SGT Building Design

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Specification

First Floor Side Extension
at

Job No. 1018

Specification to be read with drawing nos. 1018-01, 02, 03, 04, 05, 06 & 07.

PROPOSALS

The proposals are to provide a first floor side extension above the existing single storey side part of the dwelling. The existing foundations are to be exposed prior to commencement of work to ensure that the existing foundations are suitable to carry the additional loading. The exposed foundations are to be inspected by the Local Authority Building Control Surveyor. If found not to be adequate, this should be referred back to SGT Building Design for further consideration.

EXTERNAL WALLS (Cavity Construction)

Note – The existing cavity construction is believed to be a 250mm thick cavity construction (50mm cavity) with an aerated block internal skin.

102mm facing brick outer skin to match existing (or to planning requirements where applicable). 50mm cavity insulated with 50mm **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 40mm Gyproc Thermaline Plus insulated plasterboard with plaster skim finish. U-value of wall - 0.30W/m^2K.

Stainless steel vertical twist wall ties conforming to DD140-2:1987 to be used at 900mm 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.

Walls to be bonded to existing using **Furfix** stainless steel profiles (*BBA Cert No. 91/2682*). **Thermabate 50** 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.

FIRST FLOOR CONSTRUCTION (Suspended Timber)

21mm T & G flooring grade chipboard on min. 50mm x 175mm (or same size as existing if greater) C16 grade timber joists @ 400mm centres supported on joist hangers (*hooked type*) built into wall construction. Timber noggins at mid-span and to ends. 100mm mineral wool insulation between joists for sound insulation above utility and wc. 100mm Kingspan TP10 insulation to floor above garage. Ground floor ceiling to be 12.5mm plasterboard with min. 5mm skim. Garage ceiling to be double tacked with 2 layers of 12.5mm plasterboard. Ceiling finish to client's requirements. Front and rear walls to be strapped across new joists at min. 1.8m centres with noggins between with ms restraint straps.

STEEL/TIMBER BEAMS

Steel and timber beams and bearings as detailed on proposed plans.

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.

LINTELS

Lintels to be **Catnic** CG50/100 (50mm cavity) 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.

PITCHED ROOF CONSTRUCTION

Concrete interlocking tiles to match existing on 38mm x 25mm tanalised timber battens on sarking felt. Rafters to be 50mm x 125mm C16 grade timber @ 400mm centres birdmouthed over 50mm x 100mm timber wall plate anchored to inner skin of cavity wall with 600mm long 30mm x 5mm galvanised mild steel straps at max. 1.8m centres. 75mm x 150mm C16 grade timber purlins as shown on section strutted onto steel support beam with 50mm x 100mm timber struts. Ceiling joists to be 50mm x 150mm C16 grade timber @ 400mm centres bolted to rafters with toothed washer between. Refer to floor plans and section for additional details.

Main roof to be insulated with 270mm thick **Rockwool Rollbatts.** U- value **-** 0.16W/m^2K. 10mm ventilation gap to be provided at eaves level to front and rear with proprietary ventilators.

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.

INTERNAL WALLS/PARTITIONS (Studwork)

50mm x 75mm vertical timber studs @ 400mm with top and bottom plates and intermediate noggins. 75mm **Rockwool** insulation between studs and 12.5mm **Gyproc SoundBloc** plasterboard (10.6Kg/m^2) to both sides with joints taped and skimmed.

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^2, 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 1.8W/m^2K.

ESCAPE WINDOW (First Floor Rooms)

Extended bedrooms to be provided with an escape window with a clear opening of at least 735mm high x 450mm wide. Bottom of opening to be within 800-1100mm above finished floor. Window fitted with fire escape hinges.

VENTILATION

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

Ventilation to bathrooms/shower rooms to be provided by mechanical extract ventilation capable of extracting at a rate of not less than 15 litres per second operated intermittently.

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

Background ventilation to bathroom having a total area of not less than 4000 mm^2.

All mechanical extract ventilation to extract to external air.

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.

MANHOLES/INSPECTION CHAMBERS

Manholes/Inspection chambers to be **Osmadrain** PVC-U type complying with BS 7158:1989. Sizes and invert levels as noted on plans.

RAINWATER GOODS

Rainwater goods to be **Osma Roundline** PVC-U system or similar to match existing. 112mm diameter half round gutters connected to existing gutters and downpipes.

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:

Appliance Type	**Trap & Branch Pipe Minimum diameter (mm)**	**Maximum length of run (m)**
Wash Hand Basin	32 (*max. gradient 20mm/m*)	1.7
"	40	3.0
Bath/Shower	40	3.0

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

Vertical stack to be 110mm diameter **Osmasoil** system vented to external air. Top of ventilation stack to terminate at least 900mm above any opening into the building within 3.0m and be fitted with a balloon grating.

Drainage runs and stack position as shown on plans.

SUNPIPE

Provide **Sunpipe** by **Monodraught Ltd**. over existing landing area as shown on plans. Final size and fittings to be agreed with the client. **Sunpipe** to be installed strictly in accordance with manufacturers details.

LIGHTING

New lighting to proposed extension to be by way of energy efficient units having a luminous efficiency greater than 40 lumens/circuit watt – e.g. fluorescent tubes or compact fluorescent lamps, (**not** GLS tungsten lamps with bayonet cap or Edison screw bases).

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.

SMOKE DETECTORS

Smoke detectors/alarms to be provided to ground floor hallway and first floor landing. The smoke alarms should be mains-operated, interlinked and conform to BS 5446:1990 - components of automatic fire alarm systems for residential premises, Part 1 Specification for self-contained smoke alarms and point-type smoke detectors. Smoke detectors to have battery back up.

CENTRAL HEATING

Extend existing central heating system as appropriate. Where new radiators are provided they are to be fitted with a suitable control device (i.e. a room thermostat or thermostatic radiator valves).
