

PARTY WALL ACT

The owner, should they need to do so under the requirements of the Party Wall Act 1996, has a duty to serve a Party Structure Notice on any adjoining owner if building work on, to or near an existing Party Wall involves any of the following:

- Support of beam
- Insertion of DPC through wall
- Raising a wall or cutting off projections
- Demolition and rebuilding
- Underpinning
- Insertion of lead flashings
- Excavations within 3 metres of an existing structure where the new foundations will go deeper than adjoining foundations, or within 6 metres of an existing structure where the new foundations are within a 45 degree line of the adjoining foundations

A Party Wall Agreement is to be in place prior to start of works on site.

HEALTH AND SAFETY

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

MATERIALS AND WORKMANSHIP

All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.

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, vapours etc on or in the ground covered, or to be covered by the building.

BEAMS

Supply and install all structural elements such as beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details. New steel beams to be encased in 12.5mm Gyproc FireLine board with staggered joints. Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

LINTELS

- For uniformly distributed loads and standard 2 storey domestic loadings only
Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.

For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacture standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels. Independent lintels to have an insulated cavity closure between the inner and outer lintel. Common leaf lintel base plates should not be continuous and the lintel core should be insulated.

STRAPPING FOR PITCHED ROOF

Gable walls should be strapped to roofs at 1.5m centres. All external walls running parallel to roof rafters to be restrained at roof level using 1000mm x 30mm x 5mm galvanised mild steel horizontal straps or other approved to BS EN 845-1 built into walls at max 200mm centres and to be taken across minimum 3 rafters and screw fixed. Provide solid noggins between rafters at strap positions. All wall plates to be 100 x 50mm fixed to inner skin of cavity wall using 30mm x 5mm x 1000mm galvanised metal straps or other approved to BSEN 845-1 at maximum 2m centres.

STRAPPING OF FLOORS

Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum of 3 joists. Straps to be built into walls. Provide 38mm wide x ¼ depth solid noggins between joists at strap positions.

FLAT ROOF RESTRAINT

100m x 50mm C16 grade timber wall plates to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres fixed to internal wall faces.

STRIP FOUNDATION

Provide 225mm x 600mm concrete foundation, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

SOLID FLOOR INSULATION OVER SLAB

To meet min U value required of 0.12 W/m²K
P/A Ratio 0.5
Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 120mm thick Kingspan Kooltherm insulation.
25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.
Where drain runs pass under floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.

PARTIAL FILL CAVITY WALL

To achieve minimum U Value of 0.18 W/m²K
Provide 103mm suitable facing brick. Ensure a 50mm clear residual cavity and provide 80mm Kingspan Kooltherm insulation fixed to internal leaf consisted of 100mm x 100mm x 100mm W/m²K standard block. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1.6 cement mortar.

PARTIAL FILL CAVITY WALL

To achieve minimum U Value of 0.18 W/m²K
20mm two coat sand/cement render to comply to BS EN 13914-1 with waterproof additive on 100mm medium block, 0.45 W/m²K. Ensure a 50mm clear residual cavity and provide 80mm Kingspan Kooltherm insulation fixed to inner leaf constructed using 100mm medium block, 0.45 W/m²K. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1.6 cement mortar.

DPC
Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

WALL TIES

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

CAVITIES

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

CAVITY BARRIERS

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

MOVEMENT JOINTS

Movement joints to be provided at the following maximum spacing:
Clay brickwork - 12m.
Calcium silicate brick - 7.5-9m.
Lightweight concrete block - density not exceeding 1,500kg/m³ - 6m.
Dense concrete block - density exceeding 1,500kg/m³ - 7.5-9m.
Any masonry in a parapet wall (length to height ratio greater than 3:1) - half the above spacings and 1.5m from corners.
Movement joint widths for clay bricks to be not less than 1.3mm/m i.e. 12m = 16mm and for other masonry not less than 10mm.

Additional movement joints may be required where the aspect ratio of the wall (length :height) is more than 3:1. Considerations to be given to BS EN 1996-1-2:2005 Eurocode 6. Design of masonry structure.

WALLS BELOW GROUND

All new walls to have Class A blockwork below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes

PARTY WALL

To achieve minimum U Value of 0.0 W/m²K
Separating party wall to consist of 2 leaves of dense aggregate blocks (1850 to 2300 kg/m³) with a minimum 100mm cavity, fully filled with 100mm Rockwool insulation. Finish with 13mm plaster or cement: sand render with plaster skim (min 10 kg/m²) to both sides.
Ensure cavity stops are installed where required, and joints, voids around floor joists, chases, etc. have been fully filled or sealed.

Where there is a separating floor a resilient flanking strip to be installed
Wall to be tied Stainless Steel Wall Ties - Type 4 for cavity wall construction, and spaced as required for structural purposes (BS 5628-3: 2001 Code of practice for use of masonry).

Pre completion sound testing to be carried out by a suitably qualified person with appropriate third party accreditation (either UKAS accreditation or be a member of the Association of Noise Consultants Registration Scheme). Test to be carried out once the dwelling is complete but before carpeting and a copy of the test results given to Building Control.

WARM FLAT ROOF

(imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value 0.11 W/m²K
Flat roof to be single ply membrane roofing providing aa fire rating for surface spread of flame with a current BBA or WMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 100mm plus 110mm Kingspan Thermafoor insulation.
Insulation bonded to vcl on 22mm external quality plywood decking or similar approved on sw firings to minimum 1 in 80 fall on sw treated 47 x 145mm flat roof C24 timber joists at 400mm c/cos max span 3.22m or as Structural Engineer's details and calculations. Underside of joists to have 12.5mm foil backed plasterboard and skim. Provide cavity tray to existing house where new roof abuts existing house. Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

WARM PITCHED ROOF

Pitch 22-45°
To achieve min U-value required of 0.11 W/m²K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Suitable roofing tiles fixed to tile battens secured over breathable sarking felt to relevant BBA Certificate allowing the breather felt to sag at least 10mm over preservative-treated counter battens (min 38mm x 50mm). Provide 110mm Kingspan Thermapitch TP10 insulation boards under the counter battens and 100mm Kingspan Thermapitch TP10 between 47 x 195mm timber rafters strength class C24 at 400 c/c – span to engineer's details. A vapour control layer should be provided to the underside of the rafters. Finish with 12.5mm plasterboard and skim.

Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanised straps or other approved to BSEN 845-1 at 2m centres
LEAD WORK AND FLASHINGS
All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.

INTERNAL STUD PARTITIONS

100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m² density acoustic soundproof quilt tightly packed (e.g. 100mm Rockwool or Iso wool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

INTERNAL MASONRY PARTITIONS

Construct non load bearing internal masonry partitions using dense concrete blocks built off thickened floor slab and tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard with skim plaster finish or 13mm lightweight plaster.
INTERNAL LOADBEARING MASONRY PARTITIONS
Construct load bearing internal masonry partitions using dense concrete blocks built off concrete foundation. Concrete mix to conform to BS EN 206-1. Depth to engineer's details and dependent on ground conditions to be agreed with BCO. Wall tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

INTERMEDIATE FLOORS

Intermediate floor to be 25mm t&g flooring grade chipboard or floorboards laid on C24 joists at 400mm ctrs (see engineer's calculation for sizes and details). Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floor joists. Ceiling to be 12.5 Gyproc FireLine plasterboard with skim plaster set and finish. Joist spans over 2.5m to be strutted at mid span using 38 x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). In areas such as kitchens, utility rooms and bedrooms, flooring to be moisture resistant grade in accordance with BS7331:1990. Identification marking must be laid upper most to allow easy identification. Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x ¼ depth solid noggins between joists at strap positions.

STAIRS

Dimensions to be checked and measured on site prior to fabrication of stairs. Timber stairs to comply with BS585 and with Part K of the Building Regulations. Max rise 220mm, min going 220mm. Two risers plus one going should be between 550 and 700mm. Tapered treads to have going in centre of tread at least the same as the going on the straight. Min 50mm going of tapered treads measured at narrow end. Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight. Min 2.0m headroom measured vertically above pitch line of stairs and landings. Handrail on staircase to be 900mm above the pitchline, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrading designed to be unclimbable and should contain no space through which a 100mm sphere could pass. Allow for all structure as designed by a Structural Engineer.

ELECTRICAL

All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a competent person registered under a competent person self certification scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.

INTERNAL LIGHTING

Internal energy efficient light to be fitted as calculated within the dwelling primary energy rate and dwelling emissions rate for account for the efficacy of lamps.
Provide low energy light fittings lamps with a luminous efficacy better than 80 lamp lumens per watt. All fixed lighting to have lighting capacity (lm) 185 x total floor area.

HEATING

All radiators to have TRVs. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.

NEW GAS BOILER

Heating and hot water will be supplied via a wall mounted condensing vertical balanced flue pressurised boiler with a minimum efficiency of 92% (as defined in ERP) and boiler control interlocks. Each room to be fitted with thermostatic radiator valves and all necessary zone controls.
Energy-Related Products Directive for Standard Assessment Procedure modelling, SEDBUK values to be used. The energy performance of the new components to be assessed. The results to be recorded and given to the building owner.
All pipes to be insulated to the standards in Table 4.4 Approved Document L.
All parts of the system including pipework and emitters should be sized to allow the space heating system to operate effectively and in a manner that meets the heating needs of the dwelling, at a maximum flow temperature of 55°C or lower.

The system will be installed, commissioned and tested by a GAS SAFE Registered Specialist and a certificate issued to demonstrate that the installation complies with the requirements of Part L. Carbon monoxide alarm to be positioned near boiler.

Boiler flue to be installed in accordance with Approved Document J. British Gas requirements and manufacturer's guidance.Flues to be terminated externally with metal terminal guard and positioned a minimum of 600mm away from any openings into the building. Where the flue passes through a wall, floor or roof, enclose in a non combustible sleeve. Where the flue is within a void provide appropriate and sufficiently sized access to allow inspection of the flue. No combustible materials to be within 50mm of the flue.
Provide new metered gas supply to the dwelling. All works to comply with gas authority standards.
Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.

SMOKE DETECTION

Mains operated linked smoke alarm detection system to BS EN 14604 and BS 5839-6:2019 to at least a Grade D category LD3 standard and to be mains powered with battery back up. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all levels/ storeys and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be an interlinked heat detector in the kitchen.

ESCAPE WINDOWS

Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. Windows to have an unobstructed openable area that complies with:
- minimum height of 450mm and minimum width of 450mm.
- minimum area 0.33m².
- the bottom of the openable area should be not more than 1100mm above the floor.
The window should enable the person to reach a place free from danger from fire.

ROOF LIGHTS

Min U-value of 1.6 W/m²K.
Roof-lights to be double glazed with16mm argon gap and soft low-E glass. Window Energy Rating to be Band B or better. Roof lights to be fitted in accordance with manufacturer's instructions with rafters doubled up to sides and suitable flashings etc.

SAFETY GLAZING

All glazing in critical locations to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part N in Wales) of the current building regulations. i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows.

DOORS

Doors to achieve a U-Value of 1.6 W/m²K. Glazed areas to be double glazed with 16-20mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K (Part N in Wales) of the current Building Regulations.
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers may be used around reveals.
Windows and door frames to be taped to surrounding openings using air sealing tape.

WINDOWS

Windows to be double glazed with argon filled gap and with a soft coat low-E glass. Window Energy Rating to be Band A or better and to achieve U-value of 1.6 W/m²K.
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.
Windows and door frames to be taped to surrounding openings using air sealing tape.

EXTRACT FOR SHOWER ROOM

Provide mechanical extract ventilation to shower room ducted to external air capable of extracting at a rate of not less than 15 litres per second. Vent to be connected to light switch and to have 15 minute over run if no window in the room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO BATHROOM

Bathroom to have mechanical vent ducted to external air to provide min 15 litres / sec extraction. Vent to be connected to light switch and to have 15 minute over run if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO KITCHEN

Kitchen to have mechanical ventilation with an extract rating of 60l/sec or 30l/sec if adjacent to hob to external air, sealed to prevent entry of moisture. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Intermittent extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

PURGE VENTILATION

Minimum total area of opening in accordance with Table 1.4 Approved Document F1.
Hinged pivot windows with an opening angle of 15 to 30 degrees to have an openable area in excess 1/10 of the floor area of the room.

Sash windows, external doors or hinged pivot windows with an opening angle of equal to or greater than 30 degrees to have an openable area in excess of 1/20 of the floor area of the room.

Purge ventilation should be capable of extracting at least 4 air changes per hour per room directly to the outside.

Internal doors should be provided with a 10mm gap below the door to aid air circulation.

Higher purge ventilation rates may be required in order to demonstrate compliance with Part O.

BACKGROUND VENTILATION

Controllable background ventilation at least 1700mm above floor level to be provided to habitable rooms and kitchens at a rate of min 8,000mm², and to bathrooms at a rate of min 4000mm², All habitable rooms be provided with at least 4 ventilators for one bedroom dwellings and 5 ventilators for dwellings with more than one bedroom.

Background ventilators to be tested to BS EN 13141-1

Background ventilator equivalent area and operation to be measured and recorded.

EMITTING HEAT LOSSERS AND GAINS

In accordance with Table 4.4 Approved Document L
Insulation to be provided to:
- Primary circulation pipes for domestic hot water.
- Primary circulation pipes for heating circuits where they pass outside the heated living space and voids to be insulated.
- Pipes connected to hot water storage vessels for at least 1m from the point at which they connect to the vessel.
Secondary circulation pipework.
WHOLE BUILDING VENTILATION - CONTINUOUS MECHANICAL EXTRACT
Continuous mechanical system to be installed in accordance with manufacturer's details. Details of system to be given to BCB.
Minimum extract ventilation extract rates to be:
Kitchen – 13 l/s
Utility room - 8 l/s
Bathroom – 8 l/s
Sanitary accommodation – 6 l/s
The sum of all extract ventilation in the dwelling, on its continuous rate, to be at least the whole dwelling ventilation rate given in Table 1.3 Approved Document F.

The minimum whole dwelling ventilation rate for the supply of air to the habitable rooms to be 0.3 litres per second per m2 of internal floor area.

System to include either manual or automatic controls (i.e. humidity sensors) to operate between trickle and boost modes.

Mechanical extract system to be performance tested to BS EN 13141 -6.
Background ventilators with a minimum equivalent area of 4000mm2 to be provided to each habitable room, excluding wet rooms. Total number of ventilators to equal the number of bedrooms plus two ventilators.

To ensure good transfer of air through the dwelling there should be an undercut of minimum area 760mm in all internal doors above the floor finish. This is equivalent to an undercut of 10mm for a standard door.

Mechanical ventilation system to be designed and installed to minimise noise.

Access to be provided for maintaining and cleaning ventilation systems.

Rigid ducts to be used wherever possible. Flexible ductwork only to be used for final connections, in lengths no more than 1.5m. Ductwork to meet BSRIA's BG 43/2013

Any ducting passing through a fire resisting wall/floor or fire compartment to be adequately fire stopped, provided with suitable dampers and/or fire collars or in fire resisting trucking in compliance with Approved Document B.

Mechanical ventilation systems to be commissioned in accordance with Approved Document F. Appendix C, completion checklist, commissioning sheet and air flow rate test results to be given to the Local Authority on completion.

The owner to be provided with information as listed in Approved Document F including:
- information about the building's ventilation system and maintenance requirements

- the operating and maintenance instructions
- the design flow rates
- the completed commissioning sheet

The information should be provided in a non-technical and clear manner.

A Home User Guide to be provided for the dwelling containing a section on 'Ventilation' that provides nontechnical advice on the ventilation systems provided.

Systems to ensure that they use no more fuel and power than is reasonable in the circumstances in accordance with Approved Document L.

VENTILATION OF TIMBER SUSPENDED FLOOR

Provide cross-ventilation under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm² per metre run of perimeter wall or 500mm² per square metre of floor area whichever gives the greater opening area. All sleeper walls or similar under floor obstructions shall be of honeycombed construction or have similar provision for distribution of ventilation. The under floor space shall be free from debris. Ducts to be sealed using gas proof tap if they pass through a radon barrier.

PITCHED ROOF VENTILATION

Maintain a 50mm air gap above insulation in the roof pitch to ventilate roof. Provide opening at eaves level at least equal to continuous strip 25mm wide and opening at ridge equal to continuous strip 5mm wide to promote ventilation.

FLAT ROOF VENTILATION

Cross-ventilation to be provided on opposing sides by a proprietary eaves ventilation strip equivalent to 25mm continuous with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a 50mm air gap above the insulation for ventilation.

UNDERGROUND FOUL DRAINAGE

Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1.

INSPECTION CHAMBERS

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

ABOVE GROUND DRAINAGE

All new above ground drainage and plumbing to comply with BS EN 12056-2 for sanitary pipework. All drainage to be in accordance with part H of the Building Regulations. Wastes to have 75mm deep anti vac bottle traps and rodding eyes to be provided at changes of direction.
Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)

Wash basin - 1.7m for 32mm pipe 3m for 40mm pipe

Bath/shower - 3m for 40mm pipe 4m for 50mm pipe

W/c - 6m for 100mm pipe for single WC

All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m.

On lot 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting.

Waste pipes not to connect within 200mm of the WC connection. Supply hot and cold water to all fittings as appropriate.

SOIL AND WENT PIPE

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

PIPEWORK THROUGH WALLS

Where new pipework passes through external walls the pipe work is to be provided with 'rocker pipes' at a distance of 150mm either side of the wall face. The 'rocker pipes' must have flexible joints and be a maximum length of 600mm.

Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides.

AIR TIGHTNESS

Drawing to be provided which identify the position, continuity and extent of the air barrier.<