

HEA2-2

BUILDING SPECIFICATION NOTES

All works must conform to the current edition of the Building Regulations and all other Local Authority Regulations and bye-laws. Part L1B gives notional U-values and design limits for new elements in an existing dwelling as 0.28 for walls; 0.22 for floors; for a pitched roof with insulation at ceiling level 0.16 or between rafters 0.18; flat roof 0.18. All fixtures, fittings and equipment to be installed or fitted strictly in accordance with the respective manufacturer's instructions.

- 1. MATERIALS AND WORKMANSHIP:** Any building work which is subject to the requirements imposed by Building Regulations shall be carried out in accordance with regulation 7. Guidance on meeting these requirements on materials and workmanship is contained in Approved Document 7. Building Regulations are made for specific purposes, primarily the health and safety, welfare and convenience of people and for energy conservation. Standards and other technical specifications may provide relevant guidance to the extent that they relate to these considerations. However, they may also address other aspects of performance or matters which, although they relate to health and safety etc., are not covered by the Building Regulations.
- 2. ELEMENTS OF EXISTING STRUCTURE:** The condition of the existing masonry construction at proposed padstone/ bearing plate bearings, suitability of load bearing walls/ foundations, window lintels etc. to be determined by the Contractor and agreed satisfactory by the Local Authority Building Control officer, including the replacement of elements as required.
- 3. FIRE RESISTANCE TO MEANS OF ESCAPE WALLS & CEILINGS:** In the event of a fire the building compartments (rooms) must protect the escape route so that all occupants can safely evacuate the building. Ceilings and walls in the escape route must achieve a minimum of 30 minutes fire resistance rating. This can be achieved by coating the walls and ceilings with Envirograf EP/ CP coating (product 105). Follow manufacturers guidance to ensure adherence.
- 4. WINDOWS:** Openings in external walls to have horizontal and vertical damp proof course and perimeters to be sealed with mastic. Window type to match existing where possible and have fitted trickle ventilator at a minimum of 1.7m from FFL equivalent to 8000 mm²/room. Windows to be double glazed with 16mm gap between the panes and low e coating to the internal pane. PVC-u, timber replacement or aluminium windows must have a U value of 1.6 W/m²K and must not to exceed 25% of floor area and have min 5% of floor area as openable area. Windows to habitable rooms to have opening casements achieving 1/20th floor area as ventilation. Cill to be positioned between 800mm and 1100mm above floor level or if below to meet part K & BS EN 12600 or class C BS 6206, if full height panels they should be constructed of laminated glass and internally beaded for containment, glazing to half height panels can be in toughened glass. Alternatively, fixed internal guarding can be used.
- 5. STUD PARTITIONS:** 47 x 100mm timber stud partitions at 600mm centres, lined with 12.5mm Gyproc Wall board each side, plaster skimmed. 65mm Isowool APR 1200 in the stud cavity to provide Sound insulation of R_w41 dB and 30 minutes fire resistance.
- 6. DORMER WALL & CHEEK:** 20mm waterproofed sand and cement render (or proprietary render system K-Rend, Monocouche, etc.) on stainless steel render lath fixed to 9mm Supalux board on 25 x 38 preservative battens with proprietary cavity vents to the base and top of dormer walls over Kingspan Nilvent breathable membrane on 100 x 50 studs at 400mm centres. Full fill between studs using Kingspan Kooltherm K107 Pitched roof boards. Finish internally with Polythene vapour barrier, 12.5mm plasterboard, skim plastered all to give a U value of 0.28 W/m²C.
- 7. LATERAL RESTRAINT:** Provide 30mm x 5mm galvanised steel lateral restraint straps at 1200mm centres between joists and rafters parallel to walls and walls themselves. Straps to secure at least 3 joists/rafters and to have solid noggins between joists/rafters and adjacent wall at strap locations. Straps to be securely built into the wall.
- 8. LINTELS:** Where walls are studwork, the openings are to be bridged with 2 No. 150 x 50 sw members spiked together and positioned with their long axis vertically. Ends of these members to be supported by the vertical studding.
- 9. BEAMS:** Steel beams to be painted with fire protective paint in addition to two layers of plasterboard and mounted on concrete padstones or bearing plates with minimum 100mm bearings (see separate calculations). **Please ensure that beam sizes if noted on drawing match those on the structural calculations.**

10. **AIR LEAKAGE:** Seal all services and around cables where passing through ceilings or elements of construction into unheated spaces or voids with expanding foam or other suitable sealant to prevent air leakage.
11. **DRAINAGE:** Proposed bathroom sanitary fittings to discharge to existing soil waste pipe. All waste connections: hand basin 32mm dia., shower 38mm dia and WC 100mm dia, laid to fall to swp. Allow for raised plinth to shower to provide access to the trap for cleaning and maintenance. Provide rodding access at all changes in waste pipework direction and 75mm deep seal traps to shower and hand basin. Minimum 900mm must be maintained between the top outlet of the swp and the nearest openable window.
12. **ROOF CONSTRUCTION:** Cold deck (U value 0.18 W/m²K) to be constructed using roof joists 47 x 170 grade C24 softwood joists @ 400 mm centres complete with Catnic or herringbone struts, Cross ventilation of the roof void to be maintained by four rows of continuous 25mm battens across roof at right angles to the joists. Existing rafters cut with bird-mouth over beam A & Bolted to flat roof joists. Furrings of minimum 50mm depth to achieve a fall of 1:40 in alignment with joists over cross vent battens. Fix 20mm waterproof ply or OSB boards to the joists with EPDM Rubber bond sheeting or similar approved on continuous even coating of adhesive. Drip to the UPvc gutter formed with 38 x 50mm softwood fixed to fascia. At junction with flat roof and external walls provide Code 4 lead flashing upturned a minimum 150mm and also at dressing with tiled hips. All timber connections are to be made with BAT galvanised connections or similar approved. 100 x 75 wall plate minimum timber length of 3m and half-lap plates at joints and corners to be secured in position using 30 x 5 x 900mm long vertical galvanised mild steel wall anchors at not more than 1500mm centres. Where joists are parallel to walls provide 30mm x 5mm mild steel wall anchors at not more than 1500mm centres spanning from the wall across no less than three joists. Restrain each joist onto existing wall with restraint type joists hangers let into the brickwork. 80mm Kingspan Kooltherm K7 to be laid between each joist leaving a ventilated minimum 50mm cavity, then use 57.5mm Kingspan Kooltherm K118 under joists and ensure all board joints are sealed as VCL + Air leakage Barrier to manufacturers specification, lightweight 3mm plaster skim to finish. For the hips, use plain roof tiles to match existing at 45° pitch fixed in accordance with manufacturer's instructions on 38 x 25 impregnated sw battens at max 100mm gauge and nailed as per BS 5268 on reinforced sarking felt. Rafters to be bolted to ceiling joists and supporting flat roof cross-members with M10 bolts and tooth plate connector and held to 100 x 50 SW wallplate and supporting walls with proprietary galvanised straps at 1200mm centres. 100mm thick mineral fibre (Rockwool or similar) of minimum density to be laid between ceiling joists with a further 150mm laid in opposite direction. Provide 25mm continuous patent eaves vent strip to provide roof void ventilation and high-level equivalent 25mm vent to ensure adequate airflow between flat roof joists and main roof. Where barge boards inhibit air flow, a section of board must be removed behind the fascia to allow air to pass into the roof void.
13. **ELECTRICAL CABLES:** All electrical work must meet the requirements of Part P (Electrical safety) and must be suitably designed, installed, inspected and tested so as to provide reasonable protection against their being a source of a fire or a cause of injury. Any cables inserted into stud partition walls and within roof void areas to comply with BR262. Prior to completion, Building Control must be satisfied that Part P has been complied with. This will require an appropriate BS7671 electrical installation certificate to be issued to the Local Authority for the work by a person competent to do so. If a new consumer unit is required, it must have their enclosure made of a non combustible material or be enclosed in a cabinet or enclosure constructed of non-combustible material and complying with Regulation 132.12.
14. **CONSUMER UNITS:** 421.1.201 Within domestic (household) premises, consumer units and similar switchgear assemblies shall comply with BS EN 61439-3 and shall: (i) Have their enclosure manufactured from a non-combustible material or (ii) be enclosed in a cabinet or enclosure constructed of non-combustible material and complying with regulation 132.12 such as ferrous metal (steel). The implementation date for this regulation of 1st January 2016 does not preclude compliance to the regulation prior to that date. Alternative solutions to be discussed and agreed with the BCO.
15. **HEATING & HOT WATER SYSTEM:** bedroom areas should be zoned and controlled separately using room thermostats or thermostatic valves.

16. **LIGHTING:** Provision should be made for energy efficient lighting in the extended areas. To comply with the Building Regulations 2000 (2006 update) L1A the light fitting should **ONLY** be able to accept lamps having a luminous efficiency greater than 45 lumens per circuit-watt. The circuit-watt is measured as the power consumed in the lighting circuit by the lamp and its associated control gear and power factor correction equipment. The lamp must exhibit a lumen output greater than 400 lumens. Only lamps above 5W will be included in the count towards Part L compliance. Three out of every four lamps must be energy efficient and exceed 400 lumens an 45 lm/W.
17. **VENTILATION** Toilet and en-suite shower room must have mechanical extract ventilator fitted capable of extracting 15 litres/sec which must have a 15-minute overrun and be provided with 4000mm² of trickle ventilation. Where ducting exceeds 1.5m a centrifugal fan will be required.