

## SPECIFICATION.

**GENERAL:-** Single storey rear extension. Where building to boundaries the adjacent owner is to be informed under the terms of the Party Wall Act 1996 and its provisions followed. Where building over boundaries the adjacent owner is to be served notice under section 65 of the Town & Country Planning Act 1990. All dimensions must be checked on site and not scaled from this drawing. Any dimensions given are in millimetres.

### 1. EXTERNAL WALLS AND FOUNDATIONS:-

The external walls are to be in a facing render to match existing comprising of 100mm blockwork to the external leaf with 1.1.6 cement/lime/sand. 1.30mm cavity with 80mm Kingspan Kooltherm K108 Cavity Board insulation - partial fill cavity. 100mm thermal insulating blockwork Celcon or Thermalite using AIRCRETE blocks on the inner leaf with mortar as before and finished internally with 12.5mm plasterboard and skim finish (plasterboard to be fixed on dabs to inner face of blockwork, all to achieve a 'U' value of 0.18. Cavity wall insulation carried below DPC and overlapped by 150mm with floor insulation and to meet with roof insulation at top of wall. Cavity insulation carried the full extent of gable walls. Cavity must not be closed at eaves with blockwork. All cavity closers to be insulated. All external and internal leafs are to be securely retained by approved stainless steel wall ties to BS1243 positioned 450mm apart vertically and 750mm horizontally. Wall ties at openings spaced not more than 300mm vertically provided within 225mm from sides of openings at unbonded jambs. Lean mix cavity fill to all cavity walling terminating min. 225mm below lowest DPC level. Cavity insulation to finish at same level as floor slab insulation. Below ground level both leaves shall be built in trench-blocks or class 'B' engineering brickwork. Any existing suspended ground floor ventilation blocked by new ground floor structure to be extended by ducting 100mm diameter pipes through new solid floor. Foundations in accordance with BS8004. Foundation depth and type depends on existing ground conditions and nearby trees, an engineering design may be required if existing conditions are not favourable. Foundations depth and type to be in accordance with NHBC chapter 4.2 and to Building Control approval. Foundations shall be extended below pipe or ductwork penetrating walling. oversite concrete will be level with or above the finished ground level. oversite concrete to be grade ST2 or GEN 1 concrete to BS 8500-1. Unsuitable load bearing strata will necessitate separate structural design.

- (a) Concrete trench fill founded to all load bearing cavity walls to be min. 600 x 1000mm deep. Use concrete grade ST2 or GEN 1 to BS 8500-1.

### 2. DAMP PROOF COURSES:-

Horizontal and vertical DPC's will comply with BS743 (pitch polymer) and be incorporated:

- (a) min. 150mm above ground to all load bearing walls, lapped with floor damp proof membrane.
- (b) Vertically built into jambs of all external openings.
- (c) Horizontally stepped to all external openings.

**3. DRAINAGE:-** The existing drainage system is assumed to be a single line combi system (to be confirmed on site). UPVC fittings to BS 4514, BS 5255. Baths, sink units, showers - 42mm dia. wastes via 75mm traps. WC pans - 100mm dia. with 100mm traps, clay exceeding 100mm, timber, vegetable matter or frozen material. Where rigid pipes of less than 150mm dia. have less than 300mm cover, or rigid pipes of 150mm or more have less than 600mm of cover the pipes should be encased in 150mm concrete. Where flexible pipes are not under a road or have less than 600mm cover they should be encased in 150mm concrete. Where drainage runs within 1.0m of any foundation and the level of the drain is below the level of the foundation then the drain trench should be backfilled to the found level with concrete. Any pipe penetrating through a structure below ground level should have a lintel above opening (or use of rocker pipes) and a settlement gap of 50mm coppack or similar flexible material should be inserted to provide protection to the drain. Pipe to be either rocker type or hole around fitted with compressible material. All gravity drainage should have a min. fall requirement of 1:40 to provide self-cleansing velocities. All gullies will be back inlet trapped gullies with rodding facility unless otherwise stated.

Inspection chambers of up to 900mm depth may be of a UPVC or GRP material or constructed of 150mm concrete base slab with benching formed in 1.2. cement mortar to 1.1.2 gradient trowelled smooth with all channels, branches and connecting bends. The walls are to be 225mm, class 'B' engineering brick to BS 3921 to the required invert depth.

150mm concrete cover slab with haunching forming the cover level complete with frame and lid. Where foul and surface water are available on site connections must be proved. Priority order for surface water is 1. Soakaway which must be designed to comply with BRE 365 and BS 8310:2000. Soakaways to be at min. 5.0m away from any building (foundations). 2. A watercourse or 3. A sewer. Rainwater connections to foul sewers may only be made where soakaway and watercourse cannot be used. On completion the system is to be water pressure tested and cleansed.

### 4. SOLID FLOOR SLAB:-

75mm concrete screed, on 500 gauge vapour check layer, 100mm GA4000 Celotex insulation with a 25mm upstand of insulation provided to perimeter edges of floors, on 150mm re-inforced concrete slab (grade ST2 or GEN 1 to BS 8500-1.) on 1200 gauge DPM lapped to wall DPC. Sand blinding and 150mm clean compacted hardcore (for hardcore deeper than 600mm, further advice is required from the structural engineer). All to give 'U' value of 0.18.

### 5. TIMBER PARTITIONS:-

100x50mm SC3 vertical softwood studs at 600mm c/c secured to 100x50mm SC3 head and sole plates. Noggins at 600mm intervals. 12.7mm Gyproc plasterboard and skim finish to both sides. Provide 25mm Isowool APR 1200 sound insulation to partition voids at bathrooms and around bedrooms to comply with E2 requirements for sound deadening. Floor joists to be doubled up when running parallel with and under timber partitions.

### 6. LINTELS:-

Unless otherwise stated lintels to be Cantic combined steel to BS5977 (sizes as recommended by manufacturer). Provide min. 150mm end bearing where bearing is less than 150mm concrete padstones are to be provided (sizes to suit load and detail). All lintel backs and soffits to have min. half hour fire resistance and be insulated to prevent cold bridging where necessary. Where steel beams are used they are to be braced together 350mm from each bearing point and at mid span and set to concrete padstones each end as per Structural Engineer's drawings and details. Half hour fire protection to steelwork as above.

### 7. LATERAL RESTRAINT TO FLOOR AND ROOF:-

All floors and roofs to be anchored by Bat or Cantic metal anchors (30x55mm mild steel). Straps to be secured to timber elements and walls min. 1.0m long at max. 1.2m c/c (1.8m c/c in single storey construction).

### 8. FLAT ROOF CONSTRUCTION:-

Three layers of built up roofing class 3 to BS 747 finished with bitumen-bedded stone chippings to a depth of 12.50mm. The top layer to be mineral surfaced bioluminous fully bonded to glass fibre based underfelt layer. Type 3G bottom layer to be partially bonded to 150mm Celotex XR4000 roofboards insulation or other equal approved insulation on vapour barrier on 18mm WBP plywood to BS 1058 all laid to falls via softwood firkins. Softwood treated timber flat roof joists as specified by Structural Engineer with min. 100mm end bearing. 12.7mm Duplex Gyproc plasterboard and skim finish ceiling internally. All to provide a 'U' value at 0.15 or better. Flat roof joists to be set to existing walls via Cantic type joist hangers fixed timber wall plates (bolted to existing wall via M12 bolts at 400mm c/c).

### 9. FRAMES, CASINGS, SKIRTINGS, ARCHITRAVES:-

Internal door linings shall be 100 x 38 with planted stops. Skirting boards shall be 100 x 19mm. chamfered. Architraves shall be 75x19 chamfered. All new internal doors to have min. undercut of 10mm above the fitted floor finish surface. Window frames with safety glazing to all doors, side panels, and all areas extending below 800mm from floor level and to be in accordance with BS 6266 and or BS EN 12660. New or replacement doors and windows to be UPVC and double or triple glazed, argon filled gaps and finished soft low 'E' coating to achieve U-value of 1.40W/m<sup>2</sup>K or window energy rate - Band B or better. New external doors with more kerb/upstands can have a value no worse than 2.2W/m<sup>2</sup>K. New external doors with more than 60% of internal face glazed to have a U value of 1.40W/m<sup>2</sup>K or doorset energy rate - Band C or better; other external doors to have a U value of 1.40W/m<sup>2</sup>K or doorset energy rate - Band B or better. Installed either by Fensa registered installer or compliance via certificate from L.A. Building control (fee Payable). All roof lights/lanterns to be glazed. If polycarbonate or uPVC roof lights/lanterns are to be used, ensure rating is class C-S3,d2 which can be regarded as having a BRoof(t4) classification. B.Roof(t4) units can be used within 6m of the boundary. However, they are not to be used within 1500mm of a a compartment wall line separating property's.

### 10. ELECTRICAL INSTALLATION and PART P BUILDING REGULATIONS

of the Building regulations it will either:

- a. Be installed by electrician who is registered as Part P approved by an authorised body (a completion certificate/certificate of compliance will need to be obtained from their authorised body (NICEIC, ELECSA, NAPIT etc.).

### 11. GAS INSTALLATION & HEATING:-

The proposed gas installation shall be designed and installed by GASSAFE registered person and a relevant certificate provided to Building Control pre-completion. Extend existing central heating to new areas to client's instructions. Where new or replacement boilers are installed must be a condensing boiler and must have a standby power supply, such as battery back-up. Fixed fitting taking only lamps having a luminous efficiency of 40 lumens per circuit watt shall be used at one per 25 m<sup>2</sup> of floor area or three of four or 75% fittings which ever is the greater. Fixed external lighting shall be either lamp capacity not exceeding 150w per light fitting that switches off automatically or fittings taking only lamps of 40 lumens per circuit watt.

### 12. NATURAL AND MECHANICAL VENTILATION:-

Prior to completion details of commissioning and testing of mechanical systems for extracts to be deposited with building Control to show compliance with F1 (2).

#### a) Habitable room:

- Rapid ventilation - 1/20th of floor area - for a hinged or pivot window that opens 30° or more, or for sliding sash windows. 1/10th of floor area - for a hinged or pivot window that opens less than 30°.
- Background ventilation - 8000 mm<sup>2</sup>

#### b) Kitchen:

- Rapid ventilation - opening window
- Background ventilation - 8000 mm<sup>2</sup>
- Extract ventilation fan rates - 30 l/s adjacent to a hob or 60 l/s elsewhere
- Location of mechanical ventilation devices in rooms:

#### a) Cooker hoods should be 650mm to 750mm above the hob surface (or follow manufacturer's instructions).

- b) Mechanical extract fans should be placed as high as practicable and preferably less than 400mm below the ceiling. Refer to Appendix E Approved Document F for further guidance of installation of fans in dwellings.

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