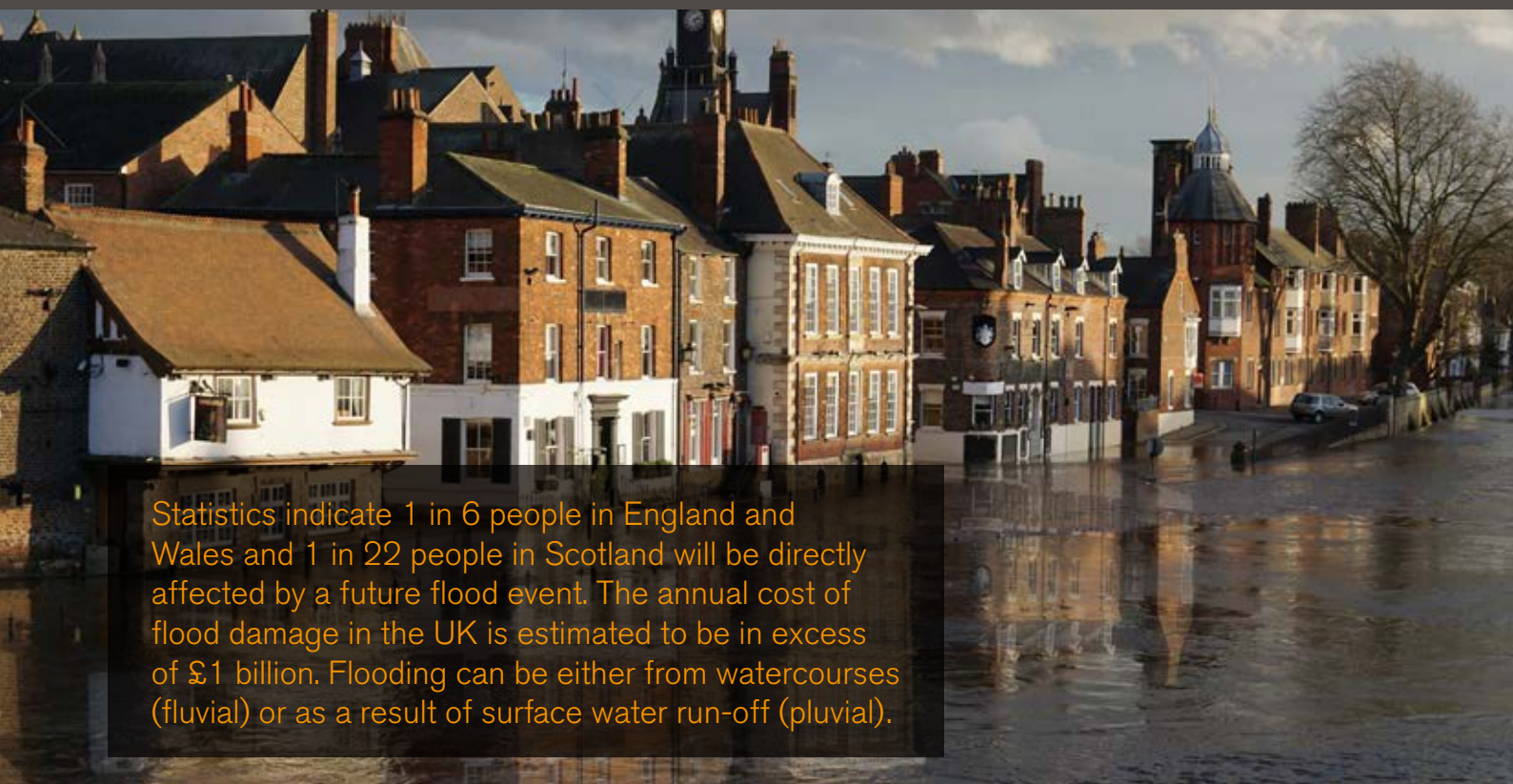


# Flood



Statistics indicate 1 in 6 people in England and Wales and 1 in 22 people in Scotland will be directly affected by a future flood event. The annual cost of flood damage in the UK is estimated to be in excess of £1 billion. Flooding can be either from watercourses (fluvial) or as a result of surface water run-off (pluvial).

Surface water run-off (SWRO) happens when heavy rainfall overwhelms drainage systems. It can happen many miles from established watercourses, including in areas with no prior history of flooding problems. Incidents of surface water run-off can be quite difficult to predict, occur quickly and are generally short lived.

It is estimated that 2.8 million properties are at risk of damage by surface water run-off, and more are likely to be affected in the next 25 years than from more traditional (fluvial) flooding. It is important that both individual home-owners and organisations understand the risk to their property arising from both.

Climate change is clearly a factor, with increasingly prolonged periods of wet weather. Ongoing land development, creating more hard-standing surfaces, and developments on flood plain areas have resulted in reduced drainage capacity and a build-up of surface water which cannot drain away quickly enough in some areas.

Both fluvial and pluvial flood risks can be assessed at postcode level using the Environment Agency or Scottish Environment Protection Agency and Natural Resources Wales websites. A national SWRO map was published by the Environment Agency in 2013 identifying 4 levels of risk for a designated area.

High	1 in 30 chance of SWRO flooding each year
Medium	1 in 100 chance of SWRO flooding each year
Low	1 in 1000 chance of SWRO flooding each year
Very Low	Less than 1 in 1000 chance of SWRO flooding each year

The map can be accessed on the Environment Agency website [www.environment-agency.gov.uk/flood](http://www.environment-agency.gov.uk/flood). Alternatively you can call the Floodline service for this information on 0845 988 1188. Whilst the Environment Agency cannot post SWRO flood alerts it is worth registering for the alert service for river and coastal flooding incidents. The Agency provide a free 24 hour 'Floodline Warnings Direct' service, available via a range of media including phone, text and email.

You should complete a flood assessment to determine the risk of both river and surface water flooding to the site. This should lead to the development of an overall Flood Plan. The Environment Agency (for England and Wales) and the Scottish Environment Protection Agency (SEPA) for Scotland have developed a lot of helpful guidance to support the completion of flood assessments and Flood Plans, including standard templates for capturing the relevant risk information.

## Flood Plans

An effective Flood Plan based on risk assessment for the site will help mitigate both financial loss and disruption to operations. The Flood Plan should detail how your organisation will respond to a flood event and should be developed by a team of suitable representatives from across the business, led by a senior member of staff with overall responsibility for communication and coordination of the plan. The plan should include details of key contacts in the event of a flood, a site plan detailing the location of service cut-off points (gas, electricity etc.) so these can be isolated, and vulnerable property/high risk areas where action is required.

If there is an imminent risk of flood, the safe evacuation of staff and visitors will be a key priority and evacuation procedures should be clearly detailed in the plan, including identification of safe shelter points.

Key contacts to be recorded in the Plan should include the emergency services, electricians, GasSafe registered contractors, security providers and plumbers. Don't forget to include your insurance intermediary's details.

A copy of the Flood Plan should be kept off site and relevant staff should be trained in the procedures to be followed. It should also include details of the controls to be adopted to minimise flood damage to the site. This will be achieved through a range of flood resistance and flood resilience measures.

## Flood Resistance

Flood resistance measures are steps that can be taken to prevent flood water entering the property. A range of measures may be considered, including:

- Flood barriers – flood boards that can be installed across doorways and windows ahead of the arrival of flood water. These usually slide into a frame pre-attached to the building structure to provide a watertight seal.
- Sandbags – Used in conjunction with plastic sheeting to create a flood barrier.
- Airbrick covers – one of the first points of entry of floodwater into a property is via airbrick vents. A plastic cover can be clipped to framework surrounding airbricks to prevent the entry of water.
- Non-return valves to drainage systems to prevent backflow of foul water into the property.
- Drainage Gullies – installed around your property designed to capture surface water and divert it direct to drains.
- Landscaping – this can be used to divert surface water away from a building. Care should be taken to ensure water is not diverted on to neighbouring property where it could cause damage.

Where possible any flood resistance/alleviation measures should be non-mechanical so that they do not require human interaction to operate when needed.

## Flood Resilience

In extreme flood situations, flood resistance measures may be defeated, and indeed may even need to be breached to maintain the structural integrity of a building. Before this happens, you should move any property at risk of damage above ground floor level where possible. Where this is not possible, you should try to raise items above anticipated flood water levels, perhaps on blocks or plinths.

When designing new buildings assessed to be at risk of flooding, or completing repairs following a flood event, consider introducing the following measures to minimise future disruption.

- Fit horizontal plasterboard or lime based plaster instead of gypsum.
- Introduce drainage systems within cavity walls
- Use tile flooring instead of carpets
- Use built-in units manufactured using stainless steel, solid wood or similar rather than chipboard
- Locate appliances on plinths raised above the floor
- Increase the height of damp proof coursing to walls
- Raise electrical sockets and fuse boxes at least 1.5 metres above floor level and run cabling to these from ceiling rather than floor level
- Raise the height of door thresholds
- Installation of sump pumps in lower ground areas such as basements. Sump pumps should be triggered using a float switch.

Free, impartial advice is available for householders and businesses on [www.floodguidance.co.uk](http://www.floodguidance.co.uk), part of the Property Flood Resilience Action Plan, a collaboration between central government, the Environment Agency, insurers, flood action groups and other interested parties.

A range of both flood resistance and resilience products can be found in “[The Blue Pages](#)” directory available on the [National Flood Forum website](#). Flood defence products purchased for use as part of your Flood Plan must be regularly inspected/checked to ensure they remain fit for purpose and available when required.

In addition to the above, Flood Plans designed to combat surface water run-off should also include:

- Regular inspection of site drains. Manhole covers should be regularly lifted to check drains are clear. The drainage system should be cleared if there is any indication of problems
- Regular inspection of culverts, gullies and other drainage channels which should be cleared of any blockages as necessary. You might also wish to discuss the maintenance and inspection of culverts in neighbouring premises if there is a possibility that your property might be affected.
- Suitable Disaster Recovery/Business Continuity arrangements to support the swift recovery of activities. This may include the involvement of emergency plumbers and electricians to make the services safe. You might also need to consider alternative security arrangements if the existing physical and electronic security systems to the site are compromised. This might involve static security guards or security patrols by SIA licensed and NSI/SSAIB accredited providers.

## Need to contact us?

For further advice Ecclesiastical customers can call our Risk Management Advice Line on **0345 600 7531** (Monday to Friday 09:00 to 17:00, excluding Bank Holidays) or email us at [risk.advice@ecclesiastical.com](mailto:risk.advice@ecclesiastical.com) and one of our experts will call you back within 24 hours.

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