6 Wilton Drive
Haleburns
Cheshire
WA15 0JF
26/5/8



Manchester City Council
Planning Department
For attention of Jackie Tipping

Dear Sirs

Re: Application 086729/FH/2008
28 Westdale Gardens Burnage M19 1JD

In reply to your letter dated 22/5/8 I confirm that I have been in contact with the EA. Their advice is that the property is in a low risk area and provided that the floor level is as the existing property then flood proofing where appropriate is incarporated

Please find attached completed form and extracts from Chapter 5 indicating measures to be taken - timber suspended floor, stainless steel wall ties, mineral wool insulation, treated floor boards on joists, access hatch, PTO

law absorbtion board insulation between joists and services installation to comply with recommendations

Yours faithfully

Environment Agency

Environment Agency Standing Advice Development and Flood Risk - England **March 2007**

Householder and other minor extensions

welcome | user flowchart | consultation matrix | sequential test results table | applicant and agent advice householder and other minor extensions | general surface water drainage information planning policy statement 25 | flood risk assessment note 1 | flood risk assessment note 2 | flood risk assessment note 3
view this document as pdf for printing

The guidance below is designed to cater for domestic extensions as well as the extension of an existing building used for non-domestic purposes where the footprint created by the development does not exceed 250 square metres.

The Environment Agency recommends that:

Applicants complete the table below and include it with the planning application submission. The table, together with the supporting evidence, will form the Flood Risk Assessment (FRA) and will act as an assurance to the Planning Authority that flood risk issues have been addressed as part of the development.

Planning Authorities check the planning application and ensure that one or other of the mitigation measures proposed in the table below has been incorporated into the development.

Applicant to choose one or other of the flood mitigation measures below.	**Applicant to provide the LPA with the supporting information detailed below as part of their FRA**	**Applicant to tick one of the boxes below**
Either ; Floor levels within the proposed development will be set no lower than existing levels AND, Flood proofing of the proposed development has been incorporated where appropriate.	Details of any flood resilience and resistance techniques to be included in accordance with 'Preparing for floods' (ODPM 2003)	✓
Or; Floor levels within the extension will be set 300mm above the known or modelled 1% (1 in 100 chance each year) river flood level or 0.5% (1 in 200 chance each year) tidal & coastal flood level.	This must be demonstrated by a plan that shows finished floor levels relative to the known or modelled flood level. All levels should be stated in relation to Ordnance Datum	

Click here for information on flood resilience and resistance techniques

Cumulative impact of minor extensions and the removal of Permitted Development rights.

Steve.

55-82

5 Permanent Measures to Reduce Flood Damage – New and Existing Properties

Introduction

This section of the guidance provides information on the wide range of permanent measures that can be undertaken to improve the flood resistance of new and existing buildings. These measures can help to reduce the extent of flood damage, thereby reducing repair costs and speeding up building restoration times. Four sub-sections are provided covering improvements to:

- External walls.
- Internal walls.
- Floors.
- Building services and fittings.

Whilst this section of the guidance is aimed principally at existing property owners it should also help to raise awareness of the flood resistance measures that can be adopted in the design and construction of new properties. Advice sheets on improving the overall flood resistance of a property are available on the CIRIA website (www.ciria.org/flooding). The use of temporary flood barrier systems for buildings is discussed in Section 3 and is not referred to within this part of the guide.

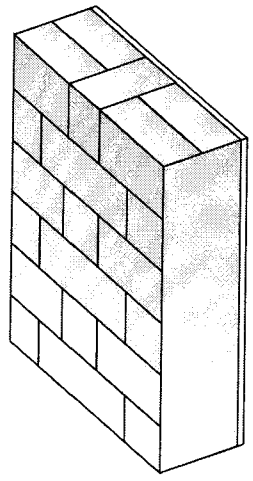
It should be noted that the illustrations contained within this section of the guide are included to demonstrate the main differences between the most common wall and floor types found within domestic properties. They are not drawn to scale and are included for general information purposes only.

It should be noted that the guidance provided in this part of the guide is of a more technical nature than previous sections. Professional advice should always be obtained before any improvement measures contained within this guide are undertaken. When handling building materials care should also be taken to follow manufacturer's health and safety instructions.

Some flood resistance measures discussed within this section may require building control

approval, depending on the type of property concerned. If in doubt advice should be sought from the local building control officer.

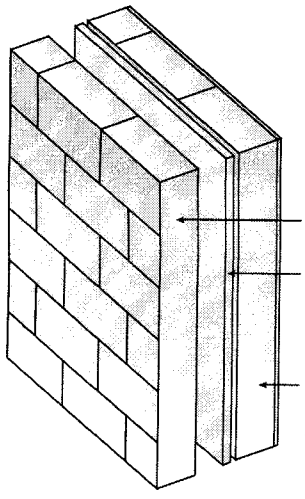
a) Solid walls



Solid wall of brick or blockwork, usually with inside finish of plaster

The external face is often rendered or painted to prevent rain/moisture penetration

b) Cavity walls

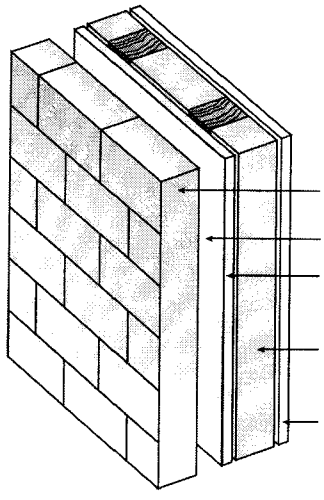


Outer leaf, normally of brick

Partial cavity fill insulation. Some walls may have no insulation or may be fully filled

Inner leaf of brick or blockwork, usually with a plastered finish

c) Timber-framed walls



Outer leaf, usually brick

Cavity

Plywood sheathing (with breather membrane)

Timber framing infilled with insulation

Plasterboard internal finish (with vapour membrane)

External walls

Introduction

A number of different external wall types are found within domestic and small business properties across the UK including solid masonry walls, cavity walls, timber-framed walls, and half-timbered walls. Before considering flood improvement measures it is necessary to establish the type of wall, if necessary by seeking professional advice.

Please note that guidance on improving the flood resistance of half-timbered walls, which are normally found in historic buildings, is not provided within this guide. English Heritage is currently producing guidance in the form of a Technical Advisory Note (see page 47).

The outside face of external walls

The outside face of most external walls is normally constructed of brickwork, which is either left exposed (fair faced), rendered and or/painted. For existing properties, cracks within the brickwork joints or render below the expected maximum flood level should be repaired to reduce the amount of seepage through the wall.

A variety of water-resistant paints and coatings (or tanking) are available that can help prevent floodwater soaking into the external face of the wall, thus allowing the wall to dry out more quickly. Specialist advice must always be obtained to ensure that the most appropriate system is chosen for the property. Coatings should be applied to 500mm above the maximum expected level of flooding. Any measures to improve water resistance must be compatible with the existing wall materials and must allow adequate water vapour transmission to avoid trapping moisture within the wall.

Stainless steel ties should be used in all new build properties at risk of flooding.

The thermal performance of some insulation materials may be reduced following saturation from floodwater, particularly lightweight blown-in materials. For existing properties such materials can be replaced with closed cell insulation foam, which is not water absorbent, but this can be a difficult and expensive task. Specialist advice from cavity-fill installers should be obtained to establish whether replacement is necessary and to identify the options available.

Existing insulation within a timber-framed wall will typically consist of highly absorbent mineral wool that is susceptible to flood damage. Such materials will need to be replaced after exposure to floodwater.

Timber-framed walls

Existing insulation within a timber-framed wall will typically consist of highly absorbent mineral wool that is susceptible to flood damage. Such materials will need to be replaced after exposure to floodwater. Other more flood resistant insulation materials are available but it is unlikely that using such materials would provide any cost benefit as they would normally still need to be removed in order to allow the timber frame to dry out.

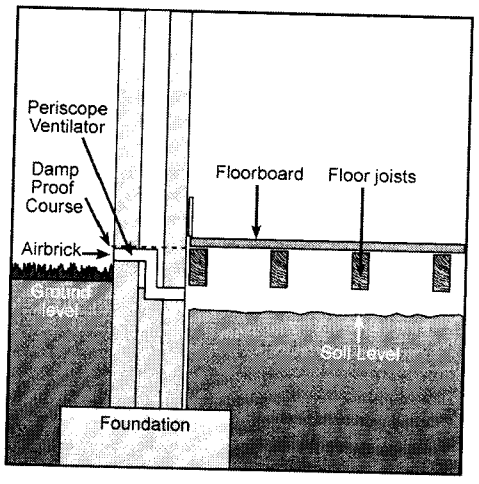
Replacing damaged insulation with new mineral wool is likely to be the most cost effective option after the timber frame has been allowed to dry out accepting that the material will need to be replaced should flooding re-occur.

Sheathing fitted on the outside of the timber frame (normally plywood or oriented strand board) provides additional stability to the timber frame called racking resistance.

Fibreboard sheathing may become weakened as a result of flooding. If a structural assessment by a qualified engineer shows the racking resistance to be inadequate new WBP bonded plywood sheathing should be added to the inside of the frame.

Floors

There are three main floor types used within residential buildings and small business properties in the UK, suspended timber floors, solid concrete floors and suspended concrete floors.



Suspended timber floor

Suspended timber floors

Timber joists and floorboards will normally dry out after being immersed in floodwater without any long term effects provided they have been treated with an appropriate preservative. Should joists need to be replaced they can, subject to professional advice, be supported on hangers rather than being built into walls. This can help to minimise the risk of future distortion following wetting and drying. Additional struts or battens can also be installed between joists to reduce the risk of future distortion.

Flooring materials

Chipboard flooring usually needs to be replaced following exposure to floodwater and should be replaced with appropriately treated floor boards or WBP plywood. Removable hatches should be installed to allow access to the sub floor void and to allow the void to dry out following flooding.

Insulation

Many suspended timber floors in modern buildings have mineral wool insulation between the timber joists. This material has poor flood resistance and will need to be replaced following exposure to floodwater.

Other more water resistant insulation materials are available, such as low absorption boards. Although it may be possible to re-use this type of insulation after exposure to floodwater it would be more expensive to install than mineral wool, and would need to be removed temporarily to allow the timber joists to dry out. The additional material and labour costs involved are likely to outweigh any replacement cost savings. Hence replacing damaged floor insulation with traditional mineral wool is likely to be the least cost option, accepting that this material will need replacement should flooding return.

expensive to refurbish than papered walls. The use of low permeability lime-based paints rather than oil based paints or emulsion can allow walls to dry out more quickly following flooding.

Ceramic tiling may also be used as discussed above under solid masonry walls (on page 58) but specialist advice should be obtained to ensure that such low permeability finishes do not lead to problems of damp in the walls.

For new properties within flood risk areas locating the meter box and internal consumer unit above the expected maximum flood level should be considered.

Electricity supply

Before floodwaters arrive the electricity supply should be turned off at the consumer unit (fuse box). Following internal property flooding a qualified electrician should be called to check the building's electrical system (and any appliances that have been immersed) before it is re-connected.

Location of meter and consumer unit (fuse box)

For many older properties both the electricity meter and consumer unit (fuse box) are located at low level inside the house, often in the cupboard under the stairs. If there is sufficient space raising the meter and consumer unit (fuse box) to a higher level above the expected flood level could be considered subject to approval by the local electricity supply company.

For modern houses the electricity meter is often located outside the property in a box mounted on the external wall. For new properties within flood risk areas locating the meter box and internal consumer unit above the expected maximum flood level should be considered.

Wiring

Modern electrical wiring is not normally affected by immersion in floodwater. However for long duration floods lasting several hours, water may penetrate the insulation and in such cases the wiring may need replacement. During refurbishment works, or when building new properties, moving the ground floor ring main cables to first floor level could be considered with drop down cables to ground floor sockets.

It is also advisable to use plastic cable conduits rather than to plaster cables directly into the wall in order to reduce the cost of future rewiring should this be required. However care must be taken to ensure that cable conduits are installed to avoid low points that could collect water in the event of flooding.

Socket height

For properties at risk of flooding raising the sockets to an appropriate height above flood levels could be considered. Although this could lead to savings in flood repair costs it should be noted that the appliance cables would become more visible inside the room.

Gas supply

In the event of flooding the gas supply should be turned off at the meter. Following immersion by floodwater it is essential for safety reasons that the operation of the gas system and individual gas appliances are inspected by a CORGI registered engineer before the system is re-used.

Following immersion by floodwater it is essential for safety reasons that the operation of the gas system and individual gas appliances are inspected by a CORGI registered engineer before the system is re-used.

During a flood, water and silt may find its way into gas systems affecting their safe operation. The appliances may light and appear to be working normally but the flue or ventilation systems may have been adversely affected by the floodwater or partially filled with water.

Gas meters may be affected by floodwater and it is worth considering raising meters above the expected flood levels during refurbishment works or for new build properties. Provision should be made for purging gas supply pipes through the installation of appropriate drain points.