access to be provided within 45m of any point on the projected plan area with access to the interior provided through a door not less than 750mm wide.
- The vehicular access route including manhole covers to be capable of supporting vehicles weighing 12.5 tonnes & comply with the standards in Table 20 and Diagram 44, Regulation B5.
- Overhead obstructions, such as cables & branches within the access zone which would interfere with the setting of ladders etc should be avoided.
- New vehicular roads to be min. 3.7m wide.
- Turning facilities to be provided in any dead-end access route more than 20m long designed on the basis of Table 20, Regulation B5.

All to comply with Part B5, Section 17 of the Approved Building Regulations Documents.

• ACCESS & FACILITIES FOR PEOPLE WITH DISABILITIES

To comply with Part M2, Section 6 of the Building Regulations along with Part C2 & C4.

ACCESS INTO THE DWELLING

- Provide a level approach max 1:20 gradient, min 900mm wide & accessible wheelchair threshold.
- Stepped approach appropriate where plot gradient exceeds 1 in 15.
- Stepped approach to have widths min 900mm, rise between 75-150mm, going 280mm min, rise between landings min.1.8m, top & bottom landings min 900mm, steps with nosing profiles as Diagram 27, Part M1.
- Where stepped approach flight is three or more risers to have a suitably designed gripable handrail at 850-1000mm above pitch line to extend 300mm beyond top and bottom nosing.
- The external entrance single leaf door is to have a min 775mm clear opening.
- If step into dwelling is unavoidable rise to be max 150mm.

CIRCULATION WITHIN THE DWELLING

- Unobstructed corridor width min 900mm to comply with Table 4 & Diagram 28, Part M1.
- Internal doors on entrance storey of dwelling to have min 750mm clear opening.
- Stair to have min width 900mm & continuous handrail on each side of flight, where 3 or more risers.

- Switches/sockets to be at accessible heights between 450mm & 1200mm from finished floor level.

ACCESS TO SANITARY FACILITIES

- Provide a W.C. facility on the entrance storey of a dwelling which contains habitable rooms.
- Ground floor W.C. facility to have min 900mm leaf door opening outwards.
- Manoeuvring space within the entrance storey W.C. is to comply with Diagrams 31 & 32, Section 10.

All the sanitary provisions for disabled persons shall be in accordance with Diagrams of Part M Section 6-10 of the Building Regulations Approved Documents.

EXTERNAL WORKS & HARD LANDSCAPING

- New external drives & parking areas shall have permeable surfaces.
- Driveway and associated parking areas to be dressed with field gravel or similar interlocking type (not pea shingle) on either crushed concrete or D.O.T. Type 1 sub-base to ground contractor's design.
- Footpaths & terraces to be finished with Indian sandstone or similar - TBC with mortar joints.
- Allow for all necessary drainage to hard landscaped areas to comply with BS 8301 & BRE digest 365 & Part H 3 of the Building Regulations Approved Documents.

ENTRANCE GATES

- New side-hung Entrance Gates in purpose made pre-treated solid oak/hardwood with treated finish.
- New gates to be electronically operated with phone entry & a manual override.

APPENDICES

APPENDIX I

The Building Regulations 2010 (Updated 2019):

Part A - Structure (2013 Edition)

Part B – Fire Safety Volume (1) – Dwelling Houses. (2013 Edition)

Part B – Fire Safety Volume (2) – Buildings Other Than Dwelling Houses (2019 Edition)

Part C – Site Preparation and Resistance to Contaminants and Moisture (2013 Edition)

Part D – Toxic Substances (2010 Edition)

Part E – Resistance to The Passage of Sound (2015 Edition)

Part F – Means of Ventilation (2010 Edition)

Part G – Sanitation, Hot water safety and Water Efficiency (2016 Edition)

Part H – Drainage and Waste Disposal (2010 Edition)

Part J – Combustion Appliances and Fuel Storage Systems (2010 Edition)

Part K – Protection from Falling, Collision and Impact (includes safety glazing) (2013 Edition)

Part L – Dwellings:

Part L1A – Conservation of Fuel and Power in New Dwellings (2016 Edition)

Part L1B – Conservation of Fuel and Power in Existing Dwellings (2018 Edition)

Part L – Buildings Other Than Dwellings:

Part L2A – Conservation of Fuel and Power in New Buildings other than Dwellings (2016 Edition)

Part L2B – Conservation of Fuel and Power in Existing Buildings other than Dwellings (2016 Edition)

Part M – Access to and Use of Buildings (2016 Edition)

Part P – Electrical Safety in Dwellings (2013 Edition)

Part Q – Security in Dwellings (2015 Edition)

Part R – High-Speed Electronic Communication Networks (2016 Edition)

Regulation 7 – Materials and Workmanship (2018 Edition)