

NEW EXTER NAL WALLS

Constructing new attic walls: U-value requirement is 0.21 W/m²K.When insulating a 100mm stud wall, install Celotex 70mm FR5000 between the studs,

flush with the back of the studs, thereby leaving a 30mm cavity, then fix 40mm Celotex FR5000 over the inside face of the studs. The joints of the

insulation are then taped using Celotex Insulation Tape and the perimeter sealed with mastic to provide a VCL. Finally, fix 12.5mm plasterboard through

to the studs to achieve a U-value of 0.21 W/m²K.

Ventilation

Habitable Rooms

For rapid ventilation each proposed habitable room must have an openable area of at least 1/20th of the floor area of the room served with some part of the opening at least 1.75mm above ground level. In addition background ventilation must be provided having an openable area of not less than 8000mm². The openable area should be controllable, secure and located to avoid undue draughts e.g. trickle ventilator.

Bathroom /WC areas/Utility Areas

Provide a mechanical extractor fan capable of extracting 15 litres/ second plus (30 litres for utility)and a secure vent having a minimum area of 4000mm². Allow for 10mm air gap underneath door where no openable windows are present.

Windows To be WER Band C or greater, with argon filled 12mm cavity and low E coating to achieve of U value at least of 1.6 W/m²k, . New windows to be double glazed PCVu, design and colour to match existing. The design of first floor windows must be such that it has a clear openable area of 450 x 750mm (0.33m2), with the lowest part a maximum of 1100mm from floor level for means of escape. Openable area of windows not less than 1/20th floor area. Frosted glazing to be used in bathrooms.

Doors — will be required to meet DSER Band E or better, or U-value 1.8W/m²K.

Glazing

All glazing in doors and windows that are within 800mm of floor level should be annealed, toughened or laminated safety glass. This height is increased to 1500mm for a distance of 30mm on each side of the door (and the door itself if it is glazed).

Electrical Installation

All electrical work is to be designed, installed, inspected and tested to meet the requiremets of Part P (Electrical Safety) and in accordance with BS7671, by a competent person. Any proposed recessed lighting should be provided with suitably tested and fire resisting backs and should be installed strictly in

accordance with the manufacturers requirements to prevent potential for overheating from the first floor sound insulation or roof thermal insulation.

Smoke detectors.

Smoke detectors to be provided to ground and first floor and loft circulation areas, positioned no further than 7.5m from doorways of habitable rooms, in accordance with Part B1 and be mains operated with a battery or capicitor standby power supply. The system is be at least Grade D Category LD3 standard conforming with BS 5839 -6: 2013. A heat detector should be incorporated to kitchen areas. On completion, an appropriate installation and completion certificate must be provided.

Gas Fired Heating System

If a new condensing boiler is to be installed it must meet the requirements of SEDBUK A or B, and must fitted by a Gas Safe Registered installer.

Consequential thermal improvements to existing dwellings

if the dwelling has uninsulated or partially insulated cavity walls, fill with insulation where suitable (cavity wall insulation may not be suitable for sites exposed to driving rain); and

if there is no loft insulation or it is less than 200 mm thick, provide 250 mm insulation or increase it to 250 mm; and

upgrade any hot water cylinder insulation as follows:

if the hot water cylinder is uninsulated, provide a 160 mm insulated jacket; or

if the hot water cylinder has insulated jacket less than 100 mm thick, add a further insulated jacket to achieve a total thickness of 160 mm; or iii. if the hot water cylinder has factory-fitted solid foam insulation less than 25 mm thick, add an 80 mm insulated jacket.

Loft Floor Construction

The floor joists are to have solid strutting at mid span where the joist span does not exceed 4500mm. Over 4500mm span solid strutting is required at third span positions. If partition walls run parallel the joists should be 'doubled up' and bolted together. The floor finish to be 19mm tongue and groove Weyroc or similar flooring grade boards. Fill void between new floors with 100mm Rockwool 'Flexi' on continuous run of chicken wire to manufacturers specifications, to provide sound insulation 30mins fire insulation.

Internal Partitions

50 x 100mm timber studding with 12mm plasterboard and 5mm plaster skim both sides. Provide Rockwool insulation to en suite and bathroom partitions to provide sound resistance value of 40db where applicable.

Roof Construction

This will comprise of concrete interlocking tiles to match existing fixed in accordance with manufacturers specifications. These to be secured to 50 x 25mm tanalised roofing battens over untearable roof felt to BS747.

50 x 100mm softwood wall-plate secured using 30 x 5 x 1200mm durable mild steel straps at intervals not exceeding 2 metres. Bracing to be provided by 122 x 32 timbers. Sizes of rafters, ceiling joists and binders as shown. Rafters to be doubled up when fitting roof lights. All roof lights must be fitted with the appropriate flashing to suit the pitch of the roof and proposed roof covering, and to supplied and fitted as per manufacturers specifications.The ceilings are to be 12.5mm plasterboard and 5mm plaster skim.

Provide lateral support to roof with 1200mm galvanised mild steel lateral straps at no more than 2000mm centres to the gable and flank walls.

All roof spaces are to receive 300mm of Rockwool quilt insulation laid between and over joists at ceiling level and over the wall-plate to avoid cold bridging. Use propriety crossflow ventilators to ensure air gap. U value to be at least 0.15 W/m² with cross lapped insulation (100mm between rafters).

Provide ventilation to roof space by means of a continuous 12mm air gap at soffit with fly-proof mesh to ensure through ventilation. Also include high level propriety roof vents, to be placed as high practicable to be at least equal to continuous strip 5mm wide.

Lean to roof space to receive 150mm of Celotex FR5000 insulation laid between and under rafters, with an air gap of of at least 50mm to be maintained above for through ventilation, U value to be at least 0.15 W/m².

Ventilation to lean-to roof by means of a 25mm air gap at soffit with fly-proof mesh to ensure through ventilation. Also include high level propriety roof vents, to be placed as high practicable to be at least equal to continuous strip 5mm wide.

Code 4 lead flashing to soakers valleys and abutments.

External Walls

These are to consist of a 350mm cavity wall construction comprising of an external skin of 2 coat sand/cement render finished 100mm concrete block (or 102.5mm facing brick) , 150mm cavity with 100mm thick 'Celotex CG5000' fixed on the warm side of the cavity formed. Galvanised or stainless steel wall ties spaced at 700mm horizontally and 450mm vertically and staggered. The internal skin is to be 100mm concrete block finished plasterboard on dabs with plaster skim.

Close cavity at eaves with 'Superlux' or similar.

The thermal transmittance (u - value) of the cavity wall construction is to be at least 0.21W/m2K. it is recommended that the u - value at heads, cills and unbonded jambs does not exceed 1.2 W/m²K This can be achieved by using 'Thermabate' cavity closure system or other (methods described in BR 143 Thermal Insulation; avoiding risks.

The wall ties at unbonded jambs are to be placed at a maximum of 300mm vertically and 150mm maximum horizontally from the unbonded jamb.

Provide lateral support at first floor level to those walls running parallel to the floor joists and at soffit level to those walls parallel to the ceiling joists/roof rafters or at both locations if necessary.

All lintels are to be taken from the "I.G." standard range, with a minimum end bearing of 150mm.The tray dpc to lintels are to extend at 150mm beyond the edge of the lintel and be fitted with a proprietary stop with a purpose made "Weep-hole". Weep holes are to be spaced at a maximum of 900mm in all cases.

Tying-in

Where new walls are to be tied to existing, they are to be mechanically fixed using a proprietary building profile system e.g. "Furfix", "Catnic" or similar. The system must be fixed in strict accordance with manufacturers written specification. At the junction where proposed walls meet existing cavity construction insert vertical DPC through outer skin to inner cavity or construct to maintain a cavity.

Above Ground Drainage

The minimum trap sizes and seal depths for appliances are as per the following table

:-Diameter of trap Depth of seal

Wash-hand 32mm 75mm

Kitchen Sink 40mm 75mm

Shower 40mm 75mm

Where the length of branch exceeds 3m for a sink, bath or a shower, install an "anti-vac" valve or increase the pipe diameter from 40mm to 50mm. Where the length of branch exceeds 1.7m for a wash-hand basin, install same "anti-vac" valve or increase the pipe diameter from 32mm to 40mm.

If the larger branch pipe sizes are used for the sink or wash-hand basin then the diameter of the trap need not be increased, but the tail of the trap should be 50mm long before increasing the diameter.

The soil pipe is to be 100mm diameter PVC.U or similar, fitted with a 200mm internal diameter rest bend which must discharge at least 900mm above any openable area which is less than 3m from the soil and vent pipe. The top of the soil and vent is to have a cage or perforated cover fitted.

All internal and external drainage must comply with BS5572.

PROPOSED
Rear single storey extension

9 Woodland Drive, Rogerstone.
Scale 1:50, 1:100 (003)