# Appendix D – Flood response plan guidance and structure

# Chapter 1: Flood Response Plan Guidance

## Introduction

This guidance has been produced to assist with the preparation of Flood Response Plans (FRP). FRPs need to be provided as part of a Flood Risk Assessment where this is necessary to accompany a planning application.

All residents and businesses in flood risk areas are encouraged to prepare and maintain a Flood Response Plan so they are prepared in the event of a flood.

Floods present a danger to health and life and can damage property. It is important to be prepared in advance to limit the dangers and damage. At times of flooding, emergency and other local services will be under significant pressure. The better prepared you are, the less pressure the services will be under so they can attend to the most vulnerable in the community. Even if you are not physically injured in a flood, the consequences can have an emotional impact. The shock and disruption and damage to, or loss of, property and possessions can have big impacts. Being proactive and having a Plan you are familiar with in advance can help you take prompt, effective action when warnings are issued and result in an easy and efficient recovery.

Every effort has been made to ensure this guidance is accurate and comprehensive as at the date it was prepared. However, it is the responsibility of the developer to ensure that any additional risks relevant to a particular property development are fully considered. The Broads Authority will not accept responsibility for any errors, omissions or misleading statements in this guidance or for any loss, damage or inconvenience caused as a result of relying on this guidance.

You will need to adapt the template to reflect the specifics of your site; such as the size and the number of people who use and what they use it for.

According to a new guide produced by ADEPT and the Environment Agency in September 2019[[1]](#footnote-1), flood response plans should address the following:

* characterise and quantify the flood risk
* list relevant flood warnings and estimate the likely lead-time available
* detail who is at risk – including vulnerable people and transient users
* explain how the EP will be triggered, by who and when
* define any areas of responsibility for those participating in the EP
* describe what actions are required by the people in the development
* set out the type and performance of any flood resistance or resilience measures to be installed prior to a flood
* establish safe access and escape routes to a safe location
* outline the evacuation procedure, place of refuge and related equipment needed to serve occupants for the required duration
* detail what emergency service infrastructure and/or contributions are proposed
* establish procedures for implementing, monitoring and maintaining the plan throughout the lifetime of the development

## Flood response plans - considerations

* 1. **Flood warnings**

The Environment Agency is responsible for providing flood warnings to the public. Anyone can register with the Environment Agency's flood warning service 'Floodline Warnings Direct[[2]](#footnote-2)'. The Floodline Warnings Direct (FWD) service provides information about the current and future flooding danger. If flooding may happen, the Environment Agency will issue a flood warning to registered users by telephoning a pre-arranged number with a recorded message or by sending a text or email.

The 3 flood warning codes are shown below. You can go to the Flood Information Service[[3]](#footnote-3) to see what warnings are in place around the Country.

|  |  |  |
| --- | --- | --- |
| **Severe Flood Warning** | **Flood Warning** | **Flood Alert** |
| Severe Flood Warning  Severe flooding. Danger to life. | Flood Warning  Flooding is expected. Immediate action required | Flood Alert  Flooding is possible.  Be prepared |

* 1. **Liaise with neighbours**

When drafting an FRP you are strongly encouraged to liaise with the owners/occupiers of any neighbouring and nearby sites. That way you can coordinate procedures and minimise confusion during an incident.

* 1. **Evacuating**

FRPs should reflect the fact that people should evacuate**prior** to a flood occurring. Once flooding has**inundated** an area, staying put rather than evacuating, could be the safer option. This is because of the dangers of moving in flooded areas such as lifted manhole covers and contaminated water. It is important to note that in the Broads area, flood waters may take a longer time to subside which can cause difficulties for those taking refuge within buildings. Your FRP needs to reflect the local circumstances.

Ensure that the FRP deals with the potential difficulties involved in immediate evacuation which may need to be carried out in inclement weather. The FRP needs to address how people will reach local authority designated rest centres.

* 1. **People requiring extra assistance**

Informing appropriate response organisations, such as Social Services, about any elderly or vulnerable people who may require extra assistance in the event of an emergency such as a flood.

Particular attention should be given to the communication of warnings to vulnerable people including those with impaired hearing or sight and those with restricted mobility.

## Other sources of useful information

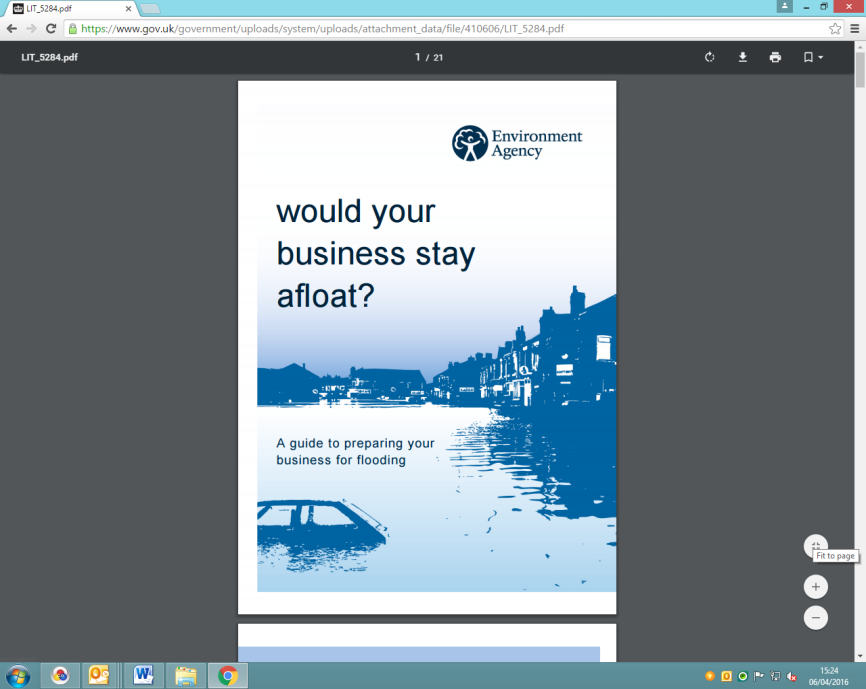
Emergencies web pages of the County and District Councils contain useful information which you may wish to consult/refer to in your FRP:

* Norfolk County Council: <http://www.norfolk.gov.uk/safety_emergencies_and_accidents/index.htm>
* Suffolk County Council and Waveney District Council: <https://www.suffolk.gov.uk/emergency-and-rescue/>
* South Norfolk Council: <http://www.south-norfolk.gov.uk/environment/1507.asp>
* Broadland Council: <http://www.broadland.gov.uk/environment/316.asp>
* Norwich Council: <https://www.norwich.gov.uk/info/20226/emergency_planning>
* North Norfolk Council: <https://www.north-norfolk.gov.uk/tasks/emergency-planning/>
* Great Yarmouth Council: <http://www.great-yarmouth.gov.uk/article/2512/Emergency-planning>
* Met Office website. <http://www.metoffice.gov.uk/public/weather/forecast/?tab=map>
* National Flood Forum: The NFF is an independent body that supports flood preparedness and flood recovery. It has advice about flood protection products and clean up processes. It also covers other areas of post flooding support. <http://www.floodforum.org.uk/>
* Flood risk emergency plans for new development <https://www.adeptnet.org.uk/floodriskemergencyplan>

## Your Flood Response Plan

Flood Response Plans may be different for different buildings. This would reflect the time of day someone might be there, how many people are in or around the building and what the building is used for.

* **Businesses** can follow the Environment Agency's guide 'Would your business stay afloat? A guide to preparing your business for flooding'[[4]](#footnote-4).
* **Community organisations** can follow the Environment Agency's guide 'Flooding - minimising the risk. Flood plan guidance for communities and groups. Practical advice to help you create a flood plan'[[5]](#footnote-5).



The following suggested structure is for the production of Plans for residential, holiday and other development which includes overnight accommodation.

# Chapter 2: Suggested structure for your Flood Response Plan

## Introduction

* Describe the site fully and accurately including where it is and what it is used for:
  + State the name and address of the property.
  + Attach a site plan to identify the location and size of the site.
  + Identify what type of development it is (a residential dwelling, holiday let, second home, etc.) and the size (number of storeys, number of bedrooms, any outbuildings, etc).
  + Identify where the access into the site and into the building is – will this be safe at times of flood? If not, are there other safe accesses that can be used?
  + Identify where people could safely be rescued from in an emergency if a flood occurs before the building is evacuated (usable safe refuge).
* Identify potential sources of floodwater and what to look out for.
* What timescale are people likely to have to respond to flood warnings?
* State who will be responsible for implementing the Flood Response Plan and who will review it and how regularly.
* State the date the Plan was adopted and refer to timescales for review.
* State which flood zone the site is in (as identified in a Flood Risk Assessment or on the Environment Agency's website[[6]](#footnote-6)). A flood zone identifies how likely the site is to flood.
* Identify the scope of the plan – the site, building, property and people

**Zone 1: Low Probability of flooding**Land having a less than 1 in 1,000 (0.1%) annual probability of river or sea flooding.

**Zone 2: Medium Probability of flooding**Land having between a 1 in 100 (1%) and 1 in 1,000 (0.1%) annual probability of river flooding; or

Land having between a 1 in 200 (0.5%) and 1 in 1,000 (0.1%) annual probability of sea/tidal flooding.

**Zone 3a: High Probability**Land having a 1 in 100 (1%) or greater annual probability of river flooding; or

Land having a 1 in 200 (0.5%) or greater annual probability of sea/tidal flooding.

**Zone 3b: The Functional Floodplain**This zone comprises land where water has to flow or be stored in times of flood, during a flood event with an annual probability of 1 in 20 (5%) or greater.

## Warning arrangements

* Register the site with the Environment Agency's Floodline Warnings Direct service.
* Who receives these warnings and how? What if they are away? What will they do when they receive a warning?
* Where will a copy of this Plan be kept? How will all residents/tenants know where to find it?
* How will response organisations (like the police and fire service) be made aware of elderly or vulnerable people who may require extra assistance in the event of an emergency such as a flood?
* If warnings are received outside of normal working hours, how will you tell the staff/visitors before they leave for work? Who will inspect the premises before letting them arrive?

## Instructions to residents/tenants in the event of a flood warning

The plan needs to set out clear instructions and actions for each stage of warning. This needs to form an easy-to-refer-to plan that can be followed in an emergency, providing all the necessary information and identifying who is responsible for doing what. It needs to identify at which stage the property should be evacuated, how and where to. A plan showing a safe exit route needs to be included.

If refuge is to be taken within the property, the plan needs to identify the circumstances when this should take place, where there is safe refuge and where any resources such as a flood kit (see below) will be found. Single storey properties may not have a place of safe refuge, so evacuating at an early stage to a safe place is more important.

The following table shows the stages of flood warning. What will you do at each stage?

|  |  |
| --- | --- |
| **Flood Alert**  **Flood Alert**  Flooding is possible. Be prepared. | * How will you respond to this alert? * What will you need to do to be prepared? * Is any other action necessary? * Who do you need to tell there is an alert in place? What will they need to do? |
| **Flood Warning**  **Flood Warning**  Flooding is expected. Immediate action required. | * How will you respond to this warning? * What is the immediate action you need to take? * Who do you need to tell there is a warning in place? What will they need to do? |
| **Severe Flood Warning**  **Severe Flood Warning**  Severe flooding. Danger to life. | * How will you respond to this severe warning? * What action(s) do you need to take? * Who do you need to tell there is a severe warning in place? What will they need to do? |
| **Warnings no longer in force - no flooding occurred** | * How will you know when warnings are no longer in force? * Who do you need to tell the danger has passed? * What action is necessary? |
| **Warnings no longer in force - flooding has occurred** | * How will you know when warnings are no longer in force? * Who do you need to tell the danger has passed? * What action is necessary? * Re-occupation of flooded premises should only be carried out following consultation with the emergency services and appropriate authorities. This is because of any residual hazards. Identify who needs to be consulted, when and how. |

# Chapter 3: Important Considerations for your Flood Response Plan

The following considerations may be relevant and important to your Flood Response Plan. They could help reduce the impact of a flood on people and property. A comprehensive and effective Plan will identify all actions that would be necessary before, during and after a flood event.

**Be Proactive**

* Do not wait for a flood – be proactive and consider what can be permanently moved to a safer higher level. Produce a checklist of remaining items that must be moved if there is a flood event. E.g. important documents, IT or vehicles.
* Check your insurance policy covers flooding.
* Look at the best way of stopping floodwater entering your property. There are a range of flood protection products on the market, a directory of these is available from the National Flood Forum at [www.bluepages.org.uk](http://www.bluepages.org.uk)
* Find out where you can get gel bags if you are in a fresh water area.
* Identify who can help you and who you can help.
* Understand the different flood warning levels.
* Make sure you keep an up to date contact list for all staff/residents
* Produce a Business Continuity Plan – part could relate to how to continue at times of flood.

**Familiarisation**

* Emphasise the need for all who work/live at your site to be familiar and comfortable with the Plan and its contents. You may wish to hold staff awareness briefings or add flood risk to the staff induction.
* Consider practicing your response to warnings and how to evacuate.
* Become familiar with the safest route from the property to any local evacuation centre. Get to know your local volunteer Emergency Co-ordinator. Ask the Emergency Planning Team at your local District Council for details.

**Actions to consider (to identify at each stage of warning)**

The plan should identify which actions will be undertaken when a flood alert is issued, which will be done when a flood warning is issued, etc.

* Check at what time the flooding is expected. If the site is vulnerable to tidal flooding, there can be 6 to 12-hour warning.
* Stay calm and tune in to BBC Radio Norfolk/Suffolk for weather forecasts and local information.
* Fasten your outer doors and fix any flood protection devices.
* Shut off your gas/electric supplies – show on a plan where this is as well as give details of how to do this. Do not touch electrics if already wet.
* Fill bath and buckets with water in case supply is shut off. Drinking water should be stored in clean containers.
* Move any important documents, valuables and sentimental items above the flood level or protect them by placing them in sealed plastic bags.
* Move furniture and electrical items if possible. Roll up carpets and rugs. Remove curtains, or hang them over rods.
* Consider moving vehicles to higher ground and make safe or secure any large or loose items outside that could cause damage if moved by floodwater. Pay particular attention to how boats are moored – if too tightly, they could list. If too loose they could cast adrift or float onto the landside of the quay heading.
* Ensure any hazardous materials are safe and secure and do not create any additional risks by coming in contact with flood waters
* Tie or anchor down equipment that could potentially float and cause an additional hazard (e.g. containers used for storage).
* Tell your neighbours about the warning, especially if they are elderly or vulnerable. Consider coordinating plans with neighbours/neighbouring organisations.
* If advised to do so, move to an identified Evacuation Centre or other safe place (such as a friend or relative). If it is not possible to evacuate, move to a safe refuge. If the property is single storey, move to an identified refuge place with nearby neighbours with safe, higher level accommodation.
* Take essential medicines, infant care items, personal documents/identification for each member of the family when you evacuate.
* Take food, clothes, blankets, candles/torches with you when you evacuate.
* Remember any pets (and their needs such as food, cages and litter trays).
* Notify visitors to the site that it is not safe.
* How will you shut down the site in an orderly fashion so people and assets can be protected?

**Flood Kit**

The flood kit should include essential items, be stored in the refuge area and be as easily accessible as possible. The flood kit could contain:

* Copies of insurance documents
* A torch with spare batteries (or a wind-up torch)
* Portable radio (wind-up preferred or store spare batteries)
* Warm, waterproof clothing.
* Rubber gloves
* Wellingtons
* Blankets
* First aid kit with essential prescription medication/repeat prescription form
* Bottled water and high energy food snacks (non-perishable and check use by dates)
* A copy of the Flood response plan
* List of important contact numbers
* Wash kit and essential toiletries (such as toilet paper and wet wipes)
* Children’s essentials (such as milk, baby food, sterilised bottles, wipes, nappies, nappy bags, clothing, comforter, teddy or favourite toy)
* Food and cages for pets
* Laminated copy of the emergency card from the FRP
* Plus, anything else you consider important.

**Dangers of flood water**

Include the dangers associated with flooding in your FEP. Do not assume that every flood event will be the same; just because flood water hasn't been deep or flowed fast in the past, it doesn't mean it won't in future. A brief guide is given below:

**Remember:**

* **Don’t walk through flowing water** – currents can be deceptive. Shallow and fast-moving water can knock you off your feet!
* **Don’t swim through fast flowing water** – you may get swept away or struck by an object in the water.
* If you **have** to walk in standing water, **use a pole or stick** to ensure that you do not step into deep water, open manholes or ditches. Use the stick to ‘feel’ your way.
* **Don’t drive through a flooded area.** You may not be able to see obstacles under the water or abrupt drop-offs. Even half a meter of flood water can carry a car away.
* **Avoid contact with water** as it may be contaminated with sewerage, chemicals, oil or other substances.

**Re-occupation after a flood**

Re-occupation of flooded premises should only be carried out following consultation with the emergency services and appropriate authorities. This is because of any residual hazards. A statement to this effect could usefully be included in the response plan.

When you can reoccupy, you shall need to:

* Safely throw away food that has been in contact with flood water – it could be contaminated.
* Open doors and windows to ventilate your property.
* Call your insurance company Emergency Helpline as soon as possible. Makes notes of what the insurers say and keep correspondence with the insurers.
* Keep a record of the flood damage (use photographs or videos).
* Commission immediate emergency pumping/repair work if necessary, to protect your property from further damage. Check that you can do this without your insurance company’s approval.
* Keep receipts of work paid for.
* Where detailed or lengthy repairs needed, get advice. Your insurer or loss adjuster can give advice on reputable contractors/tradesmen. Always check references of tradesmen.
* Check with your insurer regarding cost of alternative accommodation, if you need to move out. Make sure the insurer knows where to contact you.

**Cleaning up**

* Find out where you can get help to clean up. Look on the internet for suppliers of cleaning materials and equipment to dry out your property. As a guide, it can take a brick house one month per inch to dry out.
* Don’t attempt to dry out photos or papers – place in a plastic bag and if possible store in a fridge
* The Citizens Advice Bureau may be able to help.
* **Don’t think flooding will not happen again – restock supplies and review your plan!**

**Advice and information**

* List useful telephone numbers and website - including responsible persons, emergency contacts, utilities providers, insurance companies and sources of information such as the local radio station. A copy could be included in the flood kit.
* Provide residents/tenants with information on how to register with the Environment Agency's Floodline Warnings Direct service.
* Display notices within properties (translated where foreign visitors may be present), outlining procedures to be followed, escape routes and evacuation plans.
* Review your FRP regularly.

# Chapter 4: Flood Response plan checklist

The following table is a summary of this FRP. Please use it as a checklist for when you produce your FRP. Include this checklist as part of your FRP, perhaps as an appendix. Please complete it with details such as page number or explanatory text. This checklist does not constitute your FRP – it is a summary and simply a checklist to help you produce a robust FRP.

|  |  |
| --- | --- |
| Have you done these things? | Checklist |
| Liaised with neighbours about responding to flood event |  |
| Registered for flood warnings |  |
| Identified anyone who will need extra assistance |  |
| Identified a safe refuge |  |
| Identified a safe escape route |  |
| Made a flood kit |  |

|  |  |
| --- | --- |
| Does your FRP address these things? | Checklist |
| Description and location of site |  |
| Date FRP produced |  |
| Warning arrangements |  |
| How instructions will be given |  |
| What you can do to be pro-active |  |
| Identify escape routes, local evacuation centre and local emergency coordinator |  |
| How tenants/occupiers will be made aware of the FRP including the safe refuge, escape route and flood kit |  |
| Actions at each level of flood alert |  |
| What will be in your flood kit |  |
| Dangers of flood water |  |
| Re-occupation procedure |  |
| List useful telephone numbers and website |  |
| Review after a flood event |  |

|  |  |
| --- | --- |
| Other things to address: | Checklist |
| How often will you review the FRP? |  |
| How will you tell your tenants/occupiers about the FRP and escape routes? |  |
| Where will important information be displayed? |  |
| Have you put your flood kit together? |  |
| Where is the flood kit stored? |  |

1. Flood risk emergency plans for new development: <https://www.adeptnet.org.uk/floodriskemergencyplan> [↑](#footnote-ref-1)
2. Register With Floodline Warnings Direct <https://www.gov.uk/sign-up-for-flood-warnings> [↑](#footnote-ref-2)
3. <https://flood-warning-information.service.gov.uk/> [↑](#footnote-ref-3)
4. would your business stay afloat? <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/410606/LIT_5284.pdf> [↑](#footnote-ref-4)
5. Flooding - minimising the risk <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/292939/LIT_5286_b9ff43.pdf> [↑](#footnote-ref-5)
6. Long term flood risk assessment for locations in England

   <http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?topic=floodmap#x=357683&y=355134&scale=2> [↑](#footnote-ref-6)