

# *SGT Building Design*

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## *Specification*

Single Storey  
Side & Rear Extension  
at



Job No. 1113

**Specification to be read with drawing nos. 1113-01, 02, 03, 04 and structural engineer's calculations.**

## **FOUNDATIONS**

Trench fill type, min 450mm wide, taken down to a minimum of 1.0m below adjoining ground level as shown on plans/sections (refer to drawing no. 1113-04). Subsoil type is believed to be Ballast. Concrete to be 1:2:4 mix. No trees present that affect foundation design. Drains to be bridged, where passing through walls/foundations with pre-cast concrete lintels (**not** pre-stressed type). At least 50mm clearance to be maintained all around the pipe.

## **EXTERNAL WALLS (Cavity Construction)**

102mm facing brick outer skin to match existing (or to planning requirements where applicable). 100mm cavity insulated with 100mm **Crown Dritherm 32** cavity wall batts (*BBA Cert No. 95/3212*). 100mm **Celcon Standard** block inner skin (*BBA Cert No. 86/1689*). Internal finish to be 13mm lightweight plaster in accordance with BS 5492:1990. U-value of wall - 0.27W/m<sup>2</sup>K.

Stainless steel vertical twist wall ties conforming to DD140-2:1987 to be used at 750mm centres horizontally, 450mm centres vertically (staggered), at every block course at the edges of openings and at 450mm centres horizontally at dpc level to support the insulation batts.

**Hyload** damp proof course (*BBA Cert No. 86/1770*) to be provided to both skins at least 150mm above external ground level linked to existing house dpc. All laps to be a minimum of 100mm, sealed using **Hyload** contact adhesive. Dense concrete blockwork to be used below ground/dpc level as appropriate. Cavity to be filled with fine concrete up to 225mm below lowest dpc level. Walls to be bonded to existing using **Furfix** stainless steel profiles (*BBA Cert No. 91/2682*). **Thermabate 100** insulated cavity closers (*BBA Cert No. 91/2648*) to be provided at all reveals and to all other cavity closers.

Mortar mix to be Class III to BS 5628:Part 1:1978 or 1:1:6, cement:lime:sand.

## **GROUND FLOOR CONSTRUCTION (Solid)**

75mm thick cement/sand screed (1:3-opc: sharp sand) on separating layer of building paper (BIF grade to BS 1521:1972) on 75mm thick **Celotex GA4000 (GA4075)** floor insulation, 25mm thickness turned up around the perimeter of screed. Min.100mm thick concrete oversite on 1200 gauge **Visqueen** polyethylene damp proof membrane (*BBA Cert No. 94/3068*) linked to existing dpc with Synthaprufe dpm. Min.150mm sand blinded hardcore bed of clean broken brick or similar inert material. Concrete to be 1:2:4 mix or min. grade ST2 (in accordance with BS 5328: Pt2: 1991 - 10.0N/mm<sup>2</sup> @ 28 days). P/A= 0.7. U-value of floor - 0.22W/m<sup>2</sup>K.

Any existing sub floor vents obstructed by the new works are to be ducted below the new floor, using min. 100mm diameter upvc pipes, to new air vents.

## **MONOPITCHED ROOF CONSTRUCTION (Non-Ventilated Cold Pitched Roof System)**

Plain tiles, colour to match existing, on 38mm x 25mm tanalised timber battens on **Klober Permo Forte** breathable roof tile underlay (*BBA Cert No.00/3749*). Rafters to be 50mm x 100mm C16 grade timber @ 400mm centres fixed to 50mm x 100mm timber plate bolted to new wall @ 600mm centres. Feet of rafters to be fixed to 50mm x 100mm timber wall plate. Ceiling joists to be 50mm x 100mm C16 grade timber @ 400mm centres. Ceiling finish to be 12.5mm foil backed plasterboard and 5mm Gypsum plaster skim. Roof to be insulated with 270mm thick **Rockwool Rollbatts**. The underlay should be laid draped in the traditional manner and the insulation should be pressed tightly into the eaves against the underlay to ensure no gaps are present. Roof to remain unvented. Allow underlay to discharge over a wide dpc draped into guttering - underlay should not be left exposed to daylight.

## **EXISTING CHIMNEY STACK**

Existing chimney stack to rear to be removed as shown and existing masonry made good as appropriate.

## **FLASHINGS**

Lead flashings to be laid in accordance with BS 6915:1988 as follows:

- (a) Minimum 150mm upstand in Code 4 lead to BS 1178:1982 chased 25mm into wall with lead wedges at approx. 450mm centres. Maximum single length of lead to be 1500mm. Patination oil to be applied to lead as soon as possible after fixing to prevent carbonation of the surface;
- (b) Horizontal and racking abutment flashings to have a minimum 100mm upstand in Code 4 lead to BS 1178:1982 chased 25mm into wall with lead wedges at approx. 450mm centres (lead wedges at each step to stepped flashings). Lead to extend over the tiles/slates at least 150mm (200mm where plain tiles are used). Soakers to be Code 3 lead.

## **LINTELS**

Lintels to be **Catnic** CG90/100 unless otherwise specified. Lintels to be installed with at least 150mm end bearings. Void within lintels to be filled with insulation material to prevent cold bridging. Weep holes to be provided above all lintels to external walls.

## **STEEL BEAMS**

Steel beams and bearings to structural engineer's design details.

## **FIRE PROTECTION TO STEEL BEAMS**

Encasement to steel beams to be expanded metal lathing (EML) with minimum 12.5mm thick Gypsum plaster finish to achieve a 30 minute period of fire resistance. Alternatively beams to be painted with intumescent – fire resisting – paint to achieve 30 minute period of fire resistance. i.e. Nullifire or similar product.

## **BELOW GROUND DRAINAGE (Foul & Surface Water)**

110mm diameter **Osmadrain** PVC-U system to be used complying with BS 4660:1989 and laid in accordance with BS 8301:1985 and BS 5955:Part 6:1980. Pipes to be laid to a minimum gradient of 1:40 (1:80 where serving at least 1 w.c.) on a 100mm base of pea shingle. Trench to be backfilled to the top of the pipe with pea shingle then a 100mm layer of selected granular fill, free from stones larger than 40mm, to be placed before back filling with suitable as dug material. Access points to be provided as shown on plans.

Drains to be bridged, where passing through walls/foundations with pre-cast concrete lintels (**not** pre-stressed type). At least 50mm clearance to be maintained all around the pipe.

## **ABOVE GROUND DRAINAGE**

Waste plumbing to be Osma MUPVC solvent weld system or similar complying with BS 4514:1983, laid in accordance with BS 5572:1994.

Trap and branch sizes as follows:

<b>Appliance Type</b>	<b>Trap &amp; Branch Pipe Minimum diameter (mm)</b>	<b>Maximum length of run (m)</b>
Wash Hand Basin	32 ( <i>max. gradient 20mm/m</i> )	1.7
"	40	3.0
Sink/Waste Disposal	40	3.0

Washing Machine	50	4.0
Dish Washer	50	4.0

All appliances to be fitted with 75mm deep seal traps. Rodding access to be provided at all changes of direction.

Drainage runs and stack position as shown on plans.

### **RAINWATER GOODS**

Rainwater goods to be **Osma Roundline** PVC-U system or similar. 112mm diameter half round gutters, 68mm diameter downpipes, connected to the below ground surface water drainage system discharging to soakaway(s) as shown on plans.

### **SOAKAWAYS**

Soakaway(s) to be a minimum 1.0m<sup>3</sup> capacity measured below the invert level of the inlet pipe. To be filled with clean broken brick and positioned not less than 6.0m from any building. Capacity of soakaway to be based on the effective roof area being drained. Capacity to be calculated as 1.0m<sup>3</sup> for every 20m<sup>2</sup> of effective roof area being drained.

### **SAFETY GLAZING**

Glazing within 800mm of finished floor level in internal and external walls/partitions to be toughened or laminated safety glazing achieving a Class C standard when tested to BS 6206:1981.

Glazing within 1500mm of finished floor level in doors or side panels within 300mm of a door to be toughened or laminated safety glass achieving at least a Class C standard when tested to BS 6206:1981. If the width of a panel exceeds 900mm then that panel should achieve at least a Class B standard when tested to BS 6206:1981.

Glazing in small panes (maximum area 0.5m<sup>2</sup>, maximum width 250mm) should comply with the above or may be annealed glass at least 6.0mm thick.

### **GLAZING**

All new windows and external glazed doors to be PVC-U fitted with double glazed units with a minimum 20mm gap between panes and low-e glass (i.e. Pilkington k-glass). Maximum U-value of 1.6W/m<sup>2</sup>K or a Window Energy Rating (WER) of band C or better.

### **VENTILATION**

Ventilation to habitable rooms to be provided by opening windows at least  $\frac{1}{20}$ <sup>th</sup> of the floor area of the room. Some part of the ventilation opening to be at least 1.75m above floor level.

Ventilation to the kitchen, in addition to any opening windows, to be provided by mechanical extract ventilation capable of extracting at a rate of not less than 60 litres per second or not less than 30 litres per second if incorporated within a cooker hood.

Ventilation to existing w.c. room to be provided by mechanical extract ventilation capable of extracting at a rate of not less than 3 air changes per hour operated intermittently with a 15 minute overrun.

Background ventilation to be provided to habitable rooms and kitchen having a total area not less than 8000mm<sup>2</sup>. (i.e. a trickle ventilator, which should be controllable and secure and located, so as to avoid undue draughts.)

Background ventilation to be provided to bathrooms, utility rooms and w.c. accommodation having a total area of not less than 4000 mm<sup>2</sup>.

All mechanical extract ventilation to extract to external air.

### **LIGHTING**

New lighting to proposed extension to be by way of energy efficient units having a luminous efficacy greater than 45 lumens/circuit watt and a total output of greater than 400 lamp lumens – e.g. dedicate fittings which will have separate control gear and will take only low energy lamps (pin based fluorescent or compact fluorescent lamps) or standard fittings supplied with low energy lamps with integrated control gear (bayonet or Edison screw base compact fluorescent lamps). **Not** GLS tungsten filament lamps or tungsten halogen lamps.

### **ELECTRICAL WORK**

Provide electrical sockets and lighting to Client's requirements.

All electrical installations required to meet the requirements of Part P (Electrical Safety) **must** be designed, installed and tested by a person competent to do so. Prior to completion the Council should be satisfied that the requirements of Part P has been complied with. This may require an appropriate BS 7671 electrical installation certificate to be issued for the work by a person competent to do so.

**A person who is a competent person registered with an electrical self-certification scheme authorised by the Secretary of State should preferably, undertake the proposed installation work.** In this case, this person is responsible for ensuring compliance with BS 7671: 2001 and all relevant Building Regulations. On completion of the work, the person ordering the work should receive a signed Building Regulations self-certification certificate, and the relevant building control body (The Local Authority) should receive a copy of the certificate. The person ordering the work should also receive a duly completed Electrical Installation Certificate as or similar to the model in BS 76713 (see paragraphs 1.6 to 1.12). As required by BS 7671, the certificate must be made out and signed by the competent person or persons who carried out the design, construction, inspection and testing work.

### **CENTRAL HEATING**

Extend existing central heating system to serve new radiators. Suitability/condition of existing boiler to be checked. Extended system to be fitted with a suitable control device (i.e. a room thermostat or thermostatic radiator valves).

Where the existing boiler is to be replaced, the replacement boiler should be a gas condensing boiler with a SEDBUK 2009 efficiency of not less than 88% together with appropriate controls.

Work to any gas appliance/gas heating system to be carried out by a **Gas-Safe** Registered Installer competent to do so.

### **PLANNING CONDITIONS**

Any conditions attached to the Planning Permission for these proposals to be complied with.

### **EXTERNAL LANDSCAPING**

External landscaping does not form part of the Building Regulation application but to be as shown on plans and to client's requirements.

### **THE PARTY WALL ACT**

It is the owners responsibility to ensure that the requirements of the **Party Wall etc. Act 1996** are complied with. A copy of an Explanatory Booklet on the Party Wall etc. Act 1996 can be downloaded from the government website - [www.communities.gov.uk](http://www.communities.gov.uk).

The side extension to the adjoining neighbour's property at number 100 is believed to have been constructed around 1990 and as such it would be practical to assume that the foundations to this extension are no deeper than 1.0m. As the extension appears to be the only adjoining structure within 3.0m of the proposed extension at number 102, it can be assumed that a Party Wall notice will not be required.

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