

GENERAL SPECIFICATION FOR PROPOSED EXTENTION AT
47 GRAIG ROAD, ALLTWEN.

FOUNDATIONS.

600mm x 225mm concrete foundation under cavity walls at depth of to suite ground conditions as agreed with Building Control Officer.

Foundation stepped on elevation should overlap by twice the depth or 300mm whichever is the greater. Cavities of foundation walls to be filled with lean mix concrete to within 225mm of DPC level.

Difference in level of ground or other solid construction between one side of the wall and the other should be less than 4 times the thickness of the wall.

WALLS.

275mm cavity walls comprising outer leaf of Celcon Solar or similar inner skin of celcon solar block or similar with 25mm partially filled cavity insulation (Thermal conductivity 0.019W/mK) with residual cavity of 50mm.

External finish to be 19mm render ndfinished to match exsting

Internal finish to be 40mm insulated plasterboard finished with hardwall plaster

Wallties to be vertical twist type spaced 750mm horizontally and 450mm vertically. Ties at reveals to be spaced no more than 300mm vertically and within 250mm of all openings.

Partition walls to ground floor to be 100mm concrete blocks rendered and finished with plaster to give a minimum density of 120Kg /m².

Lintels to outer leaf to be Catnic or similar. Damp proof tray to be provided as necessary. Lintel, reveal and sill construction to achieve insulation of 1.2 w/m²k to avoid cold bridging.

Partition walls to first floor to be 100mm x 50mm timber stud lined each side with 12.5mm plaster board with minimum distance between lining of 75mm with an absorbent layer of unfaced mineral wool batts or quilt minimum thickness of 25mm and minimum density of 10kg/m³, which may be wire reinforced and suspended in the cavity. All joints to be sealed.

Walls to be fixed to existing building with 'Furfix' or similar fixing. Cavity to be maintained or constructed to avoid the transmittance of dampness.

GROUND FLOOR

Concrete floor to be min 100mm thick laid on 1200guage DPM on minimum 100mm 'Celotex' insulation or similar on minimum 150mm graded, well consolidated hardcore. Floor to have 'U' value of 0.2W/m²K. Insulation to be laid around the perimeter of the walls

All joints in DPM to be glued and sealed and the membrane placed under the DPC and carried over cavity in such a way so as to ensure no gas can enter the cavity above the DPC and no dampness can be transmitted to the interior of the building.

FIRST FLOOR.

19mm flooring grade boarding on 175mm x 50mm SC3 grade floor joists at 400mm centres.

Double up joists under studs and under bath.

Floor of timber or wood based board to have minimum mass per unit area of 15kg/m^2 with an absorbent layer of mineral wool minimum 100mm thick with density of 10kg/m^3 laid between the joists.

Ceiling to be 15mm plaster board with 5mm plaster skim finish minimum mass per unit area of 10kg/m^2 with absorbent layer of mineral wool minimum thickness 100mm and minimum density of 10kg/m^3 laid between joists.

Lateral support to be provided by 30mm x 5mm lateral restraint bars maximum 2.00m centres, bars spanning over 3No joists. Solid strutting to be provided under the restraint bars.

Herringbone or solid strutting to be provided at mid span where the span of joists exceed 2.5m. Where joists exceed 4.5 m two rows of strutting to be provided at third span.

ROOF

Provide cross ventilation to roofs by 25mm continuous gap in soffit along the outer walls.

Ceiling to be 15mm plasterboard with 5mm skim finish.

Flat roof to have fibreglass finish on 25mm roofing grade Weyroc board or similar laid on firings on 50 x 200mm roof joists, 225 x 25 mm fascia and 150 19mm soffit. Insulation provided by 100mm 'celotex' between joists with minimum 50mm air space between insulation and roof finish.

Roof water to be discharge via 100mm UPVC gutters to outer side, 63mm down pipe discharging into existing gully.

Valley gutter to be lined with Code 5 lead laid on 300g PVC sheet carried a minimum of 300mm up the roof pitch and under the roofing felt, and laid on boards to give adequate support to the lead.

DRAINAGE.

As existing.

WINDOWS AND DOORS.

Doors and windows to be UPVC with low 'E' 4: 16: 4 glazing. 'U' value of all doors and windows not to exceed $2.0\text{w/m}^2\text{k}$.

Glazing in critical areas to be of toughened glass.

Reasonable measures shall be taken to ensure the building is sealed for air tightness.

VENTILATION.

Habitable Rooms

Purge ventilation to be provided by window opening 30° or more and be at least $1/20^{\text{th}}$ of floor area.

Background ventilation to be at least 25000mm^2 per bedroom located minimum 1.75m above floor level.

Rapid ventilation to be minimum $1/20^{\text{th}}$ of floor area of room part of which is at least 1.75m above floor level and provide minimum 8000mm^2 background ventilation.

Provide 4000mm sq background ventilation to kitchen and bathroom.
Provide extractor fan minimum 60l/sec to kitchen
Provide extractor fan 15 l/sec capacity in bathroom.
Provide extractor fan minimum 30l/sec in utility room.

HEATING.

Heating of extension to be provided by extending the existing system.

ELECTRICAL.

All electrical work required to meet the requirements of Part P (Electrical Safety) will be designed, installed, inspected and tested, in accordance with BS7671, by a person competent to do so.

The Council will be notified prior to any covering up of any electrical cables or fittings so that an inspection can be made while they are still visible.

Prior to completion the Council will be provided with :-

An Electrical Installation Certificate issued under a Competent Person Scheme (CPS);

Or

An Electrical Installation Certificate (complete with schedule of inspections and a schedule of test results as required by Part 7 of BS7671) signed by 'a person competent to do so'.

Sufficient information will be provided to the building owner, on completion, so that persons wishing to operate, maintain or alter the installation in the future can do so reasonably safely.

All light switches and sockets to be located no lower than 450mm and no higher than 1200mm above floor level.

All light switches to be within 8m of the luminaries it controls.

Provide energy efficient lighting to every third lighting point having an efficiency of no worse than 40 lumens per circuit Watt.

Provide electrically operated interconnected smoke alarms located within 7.5m of any habitable rooms.

MATERIAL	THICKNESS	THERMAL CONDUCTIVITY.	THERMAL RESISTANCE.
External Surface			0.040
uPVC	0	0.17	0.000
Outer leaf - brick	0	0.77	0.000
Outer leaf celcon or similar	0.1	0.11	0.909
Stone wall	0	1.5	0.000
External Render	0.019	0.57	0.033
Cavity	0.05	0.09	0.556
Plywood	0	0.13	0.000
Cavity bats	0.025	0.019	1.316
Mineral Wool x 85%	0	0.025	0.000
Timber Frame x 15%	0	0.13	0.000
Inner leaf - concrete block	0	0.57	0.000
Inner leaf - Celcon Solar or similar	0.1	0.11	0.909
Insulated plasterboard	0.045	0.03	1.500
Plasterboard	0	0.25	0.000
Plaster finish	0.005	0.18	0.028
Internal Render	0	0.18	0.000
Inernal Resistance			0.130

Total Resistance

5.381

U Value

0.186