



BUILDING
DESIGN
SOLUTIONS
NORTH EAST LIMITED

SPECIFICATION

39 Sunderland Road

Boldon

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Specification

Foundations.

The foundations of the proposed extension are to be in accordance with B.S. 8004. The foundations are to be 600*225mm bearing onto firm clay strata to the invert of any drains running parallel or through the excavations. The excavations are to be a minimum of 900mm below ground level and bearing on to firm clay strata. The excavations to the rear single storey extension are to be taken down to the invert of the drain running parallel with the proposed extension. The width of these excavations are to be 600mm. Note All excavations are to be stepped below the drain and reinforced concrete lintels bridged over the pipe. The existing foundations of the garage are to be exposed to confirm their suitability. Building Control Surveyor to be notified when the foundations are exposed. Two trial pits are to be provided for inspection. The excavations for the new pillar supporting the RSJ,s to the front of the garage are to be dug to the dimensions as above.

Walls.

The walls of the extension are to be constructed of 102mm facing brickwork to match the existing with 110mm cavity with 100mm thermolite blockwork internally then plasterboard dot and dabbed with a 3mm finishing skim. The cavity is to be fully filled with drytherm insulation to achieve a U value of 0.28 W/m²K. Stainless steel wall ties are to be used to B.S. 1243 placed at staggered intervals of 750mm horizontals, 450mm verticals and every 300mm around windows and doors. From foundation level up to ground level there is to be a fine mix cavity fill. Horizontal D.P.C.'s are to be 150mm above ground level. All windows and doors are to be provided with vertical insulated D.P.C.'s and all new cavities are to be continuous with the existing construction. The new stud walls on the first floor are to be constructed of 100mm * 50mm timber studs with a minimum of 25mm glass fibre insulation between the studs with 12.5mm plasterboard either side. The plasterboard is to be finished with a 3mm plaster skim either side. The wall construction to the rear of the garage where the changing rooms etc. for the swimming pool have been formed is to be exposed when the existing room is removed to confirm a cavity wall is present. If it is found that the wall is single leaf a new cavity is to be formed.

Ground Floor.

The floor of the kitchen is to be made up of 100mm layers of compacted dolomite. On top of the dolomite is to be laid 125mm of jableite insulation. To the external perimeter walls of the kitchen is to be placed 30mm of jableite insulation to prevent cold bridging. On top of the insulation is to be placed a 1200 gauge visqueen DPM. a minimum of a 300mm lap is to be provided with the DPM and the DPC of the wall construction. To complete the floor 125mm of concrete is to be laid and finish screeded to accept the clients choice of floor covering.

First floor.

The floor construction over the garage is to be made up of 225mm * 75mm floor joists at 400mm centres spanning from side to side. For the sound resistance and fire resistance purposes over the garage 200mm glass fibre is to be placed between the joists. To form the ceiling 12.5mm plasterboard and a 3mm skim is to be provided to give the required 30 minutes fire resistance. To the room side of the first floor 22mm weyroc moisture resistant decking is to be provided for the bedroom and the en-suite.

Drainage.

The existing gully to the rear is to be re-positioned as shown on the plan. The new gully is to be a trapped roddable inlet gully. The pipe work of the existing gully is to be exposed and the pipe work extended to incorporate the position of the new gully. The pipework is to be hepworth supersleeve and is to be bedded on pea gravel. The new drainage is to be laid to a minimum gradient of 1:40. The drainage for the en-suite is to connect into the existing SVP located in the corner of the first floor bathroom. The rainwater from the roof is to discharge into the new trapped roddable gullies as shown on the drawing. All drainage is to be laid as

above. 100mm half round gutters are also to be provided and connected to downcomers. The new drain for the en-suite is to be fitted as per the plan and the specification above.

Roof.

The roof tiles over the extension are to match with profile of the existing tiles on the main roof. 100mm headlap to be provided for each tile. To fix the tiles to the roof 38mm * 38mm tiles battens are to be fixed to the rafters. Between the tile battens and the rafter the breathable tyvek membrane is to be placed. The roof is to be made up of manufactured truss rafters and calculations provided when fitted. All rafters are to be braced in accordance with the BS. 100mm * 500mm wall plates are to be mechanically fixed to the top of the wall construction and the rafters fixed accordingly. To the underside of the ceiling joists 12.5mm plasterboards are to be fixed and a 3mm plaster skim provided. To insulate the main roof 100mm glass fibre rockwool insulation is to be placed between the joists and 170mm over to achieve a U value of 0.16 W/m²K. To prevent any spread of the roof lateral restraint straps are to be provided @ 1.8 meter centres and 1.2m centres on the gables. Note that the builder is to ensure that the ceiling is well sealed. If the roof is not sealed correctly then ventilation is to be provided at the eaves. This will be via a continuous 10mm ventilation strip at eaves if deemed necessary. All the necessary lead soakers and code 4 lead flashings are to be provided where the new roof butts the existing brickwork. The tiles over the single storey extension to the rear are to be as per the main roof. The size of the rafters for this section of the roof are to be 175mm x 50mm @ 400mm centres with 100mm x 50mm collar ties mechanically fixed to each rafter. The wallplate fixed to the existing wall construction is to be 100mm x 50mm fixed with rawl bolts. All the necessary cavity tray and lead flashings are to be provided where the new roof abuts to the existing wall construction. The velux roof lights to be provided are code GHM M08. To insulate the roof over the kitchen 100mm extratherm insulation is to be provided between the rafters and 50mm is to be placed below followed by 12.5mm plasterboard and a 3mm plaster skim ready for decoration. If the client wishes to have a vaulted roof in the bedroom the same velux windows are to be used. If the vaulted roof design is used the trussed rafters will not be used. As an alternative to the vaulted room over the bedroom is to be constructed as over the kitchen with collar ties placed a 1/3 span of the roof. The rafters either side of the velux roof lights are to be doubled up. Wall plates are to be provided as before described and lateral restraint as above. Tiles are to be as above also. Velux windows are to be provided on the kitchen roof, code as above. Note to the builder. The flat roof for the balcony is to be a warm roof with 150mm TR31 kingspan placed on top of the joists. The joists are to span from the wall of the garage to the new RSJ over the changing area. The size of the joists are to be 225mm x 75mm @ 400mm centres. The roof covering is to be a sika liquid plastics roof with appropriate decking to protect the roof from foot traffic. Specification for this area to be provided by Sika Liquid Plastics. Conditional approval required. Again if the client wishes to use a Lanton style roof design over the kitchen in place of the vaulted design the client will need to provide the appropriate details and U values to confirm the roof meets the required standards under the Building Regulations. Conditional approval required.

Lintels.

The lintels over the window and door openings are to be Birtley Supergalv CB 90 HD lintel. There are new RSJ's to be fitted as indicated in red over the kitchen. Further RSJ's are to be placed over the garage and the changing area for the swimming pool to carry the first floor brickwork above. The sizes of the RSJ's are to be in accordance with the structural engineer's calculations. Calculations for this work are to be provided by the client.

Windows and Doors.

All windows and doors will be double glazed with trickle vents installed for background ventilation of 8000mm square. Ventilation openings must be equal to at least 1/20th of the total floor area of that room. All glazing must be Pilkington K with a 16mm air gap and comply with approved document N of the Building Regulations. All glazing in critical locations is to be toughened or laminated glass. **All new glazing is to give a U value of 1.6 W/m²K.** The French doors in the bedroom are to act as the means of escape so no need to provide an escape window. Note to the builder that the existing bi fold doors on the kitchen are to be re-located to the pool as shown if possible.

Smoke Detection.

Main operated self-contained smoke detectors are to be provided on each level of the stairs. They are interconnected, and permanently wired to a separately fused circuit at the fuse board. These are indicated on the drawing.

Heating.

All heating work will be carried out by a CORGI registered Gas Safe engineer and fitted in accordance with the manufacturers instructions. The heating engineer is to check to ensure that the existing boiler is capable of accepting the additional capacity to the system. If the existing boiler cannot accept the addition then a new boiler will require fitting. The boiler is to have a SEDBUC rating of not less than 89.5 and to be provided with room thermostats and thermostatic valves to all radiators except in rooms controlled by a room thermostat. Furthermore, all pipework in unheated spaces is to be provided with insulation as required by part L of the Building Regulations. Note that the outlet of the boiler is to be provided with a wire guarding if below a height of 2 metres measured from ground level The positioning of radiators etc. are to be confirmed by the client. Note that the pipe work installations are to be agreed with the client to satisfy their needs of the new proposed kitchen installation. New radiators are to be positioned as indicated on the drawing.

General Notes.

Builder is to check all dimensions on site before the commencement of any work.

All work carried out on the boundary is to undertaken with the neighbours consent to comply with the requirements of the Party Wall Act 1996.

Any work on the boundary is to have the consent of the adjoining owners.

Access for refuse collection must be maintained.

3 No. energy efficient light fitting is to be provided in the extension

Mechanical extractors are to be provided in the kitchen and the en-suite capable of extracting 60 litres per second, 15 litres per second respectively.

All electrical work is to be carried out in accordance with the IEE Regulations and a person who is Part P registered.

It is the builder's responsibility for all the necessary health and safety on site. He will cater for the removal of all waste materials from site and also make good to the client's satisfaction any areas of the site which may have been damaged during the construction work.

All structural calculations are to be provided by the client.