

Loss prevention standards

Flood Guidance and Mitigation (Global)

Climate change is resulting in more frequent and intense flooding across Europe and the world. Robust planning can help avoid flooding and improve recovery time if the worst happens.



Flood Guidance and Mitigation (Global)



Introduction

Flooding is one of the most common worldwide natural disasters. With the frequency and severity of these incidents increasing in recent years, it has become a major consideration for organisations due to the devastating effects on business operations and continuity. This guidance could help to reduce the effects of a flood on your business.

Supporting businesses from the effects of flooding

In recent years, there have been severe flooding incidents in the UK, Germany, Czech Republic, Switzerland, Poland, and Russia, with the costs estimated in the region of many billions of Euros, not all of which is covered by insurance. Sadly, things are not likely to improve substantially, as climate change resulting in more rainfall and rising sea levels may well lead to more frequent and intense floods.



What are the most common sources of flooding?

- River flooding
- Surface water flooding
- Coastal flooding
- Reservoir flooding
- Flooding from rising groundwater
- Sewer flooding

Assessing the risk of flood

It is important to consider the flood risk to your premises and take the necessary precautions to avoid the property being flooded, prevent damage if the property is flooded, and recover from a flood if the worst should happen. Having robust plans in place could help to reduce the potential for loss as part of a loss prevention strategy.

How to assess the risk of a flood

You should obtain data on flooding from your local and national agencies.

You can then assess the risk to your site posed by the possibility of flooding and implement preventative measures.

Factors to consider when you undertake an assessment include:

- Whether the site or surrounding area has a history of flooding (although the lack of previous flooding does not preclude the risk of future incidents)
- The proximity of the site to all sources of water
- The lie of the land on which the premises are located, i.e. sloping or flat

LOSS PREVENTION STANDARDS

What you can do if a flood risk has been identified

A Flood Emergency Response Plan should be made, which details how you will respond to the threat of flooding. For businesses, this may form part of your overall Business Continuity Plan.

- The plan should detail the procedures to be adopted if access to the premises is denied due to flooding of the surrounding area and roads
- It should be regularly reviewed and tested, with training provided to relevant individuals about when and how to activate it
- Copies of the plan should be kept in areas of the site where there's little likelihood of flooding, or off-site

Protection measures to include in the plan

Consider the following protection measures to reduce the impact of flooding as part of a Flood Emergency Response Plan:

- Relocating critical equipment and stock
- Containment of hazardous substances
- Reviewing external storage arrangements
- Waterproofing external walls
- Inspecting drainage systems
- Non-return valves for drains
- Installing flood protection equipment
- Basements having adequate drainage, e.g. sump pumps

What you can do if a flood is forecast

Check for the latest weather alerts and warnings from local and national agencies. Initiate the Flood Emergency Response Plan and deploy any protection measures. If possible and where safe, consider machinery and process shutdown procedures as appropriate, and disconnect gas, water, and electricity supplies. Close-off flow valves on gas tanks and remove vehicles to higher and secure ground.

Agencies providing advice on floods and risk notifications

The [Environment Agency](#) in England, the [Scottish Environment Protection Agency](#) (SEPA) and [Natural Resources Wales](#) operate a 24-hour Floodline telephone service on 0345 988 1188, which gives real-time flood warnings and advice, including the risk of flooding in your area. It's worth updating yourself regularly if you think you are about to be flooded. Similar information is available in Northern Ireland at: [nidirect Government Services](#).

Other useful links

- UK – [National Flood Forum](#)
- Europe – [European Flood Awareness System \(EFAS\)](#) - Designed to support preparatory measures before major flood events strike
- United States of America – [Federal Emergency Management Agency](#) (FEMA) – Flood Map Service Centre
- Global – [FloodList](#) – Provides information about floods and flooding from around the world

What to do during a flood

- Ensure that people are safely evacuated in a timely manner and cooperate with the Emergency Services
- Employees should be advised not to wade through floodwater as it's likely to be contaminated with sewage and other pollutants
- Notify your insurance company and your insurance agent of the flood to obtain their guidance and advice, and plan salvage operations

What to do immediately after a flood

- Implement procedures to ensure that only authorised people enter the premises until such time as it has been made safe, due to the possible hazards that may be present, e.g. structural damage, pollutants
- Do not use electrical or gas supplies until checks have been undertaken by competent individuals confirming their safety
- Consider the use of thermographic cameras if electrical equipment has been damaged
- Do not enter any deep standing water, as this may be contaminated or contain hazards that are not easily seen

Reducing damage and disruption in the future

Repairing a property that's been flooded offers an opportunity to minimise the damage and disruption that could be caused by flooding in the future. There are two main approaches:

1. Flood resilience – measures that can be made to reduce damage caused when floodwater gets inside a property
2. Flood resistance – measures that reduce the amount of water that gets inside a property

Following the flood, a review should be undertaken of the Flood Emergency Response Plan to ascertain what worked, and what could be done differently if the event were to happen again in the future.

All properties that have been flooded could benefit from some degree of flood-resilient repair. Some resilience techniques may not cost substantially more than standard repair (like-for-like), and these may be an appropriate way to repair a range of flooded properties.

If your business continues to be exposed to a significant risk of flooding, it would be worth repairing your property after a flood with a comprehensive set of flood-resilient measures. In such instances, some expenditure may be required, which is beyond the costs covered by your insurance claim.

Checklist

A generic Flood Review and Actions Checklist is presented in Appendix 1 which can be tailored to your own organisation.

Specialist Partner Solutions

Aviva Risk Management Solutions can offer access to a wide range of risk management products and services at preferential rates via our network of Specialist Partners.

For more information please visit:

[Aviva Risk Management Solutions – Specialist Partners](#)

Additional Information

Relevant Loss Prevention Standards include:

- UK Flood – Guidance and Mitigation

To find out more, please visit [Aviva Risk Management Solutions](#) or speak to one of our advisors.

Email us at riskadvice@aviva.com or call 0345 366 6666.*

*Calls may be recorded and/or monitored for our joint protection.

Appendix 1 - Flood Review and Actions Checklist



Location	
Date	
Completed by (name and signature)	

	Assessing the risk of a flood	Y/N	Comments
1.	Does the site have a history of flooding?		
2.	Is the site close to any rivers, streams, water drainage ditch, similar water channels and open bodies of water such as lakes or reservoirs?		
3.	Is the property located in a low-lying area?		
4.	Is the property situated in a known flood plain?		
5.	Are there any basements, cellars or similar used by you, which may be affected by flooding?		
6.	Any additional comments:		

LOSS PREVENTION STANDARDS

	Actions to be taken if you have identified a flood risk	Y/N	Comments
7.	Have you developed a Flood Emergency Response Plan or extended existing emergency plans, including Business Continuity Plans, and are they regularly tested?		
8.	Are building walls sealed or liquid-tight to at least 1-metre higher than expected inundation levels?		
9.	Where pipes, cable runs, etc. penetrate external walls, are they adequately sealed?		
10.	Are critical/vulnerable equipment and stock stored off the floor or relocated to other parts of the premises, or to an upper floor?		
11.	Is stock in the open stored on purpose-built, elevated metal racking secured to the ground and/or has consideration been given to the use of permanent water-resistant concrete plinths for yard storage?		
12.	Are fuel storage tanks suitably anchored to limit the potential for damage or pollution under flood conditions?		
13.	Where critical plant is located in basements and cannot be relocated, is the area around it protected from the potential of flooding?		
14.	Have electrical and telecommunications points such as sockets, telephone connections, cabinets and servers been raised to a higher point, e.g. at least 1-metre above expected flood levels?		
15.	Has consideration been given to replacing susceptible linings, furniture, fixtures and fittings, with more water-resistant alternatives?		
16.	Are contracts and agreements in place with appropriate salvage, recovery, and restoration organisations?		

LOSS PREVENTION STANDARDS

	Actions to be taken if you have identified a flood risk contd.	Y/N	Comments
17.	Has a flood kit been assembled? For example, does it contain: <ul style="list-style-type: none"> • Insurer’s emergency helpline telephone number? • Details of the insurance policy? • Other useful numbers such as customers, suppliers, the local council, and Emergency Services? 		
18.	Do you subscribe to flood alert warnings such as the Environment Agency flood alert scheme for properties in England?		
19.	Have local property flood protection devices such as demountable barriers, airbrick covers (for brick buildings), sand bags, and non-return valves for drains and waste pipes been purchased/installed ready for use? If so, are nominated employees familiar with these devices and how to use them, and are suitable maintenance arrangements in place for such equipment?		
20.	Has the health and safety of employees and visitors been considered in the event of a flood?		
21.	Are regular checks of the building structure undertaken to look for any defects, cracks and gaps through which water could enter the premises? Is it ensured that any defects/openings that are discovered are promptly sealed up?		
22.	Are drainage systems such as guttering, down pipes and drains regularly inspected and maintained at least once a year?		
23.	Do any yards or adjacent roads slope towards your premises?		
24.	If you become aware that local street drainage systems cannot cope in times of rainfall, do you ensure that this is reported to the controlling authority as it may be that it has become silted up and requires cleaning?		
25.	Are your premises visited during times when the site is closed such as holidays, to make certain that any problems are identified at the earliest opportunity?		
26.	Any additional comments:		

LOSS PREVENTION STANDARDS

	Actions to be taken if a flood is forecast	Y/N	Comments
27.	Has the Flood Emergency Response Plan been activated and communicated?		
28.	If possible, have gas, electricity and water supplies been turned off (water at the mains), ensuring a safe shut down of critical plant and machinery? Is power to alarm/security systems maintained during these times?		
29.	Have all electrical items been unplugged and where possible stored up high or on upper storeys? With regard to heavy electrical items, has the possibility of raising them above anticipated flood water levels been considered?		
30.	Have flow valves been closed-off on gas and oil tanks that supply the premises through pipes and fittings?		
31.	Has furniture, machinery and stock been moved to upper storeys?		
32.	Have any temporary flood protection measures/barrriers been deployed?		
33.	Have vehicles and trailers been moved to higher and secure ground?		
34.	Are procedures in place to be alert to the risk of flooding caused not only by rivers, but also surface water building-up and overwhelming drains following heavy periods of rainfall, leading to localised flooding?		
35.	Has vulnerable stock sited in open yards been relocated?		
36.	Any additional comments:		

	Actions to be taken during a flood	Y/N	Comments
37.	Have you cooperated with the Emergency Services including if they inform you to evacuate the premises during a flood?		
38.	Are you prepared to act quickly to get all employees and visitors to safety?		
39.	Has guidance been provided to all individuals advising them not to try and walk or drive through floodwaters? <ul style="list-style-type: none"> • Six inches of fast flowing water can knock you off your feet • Two feet of water can move a car 		
40.	Has information been provided to all individuals on risks to be aware of such as manhole covers having come off along with other hazards that cannot be seen under floodwater?		
41.	Have employees been advised not to walk on riverbanks or cross bridges as they may collapse?		
42.	Have employees been advised to avoid contact with floodwater as it may be contaminated with sewage? (They should be aware of waterborne diseases such as Weil's disease where there are areas of standing floodwater.)		
43.	Have you contacted your insurer and your insurance agent to advise them what has happened? Insurers will be able to provide best guidance and instigate any specialist services that may be required. Ensure that they have your contact information in case you have to vacate the premises.		
44.	Any additional comments:		

	Immediate post-flood actions	Y/N	Comments
45.	Have you ensured that only authorised individuals re-enter the site until such time as it has been deemed safe to do so?		
46.	Have salvage operations been undertaken?		
47.	Have you ensured that electrical or gas supplies in flooded buildings have not been used until appropriate checks have been completed by qualified individuals?		
48.	Have checks been undertaken on the safety of any hazardous items?		
49.	Have the fire protection and security systems been assessed including plans to reinstate them as quickly as possible?		
50.	Have all covers and barriers been removed once the floodwater has receded to allow air to circulate and water to escape?		
51.	Have flood protection devices been cleaned to avoid possible contamination?		
52.	Have photos and videos of damage to buildings, contents or stock been taken as this may assist with damage assessment and settlement of a claim?		
53.	If making an insurance claim, have you avoided disposing of any items until your insurers have confirmed that it is acceptable to do so?		
54.	Any additional comments:		

	Reducing damage and disruption from flood in future	Y/N	Comments
55.	Have flood resilience or resistance measures been considered for all site buildings?		
56.	Have you reviewed the Flood Emergency Response Plan following the flood and updated/amended it accordingly, along with other emergency plans such as Business Continuity? Has any new learning, including training where required, been implemented?		
57.	Any additional comments:		

Please Note

This document contains general information and guidance only and may be superseded and/or subject to amendment without further notice. Aviva has no liability to any third parties arising out of ARMS' communications whatsoever (including Loss Prevention Standards), and nor shall any third party rely on them. Other than liability which cannot be excluded by law, Aviva shall not be liable to any person for any indirect, special, consequential or other losses or damages of whatsoever kind arising out of access to, or use of, or reliance on anything contained in ARMS' communications. The document may not cover every risk, exposure or hazard that may arise and Aviva recommend that you obtain specific advice relevant to the circumstances.

17/02/21 V1.3

Aviva Insurance Limited, Registered in Scotland Number 2116. Registered Office: Pitheavlis, Perth PH2 0NH.
Authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

LOSS PREVENTION STANDARDS