SINGLE STOREY EXTENSION BUILDING REGULATION SPECIFICATION NOTES
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These notes do not comprise a full specification. They are for general guidance only and their primary function is to assist Local Authority officers in determining Building Regulation applications.

Where clarification is considered necessary, reference should be made to the Agents.

The developers will be responsible for ensuring that all building work carried out by them or under their instructions complies with the relevant current Regulations, British Standards and Codes of Practice, Bye-laws and manufacturers' instructions.

1.0 FOUNDATIONS

1.1a Existing foundations where subject to increased loads to be exposed for inspection to determine their suitability before the application is approved, and underpinned as and if necessary to sustain additional loads placed upon them. All subject to the approval of the Local Authority.

1.1b Existing foundations where subject to increased loads to be exposed and underpinned as and if necessary to prove suitability to sustain additional loads placed upon them. All to the approval of the Local Authority.

1.1c Foundation type and depth are to be appropriate to site conditions, and are to be designed in accordance with the "Approved Document" A1/2 Part E of Building Regulations Schedule 1 Pt. A or BS 8004: 1986. All to the approval of the Local Authority.

1.2 Where sulphates are found to be present in the ground dense, fully compacted concrete of low permeability must be used in accordance with the recommendations of Building Research Establishment Digest No. 363.

1.3a Concrete trench fill foundations (1:2:4 mix) to dimensions as shown on drawings to within 250mm below ground level and generally to a depth of 1000mm or to load bearing strata. All foundations to suit site conditions and to the Local Authority approval.

1.4 Foundations will be generally of 1:3.8:5.3 concrete with cement complying with B.S.12 1991 and aggregate complying with B.S.882 1983.

1.5 For other conditions where strip foundations are inappropriate, design will be by Structural Engineers and as set down in NHBC Requirement 5.

1.8 Any trees within 30m of the proposed works should be designed in accordance with NHBC Chapter 4.2 ‘Building Near Trees’.

2.0 **WALLS**

2.1a 300mm thick external cavity wall to consist of:

103mm facing brickwork laid stretcher bond (1:3 sand/cement mortar) with bucket handle pointing finish;

100mm cavity consisting of 50mm clear air space and 50mm Kingspan Kooltherm K8 rigid insulation foil taped together) – Insulation to extend down past DPC by 150 – 225mm);

100mm Fibolite (Plasmor) blockwork inner leaf, 3.6N/mm sq compressive strength.
All internal blockwork to receive 12.5mm Gyproc wall board.
This construction will achieve a U-Value of 0.25W/m²k.

2.4 Walls below ground to be built in brickwork or dense concrete blockwork construction with any cavities filled with weak mix concrete up to 225mm below DPC. Facing brickwork to extend two courses below ground level (FL or FN designation).

2.6a All cavity walls to be tied together with S.S butterfly wall ties to BS 1243: 1978 in accordance with BS 5628: Parts 1: 1992, 2 and 3: 1985. Spacing of wall ties to be 450mm vertically and 750mm horizontally; and 225mm centres at openings and abutments and not more than 150mm from openings and abutments.
Requirement applies to all areas of cavity wall i.e. below and above DPC.

2.7 All cavities to be closed at roof level with 9.5mm Monolux set in a bed of mortar (1:3 mix).

2.8 Cavity barriers to all cavity walls in accordance with Building Regulation Schedule 1 Pt. B and "Approved Document" B2/3/4 Appendix H.

2.13a IG or similar lintels to openings in external and internal load bearing walls with min. 150mm end bearing. Lintel design to incorporate sufficient insulation to prevent cold bridging (see guidance diag. 7 part L1 Building Regulations)

2.13c New openings to be supported with galvanised steel lintels, as indicated on drawings, with minimum 150mm end bearing.

2.14 Walls to be constructed in accordance with BS 5628 Pts 1: 1992, 2 and 3 : 1985.

2.15 All external wall openings are to be constructed to avoid any risk of cold bridging at head, jamb and cills, using proprietary cavity closes ("Dacatie" or "Damcor") or other approved construction method, with min. 30mm overlap of window to external walls to meet the requirements of the Robust details. (see guidance diag. 7 part L1 Building Regulations and Robust details)

2.16 Where new walls abut existing, new walls to be bonded to existing with stainless steel Furfix system (or equivalent). With vertical d.p.c. trapped behind inner leaf.
Vertical joint to be sealed with polysulphide sealant.

3.0 **DAMP PROOFING**

3.1 Horizontal DPCs to walls to be hessian based or other approved to BS 743: 1970. Vertical DPC where cavity is closed to be flexible and to BS 743: 1970.

3.2 Weepholes to be provided every 3 or 4 joints in brickwork above openings in external walls in accordance with BS 5628 : Part 3: 1985 and at each stop end to cavity trays.

3.3 Code 4 lead flashings and to be provided at all wall/roof abutments. Leadwork to be in accordance with the recommendations of the Lead Sheet Association, and weepholes should be provided in accordance with BS 5628 : Part 3 : 1985.

3.4 All lintels in external walls to have a flexible DPC in accordance with BS 743: 1970.

4.0 **FLOORS**

4.1a Builder to check with Client if under floor heating is required. If so, then the following floor build up specifications may be required to change to suit specialist requirements.

Underfloor heating pipes to be surrounded by floor screed.
Ground floor slab to achieve a U-Value better than 0.22 and to consist of:
75mm sand / cement screed, on;
500g polythene vapour control layer, on;
Insulation of Kingspan TF70-120mm thick (or equivalent). Insulation turned up at perimeter of floor slab (including at doors where floor slab usually touches external brickwork), on;
120mm concrete slab CP35 mix, on;
1200g polythene DPM with 300mm sealed laps. DPM to be lapped with masonry DPC's and bridge cavity (radon protection), on;
150mm min well compacted clean hardcore / MOT type 1 stone free of all deleterious materials to receive sand blinding.
This construction will achieve a U-Value of between 0.13 to 0.15 depending on the P/A value.

5.0 **ROOFS**

5.14 All roof timbers to be double vacuum impregnated to BS5707.
Roof construction to consist of:
- Roof tiles / slates fixed in accordance with manufacturer's instructions, on;
- Tanalised tiling battens (size to suit tile & rafter spacings) with a min head of 75mm, on;
- 'Tyvek' breathable sarking membrane, on;
- Roof timbers as specified on section drawings.

Builder to ensure that the proposed roof tiles are compatible with the slope of roof and to be fixed in accordance with the manufactuer's instructions.

Builder to match tile as close as possible to original roof tiles.
Any difference to be agreed with Client before orders are placed and a sample sent to the Local Authority Planning Department for approval.

5.3 Pitched roof with insulation at ceiling joist level (U-Value 0.12) to consist of 100mm fibreglass insulation (BS 5250) between joists with a further 250mm fibreglass laid across giving a total 350mm thickness of insulation. Insulation joints to be taped. Ensure 50mm clear air space is achieved between insulation and underside of roof at eaves. Include Glidevale RV601 rafter vents between all rafters.

5.4 FLAT ROOF CONSTRUCTION (U-value 0.16)

Flat roof construction to consist of:
- Firestone Rubber cover EPDM roofing system / fibreglass system installed in strict accordance with manufacturer's instructions and details.
- Kingspan Thermaroof insulation (135mm min thickness / as recommended by manufacturer) incorporating bonded plywood – Alternatively, 150mm Celotex Crown-up could be used – Check with manufacturer before ordering;
- 1000g vapour control layer;
- 18mm WBP / exterior quality plywood;
- Softwood firings laid to falls;
- Flat roof joists specified by Structural Engineer flat roof joists at 400mm crs;
- 12.5mm Gyproc plasterboard and skim finishing coat to receive decoration.
Roof construction to achieve a U-value better than 0.16.

All joists to be tied at right angles with 30 x 5mm galvanised mild steel lateral restraint straps taken over 3No joists and fixed. Straps not to exceed 2m max crs.

Provide strutting to roof joists at centre point for spans between 2.5 - 4.5m.

Composite cladding to have colourcoat finish.
Include all fixings, spacers, sealants, ridge flashings, gutter brackets etc.

6.0 **WINDOWS AND DOORS**

6.1b Windows to match the existing house to BS 644 Pt 1 : 1989 double glazed and are to comply with Part L1 of the Building Regulations.

6.3 Glazing to be low 'E' glass with 16mm airgap carried out in accordance with BS 6262: 1982 and part N of Building Regulations and should not exceed 22.5% of total floor area without introduction of additional heat loss saving as a trade off from that lost by the equivalent area of excess glazing. 'U' value not to exceed 1.8 W/m²k.

6.4 All new windows to be double glazed.

6.5a All window glazing below 800mm and door glazing below 1500mm from ground level, and any glazing within 300mm from doors to be safety glass in accordance with BS 6206 and marked accordingly.

6.9 External doors to have laminated or toughened safety glass to both internal and external panes where double glazed.

7.0 **CEILINGS/FINISHES**

7.1 Ceiling to be 15mm plasterboard with joints taped and filled.
Plasterboard to be supported on all edges with noggins as necessary.

7.2b Plaster skim coat finish to ceilings.

7.4a New steel beams to be encased with 2 skims of 12.5mm plasterboard with staggered, taped and scrimmed joints to achieve minimum ½ hour fire resistance.

9.0 **HEATING**

9.1f Existing central heating system extended to new extension.

10.0 **ELECTRICAL INSTALLATION**

10.1a The existing electrical system is to be extended to provide an electrical installation to Institute of Electrical Engineers Regulations for the Electrical Equipment of Buildings. All joist notching and drilling and wall chasing to be in accordance with NHBC regulations.

10.3d All socket and switch locations to be marked on wall for clients approval prior to chasing.

10.6 All electrical work required to meet the requirements of Part P (Electrical safety) must be designed, installed and tested by a person competent to do so. An appropriate BS7671 electrical installation certificate is to be issued for the work on completion.

11.0 **PLUMBING AND DRAINAGE**

All existing manholes and drains within 3m of the property to be surveyed for position and invert levels prior to commencement on site. All to Local Authority approval.

11.4 All tanks and pipes situated in roof are to be lagged and installed on the warm side of ceiling insulation. Insulation to tank lagging is to be taped.

11.6c Rainwater pipes to be 63mm PVC with 100mm PVC gutters, to match existing, taken to new and existing soakaways.

11.6d Existing guttering to be extended to connect to new/existing uPVC downpipes and taken to existing termination point.

11.7a Drains passing beneath buildings are to be surrounded with 150mm lean mix concrete or shingle. Where passing through walls/foundations they are to be protected by concrete lintels or other approved construction.

11.8b All drainage to be carried out in flexible jointed vitreous clay pipes (100mm Ø) laid on and surrounded by 150mm granular pea shingle bedding to a fall of 1:60.

11.9 Where new soakaways are required to be constructed of concrete rings (or equivalent) to be positioned minimum 5m from buildings, 1.6m from boundary and 1.2m Æ, taken down to a suitable ballast.

12.0 **VENTILATION**

The ventilation requirements are to be in accordance with the Building Regulations with particular ref. to the following items:

12.1a Habitable rooms - An opening window of 1/20th (min) of floor area together with a trickle ventilation opening not less than 8000mm^2 in area to habitable rooms and 4000mm^2 elsewhere.

12.6 All new windows to be fitted with trickle ventilators to provide minimum background ventilation of 8000mm² ventilated free area.

12.7 Bathroom = Mechanical extract fan with over-run and extract capacity of 15 litres per second.
Sanitary Accommodation = Mechanical extract fan with over-run and extract capacity of 6 litres per second.
Kitchen = Mechanical extract fan with a capacity of 30 litres per second adjacent a hob then 60 litres per second elsewhere in kitchen.

13.0 **INFILTRATION AND COLD BRIDGING**

13.1 All openings to be detailed to ensure that cold bridges do not occur and that all windows and doors are fitted with suitable draught stripping as standard by the relevant manufacturers.

13.2 **FIRE & SMOKE ALARM**

Mains operated fire alarm system interlinked with battery backup to BS5446.
Self contained smoke alarm permanently wired up to a separate fixed circuit at the distribution board to be provided to all ground and first floor circulation areas.
Each smoke alarm to be fixed to the ceiling at least 300mm from any wall or light fitting (centrally preferred).
Units designed for wall mounting should be fixed between 150mm & 300mm below the ceiling level.
Smoke alarms required to all circulation areas (ie: Halls, Landings etc.) where not already in place and must be interlinked with each other.

14.0 **GENERAL**

14.2 The U-values quoted above assume that a calculation under the Governments Standard Assessment Procedure (SAP) has been carried out and that the rating is in excess of 60. Better values may be required should the rating be less than 60.

15.0 **FINISHES**

Builder to provide plaster finish to all internal walls suitable for decoration.

Perimeter of rooms to receive timber skirting board plugged & screwed to walls.
Sample of skirting board to be submitted to Client for approval.

Builder to agree with Client at tender stage the extent of finishes required (ie: Client to confirm if Builder is to decorate Walls, ceilings, woodwork etc and lay floor coverings).
Actual finishes to be determined by Client.

Type of kitchen units and final layout / number of units and worktop areas to be confirmed by Client.
Electrical sockets, lighting positions and types together with radiator locations to be agreed between Builder and Client on site.

Finishes to external works (ie: special paving, landscaping etc) to be confirmed to the Builder by the Client.

Builder to include for removing all Builders rubbish from site at the end of the project (unless agreed otherwise).