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NEW DEVELOPMENT AND EMERGENCY FLOOD PLANS



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This guidance has been developed to support applicants and developers who are required or encouraged to produce and submit an emergency flood plan as part of a planning application. An emergency flood plan may be required for development to ensure it is safe in terms of risk of flooding. This will depend on the nature of a proposed development and the type and severity of flood risk to the site.

Emergency flood plans should be proportionate to the risk and appropriate to the scale, nature, location and type of proposed development.

What does this guidance cover?

- Aims and objectives of an emergency flood plan
- Planning policy context
- Setting out when and why emergency flood plans are needed
- Approval process for emergency flood plans
- Other sources of information to assist in the preparation of emergency flood plans
- Suggested contents and structure of emergency flood plans.

What is the Aim of an Emergency Flood Plan?

To reduce the risk to life, mitigate damage and enable a safe and organised evacuation of occupants of the premises during a flood event.

What are the Objectives of an Emergency Flood Plan?

- Raise awareness of the risk of flooding in the specified location
- Detail the flood warnings and estimate what lead time is available
- Detail how the Plan is triggered, by who and when
- Define any areas of responsibility for those participating in the Plan
- Describe what actions are required by the people in the development
- Establish safe access and egress routes to a safe location
- Outline the evacuation procedure and place of refuge for the occupants of a premises
- Establish procedures for implementing, monitoring and maintaining the Plan.

Planning Policy Context

Specific flood risk policies are set out in the National Planning Policy Framework (NPPF) from paragraphs 100 to 104. The main emphasis is to avoid inappropriate development in areas at risk of flooding. The associated technical guidance states that developers and applicants need to ensure that appropriate evacuation and flood response procedures, relevant to their proposed development, are in place to manage the residual risk associated with an extreme flood event.

The NPPF states that the applicants must provide evidence to show that the proposed development would be safe and that the residual flood risk can be overcome to the satisfaction of the Local Planning Authority (LPA) and Environment Agency (EA).

The developer should prepare a comprehensive flood risk management strategy for the site to ensure it will be safe and that people will not be exposed to hazardous flooding from any source. The management strategy should cover:

- the design of any flood defence infrastructure
- access and egress
- operation and maintenance
- design of development to manage and reduce flood risk wherever possible;
- resident awareness
- flood warning and evacuation procedures (see also advice here on when flood warning and evacuation plans are needed); and
- any funding arrangements necessary for implementing the strategy.

This guidance note provides advice on how these requirements could be considered and met.

Approval Process

Oxfordshire County Council does not provide bespoke advice in relation to Emergency Flood Plans.

We would however request that these plans are developed as part of the planning application process. This is to ensure that procedures are in place for occupants or users to retreat to a safe place of refuge, via a safe route, should a flood event occur.

There is no statutory requirement on the Environment Agency (EA) or the emergency services to approve evacuation plans. The ultimate decision rests with the Local Planning Authority. The EA will not comment on the acceptability of an emergency flood plan.

What about the consideration of reservoirs?

It may be appropriate for the LPA to consult the emergency services on specific emergency planning issues related to new developments. LPAs are also advised to consult with, as part of the planning application process, the owners or operators of raised reservoirs, to establish any constraints upon safe development.

Climate Change

Emergency Flood Plans should take account of the likely impacts of climate change, e.g. increased water depths and the impact on how people can be evacuated. In advising the LPA, the emergency services are unlikely to regard a development that increases the scale of any rescue as being safe.

Defended Areas

Consideration should be given to locations where there is a residual risk of flooding due to the presence of defences. Judgement will be required on whether a proposal can be regarded as safe if it requires evacuation from an area if it could be flooded by failure of the defences.

Proposals that are likely to increase the number of people living or working in areas of residual flood risk require particularly careful consideration, as they could increase the scale of any evacuation required.

Safe Access and Egress

Access routes should allow occupants to safely access and exit their dwellings in flood conditions.

Vehicular access to allow the emergency services to safely reach the development during design flood conditions will also normally be required.

Wherever possible, access routes should be located above design flood levels and should avoid flow paths.

Where access is required through limited depths of flooding, appropriate signage should be provided to make it safe.

Holiday Accommodation

A flood warning and evacuation plan is an essential requirement for sites at risk of flooding used for holiday accommodation (e.g. hostels and hotels) and short-let caravan and camping. This is because the occupants are transient and may not be aware of the risk.

Flood resilience and resistance measures

The first preference should be to avoid flood risk. Where it is not possible to locate a building in an area of lower flood risk, a building and its surrounds may be constructed to avoid it being flooded (e.g. by raising it above flood level).

Since flood management measures only manage the risk of flooding rather than removing it, flood resistance and flood resilience may need to be incorporated into the design of buildings and other infrastructure behind flood defence systems.

Flood-resistant construction can prevent entry of water where there is short duration flooding and when depths of water are 0.6 metres or less. Flood resilient construction minimises the damage caused by flooding.

Resistance and resilience measures are unlikely to be suitable as the only mitigation measure to manage flood risk, but they may be suitable in some circumstances. Temporary and demountable defences are not appropriate for new developments.

What should be done to make development safe from flood risk?

- designing buildings to avoid flooding by, for example, raising floor levels;
- providing adequate flood risk management infrastructure which will be maintained for the lifetime of the development;
- leaving space in developments for flood risk management infrastructure to be maintained and enhanced; and
- mitigating the potential impacts of flooding through design and flood resilient and resistant construction.

What should an Emergency Flood Plan include?

The checklist below sets out the key subjects that should be considered as part of any Emergency Flood Plan.

Emergency Flood Plan Checklist

REPORT SECTION	SUB-SECTION	Y/N
Scope, Objectives and background	Explain the reason for making an emergency flood plan. Provide the purpose of the plan – aims, objectives.	
Location and proposal	Provide a site description and proposed land use. Outline the presence of critical infrastructure and vulnerable people. Show access and egress points.	
Risk Summary	Outline the source/s of flooding and presence of flood zones (fluvial, pluvial and groundwater). Provide a brief explanation of the factors leading to flooding, i.e. heavy rainfalls, certain assets, river flooding, surface water flooding etc	
Mitigation Measures	Assessment of potential mitigation measures and products. Assess the worthiness of implementing or purchasing products to lessen the threat and impact of flooding to the site. Detail how such measures can/will be put into place.	

REPORT SECTION	SUB-SECTION	Y/N
Flood warnings and associated actions	<p>There should be an explanation of Flood Warnings available and how the Floodline operates and contact numbers within the Plan. Note that the EA's flood warnings are only in relation to fluvial flooding, and do not cover other sources of flooding such as surface water or groundwater flooding.</p> <p>It is crucial to fully explore the variety of flood warnings available to a development.</p> <p>The EA provides a number of methods for receiving flood warnings. It is also useful to understand the lead time for flood warnings. Other sources of warning include flood wardens, sirens and the media.</p> <p>There should be clear statement that the occupants/organisation will sign up to the Floodline service. Business should clearly identify the individuals responsible for receiving the calls.</p> <p>Outline actions and procedures upon receiving flood alerts and warnings and the dissemination of flood alerts and warnings.</p>	
Safe access and egress	<p>Safe access to and from the development. Evacuation routes (shown on map).</p> <p>When should evacuation procedures be implemented?</p> <p>What circumstances will trigger an evacuation?</p> <p>Will there be an alarm system and how will evacuation be organised?</p> <p>Will there be an assembly point?</p> <p>Where will people be evacuated to? What route? Will it be signposted?</p>	

REPORT SECTION	SUB-SECTION	Y/N
	<p>Would rescue by emergency services be necessary and feasible?</p> <p>During the evacuation, how will the welfare of people be looked after?</p> <p>What are the procedures after an evacuation and how will the people's welfare be looked after?</p>	
Temporary refuge	<p>Details of type and quality of refuge onsite or offsite, permanent or temporary.</p> <p>If on-site refuge is considered appropriate, the place of refuge should be well above the predicted flood level and this should include an allowance for climate change and any breach of defence scenarios.</p> <p>Provide the expected duration of flooding on site if a temporary refuge option is considered.</p> <p>Any place of refuge should be clearly identified in the Plan and all staff/ occupants and residents made aware of this location.</p> <p>It is further suggested that a flood kit/ grab bag should be stored and kept at the on- site refuge to support a short-term stay.</p>	
After the flood	<p>Provide procedures required post flood.</p> <p>Estimated time taken for return to normal use.</p> <p>Include clean-up times and the time to re-establish services.</p>	

REPORT SECTION	SUB-SECTION	Y/N
Business continuity	<p>Commercial and retail premises should develop a business continuity plan (BCP) in the event of any emergency or disruption to activities.</p> <p>The BCP anticipates disruptions to normal activities and identifies critical activities that need to be maintained to deliver services, run the business and survive the crisis.</p>	
List of key contacts	List all relevant key contacts.	
Dangers of flood water	Education on dangers of flood water.	
Plan usage and roll out	<p>Methods to raise awareness.</p> <p>Awareness policy.</p> <p>Exercise/test/practise of plan and evacuation.</p>	
Plan monitoring	<p>Monitoring and review of the plan.</p> <p>Responsibly for plan maintenance.</p>	

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