



Facing up to the risk of flooding

A risk management guide for business

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Climate change

The UK Government has said that “climate change is the greatest environmental challenge facing the world today. Rising global temperatures will bring changes in weather patterns, rising sea levels and increased frequency and intensity of extreme weather events”.

For the UK, “climate change means warmer temperatures, more violent storms, wetter winters and drier summers, plus higher sea levels, leading to flooding of coastal areas”.

What are the implications for the flood risk to businesses?

So how has this manifested itself, so far? Compared with 50 years ago the UK now gets more precipitation (rain and snow falls) in terms of quantity, but on fewer days. Falls therefore are less frequent but heavier when they happen. Accurate predictions are hard to make but the Environment Agency has said that the incidence of serious flooding which used to be expected about once in every 100 years may (with climate change over time) occur more often, perhaps every 10/20 years. As we are preparing to print this leaflet the Agency has announced that over the next two months (September/October 2006) the highest tides in 20 years are expected, along the East Anglian coast. The fear is that if high winds and low pressure occur at the same time, then low-lying areas will be at risk of flooding.

After adjusting for natural land movements, the average sea level around the UK is now about 10cm higher than it was in 1900 and this rise is expected to continue. However it is not uniform around the UK. The South of England is very gradually sinking, with consequences for the risk of flooding. It has been estimated that around 175,000 businesses are, at present, located on floodplains.

With rising tide levels and severe weather events becoming more common, many UK businesses are likely to find themselves increasingly exposed to the risk of flooding. The fact of not having suffered a flood in the past can no longer provide the reassurance that it once did.

Applying a risk management approach to the flood risk

Although we can't control the weather or sinking land levels, applying good risk management principles to the risk of flooding is worthwhile. The more at risk your business is, the more important it is for you to take steps to try to manage that risk.

The Environment Agency estimates that businesses that take effective action in response to a flood warning, at least eight hours in advance of a flood, can make up to 90% savings on damage to moveable equipment or stock (i.e. up to 20%-70% for pubs/hotels, 70%-90% hi-tech offices, and up to 50% in retail outlets). To achieve this, effective planning and preparations are needed. You can't afford to rely on last minute ad hoc measures.

It wouldn't be possible, in this leaflet, to cover everything that you need to know and consider. Instead we have tried to provide an overview of a risk managed approach and at the same time included some tips that we hope you will find useful. At the end of the leaflet you will find a list of websites where you can find further useful information.

Is there a significant risk of my premises being flooded?

Usually when we talk about a flood we are thinking about an inundation of water from a river or the sea. However, torrential rain can often overwhelm drains and roof gutters, so much of the published advice on how to deal with flooding is also useful when considering the risk from surface rainwater from severe storm etc.

The Environment Agency (EA) publishes on its website maps which give an indication of the possible floodplains and the likelihood of flooding within those areas (In Scotland see also the Scottish Environment Protection Agency website). You will note from these the EA's reminder that flood defences are useful but, depending on its type and the severity of the event, can fail.

Putting the risk into context

The EA website is a useful place to start. However, you should try to get historical information as well e.g. from the town library or local newspaper archive (or its website). Unfortunately the EA maps will not put your particular premises into context, for example, it may be located in a dip, at the top or bottom of a slope, or in an elevated position, etc. You may have stock in an open yard or compound that is at greater risk than the buildings themselves, or conversely be located on the 10th floor of an office block!

Don't forget that the absence of a flood in the past, is not now too useful as an indicator of risk. However, a history of flooding (or previous flood warnings) and topography are.

Planning to cope with a flood

Having decided that there is a risk of flooding you should start to plan for this unwanted event. From your investigations you should have established to what depth it is predicted flood waters might reach. This, together with the nature of your buildings and the likely effect on your business, will influence the decisions that you take and the plans you make. You will want to make sure that your proposals are appropriate, cost-effective but also adequate to meet the level of risk.

If flood warnings are available in your area, make sure that you have arranged to receive them, so that you can set into motion the emergency actions that you have planned (appropriate to the flood warning level received) at the earliest possible moment.

Writing a flood plan

Advice (including an example) on what to include in a flood plan, can be found on the Environment Agency website. Make sure you keep copies of the plan away from the area around your premises that is likely to be flooded.

Don't forget routine items that can also be helpful to reduce the risk e.g. periodic inspection and cleaning out of drains, gullies and gutters etc. Make sure that all of the necessary precautions including a risk assessment are followed where work at height is involved (see Work at Height Regulations).

New buildings

For new structures you would normally try to avoid building on a floodplain. However, where this cannot be avoided, the EA website gives considerable information on the various considerations, i.e. in addition to the government publication Planning Policy Guidance Note 25 (PPG 25). Don't forget to speak to your insurance advisor before embarking on a new project that may involve a floodplain.

Trying to keep out the flood water

Depending upon whether or not you are the owner of your premises, and the type and construction of the buildings involved, it may be possible to use some of the barrier-type products now available which, when properly deployed, can reduce the risk of flood water entering buildings. However, as King Canute discovered, holding back water is not easy. It can also, with some force, enter via drains, toilets, air-bricks and ventilation openings, so these also need to be taken into account.

A barrier scheme (either for the whole site or around individual buildings), although worthwhile where the risk is significant, can be difficult and costly to implement successfully. Their success also depends upon their being in place before the floods arrive. Not much good if you didn't know the flood was coming!

Getting specialist advice

With barrier schemes it is also necessary to take into account the risk of flood water entering a building via toilets, drains, etc; so check the need for backflow valves on them, i.e. as part of an overall scheme.

Discuss any proposed scheme with your insurance advisor before placing an order. Details of products (including some British Standard "kite-marked" ones) can be found via the EA website. Don't forget to think about air-bricks and ventilation openings when looking at products and systems! Make sure that any system you are considering is suitable for the expected flood depth.

Where you have decided not to provide a proprietary barrier system but keep other emergency supplies, the EA website gives useful information including on the use of sandbags and earth filled bags. See EA guide "Temporary and Demountable Defences".

Hazardous materials and pollutants

If you store chemicals or other possible pollutants check that the height of any storage or bund wall/containment system is sufficient for the expected flood depth.

Arranging your premises to minimise the risk of damage

Barrier systems apart, some businesses have more scope than others to arrange the placement of goods, equipment and utilities, so that they are in positions that are less likely to be affected by flood waters than others. Businesses in the motor trade which have sites on floodplains should consider (given the amount of time provided by a flood warning) how and where their vehicles might be moved to another suitable location on higher ground well above areas likely to be flooded. If only a few employees are normally available they would have to consider what help (from others) might be needed to achieve this. Such plans should of course be discussed with your insurance advisor.

Consider what scope there is in your business for this, e.g. in a warehouse of mixed goods, can lower value/less important or less vulnerable goods be safely stored on the lower levels of the racking or shelving? Are all goods stored up off the floor as high as possible, particularly expensive vulnerable items such as computer servers? Is the lowest rack or shelf height as high as possible? You should be aiming for at least 4inches or 100mm, more where possible. Be aware there maybe a height warranty on your policy so check with your insurance advisor.

Can rooms such as boardroom, meeting rooms, staff rest room, and other areas with minimal equipment be located on the lower, more vulnerable levels, where the risk of flooding is significant? Can electrical equipment and fittings be relocated to a higher level. Can a wall-mounted boiler be used instead of a floorstanding one?

Vulnerable building materials

Is it possible to replace vulnerable materials used in the construction of the building or its interior fittings with other types that have better flood resistance? Are the lower parts of the external walls suitable for a water-resistant coating to reduce seepage? The government publication "Preparing for Floods" (available via the EA website) provides much useful information on this topic, including case studies from which valuable lessons can be learnt. Don't forget to check with your local authority as to whether any changes to the building will require building regulations approval and/or planning permission.

Flood warnings and flood alarms

If flood warnings are available in your area, you should have arranged to receive them, i.e. so that you can set into motion the emergency actions you have planned and which are appropriate to the flood warning level received. Don't forget, however that these warnings do not cover events such as localised flash flooding caused by storm water overwhelming drains etc. For this reason one of the precautions you should consider is the installation of a proprietary flood/water leak alarm which will signal an alarm receiving centre. If you have a remotely monitored intruder alarm the alarm company you use may be able to help you with this.

Health and safety

If you are an employer you should be familiar with risk assessments. If the risk of your premises being flooded is significant, make sure that you have completed suitable sufficient health and safety risk assessment to cover this hazard and notified your employees who may be affected of the risks involved and what control measures you have taken to address this. Consider what shut-down procedures are needed for safety reasons, especially if you have a manufacturing area, particularly where hazardous plant and processes are involved. Use printed check-lists to support your emergency procedures and flood plan. Keep these up-to-date. Don't rely on memory!

Safety precautions after a flood

Include procedures to ensure that unauthorised and/or untrained persons do not enter a flood damaged building until it has been made safe (including isolation of the electrical supply and other utilities). For various reasons it is dangerous to enter a flood damaged building, particularly as there may be structural damage or where there may be a live or damaged electrical supply e.g. it is even dangerous to walk across a wet/damp floor to the electrical intake just to turn it off. The other utilities may also be affected and need to be checked, cleaned or purged and/or replaced.

The EA website includes detailed guidance on safety considerations after a flood. Check your plans and procedures against this advice. Don't forget that temporary covers for ventilation openings will need to be removed after the flooding has ceased. Make sure your procedures include these as part of the restoration process.

Note: Do not dispose of affected goods until you have spoken to your insurance adviser or the loss adjuster appointed by the insurance company.

Training

Ensure that you provide training for your employees (including upon induction), supported by suitable emergency procedures including flood warnings and flooding. Don't forget to make adequate provision to meet the needs of the disabled and other vulnerable persons who may be on site. Record the training provided and repeat it periodically.

Business continuity planning

Ideally you should already have prepared a suitable Business Continuity Plan (sometimes referred to as a Disaster Recovery Plan), to help prepare your business to cope with the various events that might interrupt it. Make sure that you have considered flooding, as part of the plan. If you do not have a plan, but would like us to provide you with information as to how to prepare one, then please let us know.

Further information

Association of British Insurers

www.abi.org.uk

CIRIA

www.ciria.org.uk

Department for Communities and Local Government

www.communities.gov.uk

English Heritage

www.english-heritage.org.uk

Environment Agency

www.environment-agency.gov.uk

National Flood Forum

www.floodforum.org.uk

Flood Protection Association

www.floodprotectionassoc.co.uk

Check list

	Yes	No	N/A
Checked on Environment Agency (EA)(SEPA in Scotland) flood maps to see whether the premises are located on a floodplain.			
Checked EA/SEPA flood maps for likely frequency of flooding and whether there are any material flood defences.			
Considered whether the particular location of my premises (e.g. in a dip, at the bottom of a slope, or at high level, etc) is material to the risk of flooding			
Checked with EA/SEPA whether I can receive flood warnings (asked for them if available).			
Considered flood/water leak alarm with signalling to an alarm receiving centre.			
Flood risk discussed with insurance advisor.			
Based on EA/SEPA advice have started to prepare a Flood Plan.			
Arranged to keep copies of the Flood Plan away from the area around the premises likely to be flooded.			
Reviewed my Business Continuity Plan to make sure it includes flood. Review again when Flood Plan completed to ensure plans are compatible.			
Based on EA/SEPA advice have considered what measures could be taken to prevent flood waters entering the premises e.g. flood barriers, backflow valves for toilets and drains etc.			
Sandbags and other relevant emergency use materials kept on site.			
Based on EA/SEPA advice have considered what improvements could be made to the way in which goods and equipment are kept inside the premises, so as to reduce the risk of damage from flood waters.			
Discussed proposed improvements with insurance advisor, before ordering.			
Based on EA/SEPA advice have considered what improvements might be made to the type and position of electrical equipment and other utilities so as to reduce the risk of damage from flood waters.			
Checked whether any changes to the building will require Building Regulations approval and/or planning permission.			
Review health and safety risk assessments - ensure includes risks from flooding.			
Suitable and sufficient emergency and evacuations plans devised and put into place.			
Emergency plans include, where necessary, shutdown procedures for processes, machinery etc. Detailed up-to-date check lists provided to relevant persons.			
Suitable emergency arrangements made (where necessary due to a flood alert) to remove vehicles, and other high value or critical items that can be easily and safely be moved, to a safe suitable location above the height of the predicted flood.			
Suitable emergency communications equipment provided for key staff.			
Safety procedures established for period after a flood e.g. to prevent persons entering a flood-damaged building until declared safe (including electrical supply and other utilities have been isolated/made safe) by the relevant authorities or competent persons.			
Procedures in place to ensure flood prevention covers fitted over outside vents are removed after the flooding has ceased.			
Training on the Flood Plan and emergency/evacuation procedures provided to employees. Training has been recorded.			
Arrangements in place to periodically review plans and repeat training.			
Planned preventative maintenance for the premises includes periodic inspection of drains, gullies, and roof gutters etc. All necessary risk assessments and precautions taken for work at height.			

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Allianz Insurance is authorised and regulated by the Financial Services Authority. Our registration number is 121849.
This can be checked by visiting the FSA website at www.fsa.gov.uk/register or by contacting the FSA on 0845 606 1234