

# The National Flood Emergency Framework For England



Civil Contingencies Secretariat



Environment Agency



PREPARING FOR EMERGENCIES



**defra**

Department for Environment  
Food and Rural Affairs



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# Part one:

## Understanding flood emergency planning and response



# Section 1: Introduction to the National Flood Emergency Framework

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## Flooding – a constant hazard

Flooding is a constant hazard to life and property. We know from **the Environment Agency's national assessment of flood risk** (published June 2009) that:

- one in six homes in England is at risk of flooding;
- over 2.4 million properties are at risk of flooding from rivers or the sea in England, of which nearly half a million are at significant risk; and
- one million of these are also vulnerable to surface water flooding, with a further 2.8 million properties susceptible to surface water flooding alone.

As well as flooding from rivers, the sea and surface water, there are significant risks for some communities from groundwater flooding and water from failed or overflowing reservoirs. The scope of this National Flood Emergency Framework extends to these risks too.

## Flooding happens!

Flooding happens. It happens many times each year – often to people, communities and businesses that have suffered from flooding in the past. Its severity has ranged from minor inconvenience to destruction of properties, businesses, livelihoods and normal family life.

No part of England can expect to escape the impact of flooding entirely. As well as the potential to cause serious harm to human health and property damage, flooding threatens wider social and economic damage and disruption. But it is difficult to forecast its exact timing or the precise nature of its impact. This uncertainty is one of the main challenges for policy makers and planners. Measures to prevent and control flooding require coordinated national, regional and local effort and cooperation.

## Some recent examples

### Cumbria 2009

Serious flooding affected many parts of Cumbria in November 2009. This followed heavy and sustained rainfall of 12.3 inches in 24 hours, which is the highest ever in the United Kingdom. Around 1,800 properties were flooded with the worst affected areas being Cockermouth, Keswick, Workington, Kendal and Ulverston. Around 1,500 people needed to be evacuated from their homes or businesses. Infrastructure was badly affected with 6 bridges lost in the Cumbria area, and a number of road and footbridges closed because of concerns about their stability. PC Bill Barker was swept to his death while on duty. The picture below gives an aerial view of the extent of flooding in Cockermouth, Cumbria.



## Summer 2007

Flooding affected many parts of England in the summer of 2007. The wettest summer since records began, with extreme levels of rainfall compressed into relatively short periods of time, caused 55,000 properties to be flooded. Around 7,000 people were rescued from the flood waters by the emergency services and 13 people died.

The floods also saw the largest loss of essential services since World War II, with almost half a million people without mains water or electricity. Transport networks failed, a dam breach was narrowly averted and emergency facilities were put out of action. Tens of thousands of people were rendered homeless, and some businesses were put out of action for months on end.

## Other serious flooding events

Over the last decade these have included the following:

- The autumn of 2000 was then the wettest since records began in 1766. The heaviest rainfall that season was across England and Wales, with a total of 489 mm falling between September and November; the most extreme rainfall was in October, which resulted in extensive flooding. UK insurance claims arising from that season's floods added up to around £1 billion. Many of the same areas of southern UK flooded again in early 2003.

- In the summer of 2004 a flash flood in Boscastle, Cornwall, was caused by around 200 mm of rain falling in just 4 hours. More than 150 people had to be airlifted to safety and 50-60 cars were washed away – around £50 million of damage was caused.
- Another extreme event took place in January 2005, when 100 mm of rain fell around Carlisle in Cumbria. So intense was the rain that surface-water drainage could not cope and flooding began. The flood caused local power cuts and interrupted both the landline and mobile phone systems.
- The same year, 2005, saw a similar event on the North Yorkshire moors. After a weekend heatwave, on the night of Sunday 19 June North Yorkshire had the best part of a month's worth of rain in 3 hours. One fast-flowing flood that went through the villages of Thirlby, Helmsley and Hawnby was caused by 27mm of rain that fell in just 15 minutes. The flood was in places 2 metres deep and it carried cars along with it.
- In September 2008 flooding in Morpeth was caused by 150mm of rain (6 inches) – 3 months' worth – falling onto saturated ground and full river catchments. Around 1,000 homes and businesses were affected by the flooding and nearly 250 families took advantage of rescue centres and temporary accommodation.





## National Flood Emergency Framework – what it's for

This Framework sets out the Government's strategic approach to achieving the aims set out below and is intended for use by all those involved in planning for and responding to flooding from:

- the sea;
- rivers;
- surface water;
- groundwater; and
- reservoirs.

The concept of a National Flood Emergency Framework was promoted by Sir Michael Pitt in his report on the summer 2007 floods. Its purpose is to provide a forward looking policy framework for flood emergency planning and response. It brings together information, guidance and key policies and is a resource for all involved in flood emergency planning at national, regional and local levels. It is a common and strategic reference point for flood planning and response for all tiers of government and for responder organisations.

More precisely, the purpose of the Framework is to:

- ensure delivery bodies understand their respective roles and responsibilities;
- give all players in an emergency flooding situation a common point of reference - bringing together information, guidance and key policies in a single planning document;
- establish clear thresholds for emergency response arrangements;
- place proper emphasis on the multi-agency approach to managing flooding events;
- provide clarity on the means of improving resilience and minimising the impact of flooding events;
- provide a basis for individual responders to develop and review their own plans; and
- be a long-term asset that will provide the basis for continuous improvement in flood emergency management.

It also provides a national framework within which organisations responsible for planning, delivering or supporting local responses should develop and maintain integrated operational arrangements that are flexible enough to respond to local needs and circumstances, whilst providing the wider degree of consistency necessary for an effective, sustainable and equitable national approach.

The Framework will evolve and improve over time, as it is tested by real events and exercises. We want the Framework to help improve resilience to severe flooding incidents in England by providing a common and strategic reference point for flood planning and response - for all tiers of government and response organisations. We want the Framework to strengthen resilience and response to actual or potential serious and/or disruptive flooding. In short the key outcomes we will want to see are:

- a nation that is more resilient to future flooding events;
- responses to flooding events that are judged to be effective; and
- improved understanding by all of the wider impacts of flooding.

## A framework for England

It is a National Flood Emergency Framework for England. But it has been designed to take account of flood emergency planning and response in other parts of the United Kingdom, for which the devolved administrations have responsibility. Each of the devolved administrations have tools, information, advice and guidance that you might, on occasions, want to refer to.

**Ready Scotland** contains advice on how members of the public in Scotland can prepare for all kinds of emergencies and disruptive events, including **severe weather**. It includes links to the **Scottish Environment Protection Agency's flooding pages**.

The Welsh Assembly Government is responsible for developing **flood and coastal risk management policy in Wales** and largely funds flood and coastal activities undertaken by operating authorities across Wales. **Wales Prepared** contains information on the plans for responding to emergencies in Wales.

The **Rivers Agency in Northern Ireland** and **NI Direct** websites contain advice on how members of the public in Northern Ireland can reduce the impact of flooding on their homes and businesses. Details of how to report a flooding emergency to the Northern Ireland Flooding Incident Line are also given.

## National Flood Emergency Framework – what it's not for

This Framework provides information and planning assumptions to inform and encourage contingency planning. But it is not intended to provide detailed operational guidance for individual emergency planners or responders.

The scope of the Framework does not extend to recovery from flooding emergencies. There is specific national guidance on recovery from emergencies, which can be accessed via **the Cabinet Office's UK Resilience web resources**.

This plan covers flooding from artificial waterways/canals. But in practice, such flooding incidents would normally be localised emergency incidents. So British Waterways, which manages some 2,200 miles of waterways, has its own emergency plans in place which include dealing with the breach of a canal or reservoir embankment. It has plans that include arrangements for liaison with Local Resilience Forums (LRF) and Category 1 and 2 responders (including emergency services).

## **National Flood Emergency Framework – who’s it for?**

This initial version of the Framework is intended primarily for those responsible for developing policies and strategies or coordinating, managing, maintaining or testing contingency arrangements for responding to flooding. But, additionally, it will be of interest to those seeking general information or an overview of the UK’s general preparedness for, and planned response to, a flood emergency.

## **National Flood Emergency Framework – what we want to achieve**

In planning and preparing for a flooding emergency, the Government’s strategic objectives are to:

- protect human life and alleviate suffering; and, as far as possible, property and the environment;
- support the continuity of everyday activity and the restoration of disrupted services at the earliest opportunity; and
- uphold the rule of law and the democratic process.

The National Flood Emergency Framework is intended to focus is on the first of these. In doing so, it covers the development, maintenance, testing and, when necessary, implementation of operational response arrangements that are:

- able to respond promptly to any changes in alert levels;
- developed on an integrated basis, combining local flexibility with national consistency and equity;
- capable of implementation in a flexible, phased, sustainable and proportionate way;
- based on the best available scientific evidence;
- based on existing services, systems and processes wherever possible, augmenting, adapting and complementing them as necessary to meet the unique challenges of a flood emergency;
- understood by, and acceptable to, emergency planners and responders;
- designed to promote the earliest possible return to normality.

## **Section 2:** What emergency planners and responders need to know about national emergency management

- What you need to know about national emergency management
  - Managing a crisis - from local emergency to national catastrophe
  - National emergency management: Cabinet Office Briefing Rooms (COBR)
- Flooding – local or national?
  - Working collectively at the regional level to plan for, and respond to, flooding: Regional Resilience Forums
  - Working collectively at the regional level to plan for, and respond to, flooding: Regional Coordinating Groups and Regional Civil Contingencies Committees (RCCCs)
- International assistance mechanisms

## What you need to know about national emergency management

An emergency (or disruptive challenge) as defined in the **Civil Contingencies Act 2004** is a situation or series of events that threatens or causes serious damage to human welfare, the environment or security in the United Kingdom.

Managing any emergency comprises three main phases:

- preparation (pre-planning);
- response (mitigating an immediate risk or stopping things getting worse); and
- recovery (a longer-term activity of rebuilding, restoring and rehabilitating the community).

The response phase comprises two separate but closely-related and often overlapping challenges: crisis management and consequence (or impact) management. These are both designed to control and minimise the immediate challenges arising from an incident.

Crisis management involves the phase of the response that attempts to prevent or avert an imminent emergency, along with work that puts in place protective or other measures to mitigate the effects of an emergency, prevent further damage or disruption and secure the scene. It also includes actions taken to address the immediate effects of an incident – and may include managing hostage situations, fighting fires, search and rescue, caring for the dead and injured, providing public health advice, evacuating those at risk and disseminating public information. The duration of the crisis management phase can vary from a few hours or a few days to a few months (for example in the case of an outbreak of an animal disease) until the situation is brought under control.

Consequence management usually take place in parallel to crisis management and is concerned with steps taken to prevent the impact of an incident escalating. It includes managing wider consequences and services such as restoring transport networks or electricity supplies, managing community relationships, and providing shelter to displaced persons.

### Managing a crisis - from local emergency to national catastrophe

The local response is the basic building block of the response to any emergency in the UK. Emergencies (or major incidents) are routinely handled by the emergency services and other local responders without the need for any significant central government involvement. Such emergencies may include major road crashes, localised flooding and many industrial accidents. The police will normally take the lead in co-ordinating the local response where a crime has been committed, or if there is a threat to public safety.

In England, the primary responsibility for planning for and responding to any major emergency rests with local organisations, acting individually and collectively through Local Resilience Forums

(LRFs) and Strategic Coordination Groups (SCGs). Public and private organisations need to work with and through their local forum to develop plans for maintaining critical services and business continuity during a flooding emergency and to respond to the wider challenges that will result.

A **list of LRFs** and their contact details can be found on the UK Resilience website.

The local multi-agency response is co-ordinated through a Strategic Co-ordinating Group (SCG) located in the Strategic Co-ordination Centre (SCC). The chair of the group, whether a police lead or Local Authority Chief Executive, is often known as the Gold Commander.

The principle of subsidiarity emphasises the importance of local decision making supported, where necessary, by co-ordination at a higher level. In order to aid planning, further understanding, and provide guidance to responders and central government planners on when they might expect central government involvement in responding to an incident, three broad types (or levels) of emergency have been identified which are likely to require direct central government engagement.

The full detail can be found in the **Concept of Operations (or CONOPS)** – the specific arrangements for the response to an emergency requiring co-ordinated UK central government action – which can be found on the Cabinet Office’s website. But, in summary, these are:

Significant emergency (Level 1) - requires central government involvement or support, primarily from a lead government department (LGD), or a devolved administration, alongside the work of the emergency services, local authorities and other organisations. There is, however, no actual or potential requirement for fast, inter-departmental/agency, decision making which might necessitate the activation of the collective central government response (see below), although in a few cases there may be value in using the Cabinet Office Briefing Rooms (COBR) complex – see below for more on COBR - to facilitate the briefing of senior officials and ministers on the emergency and its management.

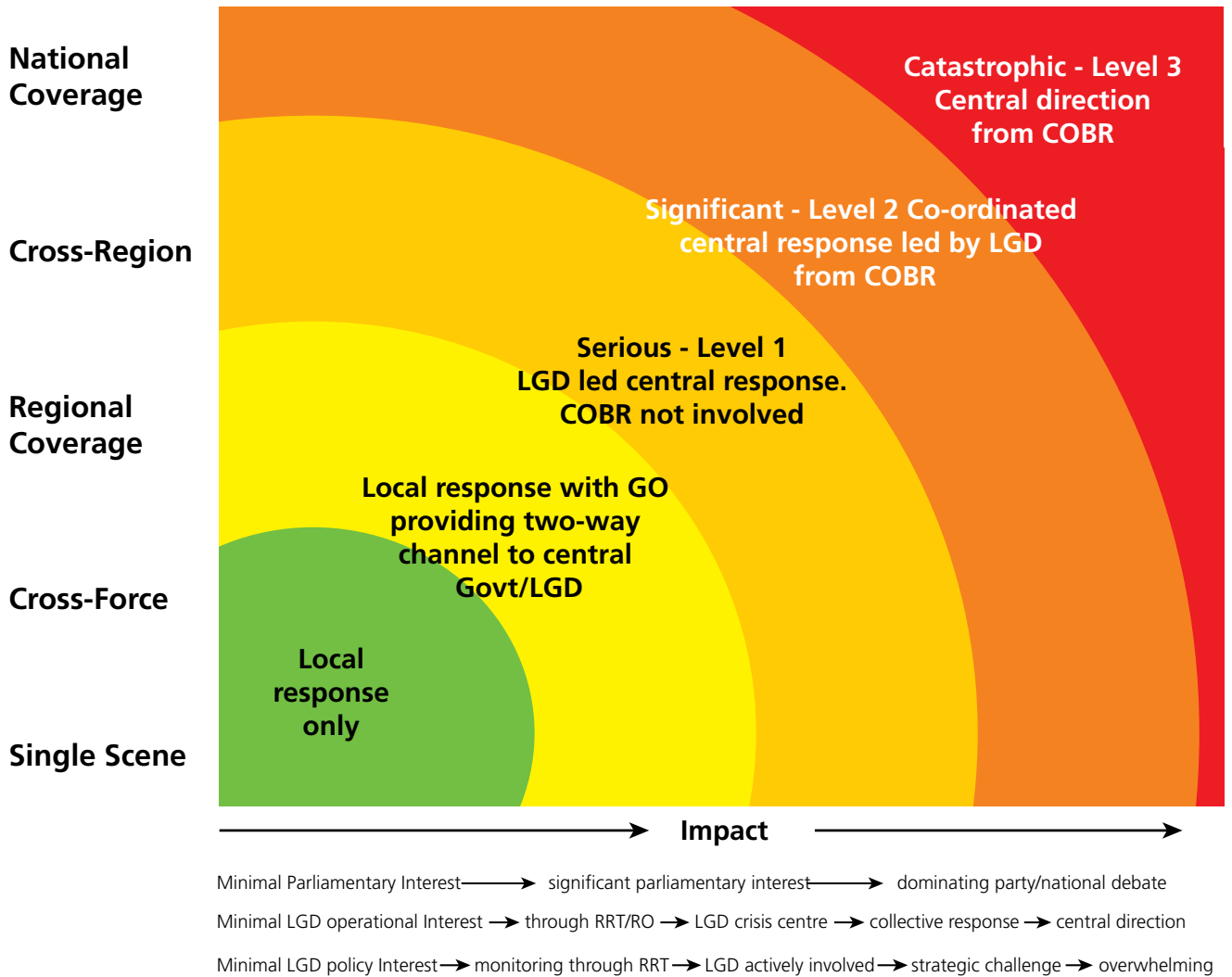
Examples of emergencies on this scale could include most severe weather-related problems.

Serious emergency (Level 2) - is one which has, or threatens, a wide and prolonged impact requiring sustained central government co-ordination and support from a number of departments and agencies, usually including the regional tier in England and where appropriate, the devolved administrations. The central government response to such an emergency would be co-ordinated from the Cabinet Office Briefing Rooms (COBR), under the leadership of the lead government department.

Examples of an emergency at this level could include widespread urban flooding.

Catastrophic emergency (Level 3) – is one which has an exceptionally high and potentially widespread impact and requires immediate central government direction and support, such as a major natural disaster, 9/11 scale terrorist attack in the UK, or a Chernobyl-scale industrial accident. Characteristics might include a top-down response in circumstances where the local response had been overwhelmed, or the use of emergency powers where required to direct the response or requisition assets and resources. The Prime Minister would lead the national response from COBR. Fortunately, the UK has had no recent experience of a Level 3 emergency, but it is important to be prepared for such an event should the need arise.

**Figure 2.1:** Emergency levels



## National emergency management: Cabinet Office Briefing Rooms (COBR)

In some instances, the scale or complexity of an emergency is such that some degree of central government support or co-ordination becomes necessary. A designated Lead Government Department (LGD) or, where appropriate, a devolved administration would be made responsible for the overall management of the central government response. In the most serious cases, the central government response would be co-ordinated through the Cabinet Office Briefing Rooms (COBR).

COBR would be activated in order to facilitate rapid co-ordination of the central government response and effective decision-making. In practice, the actual response to a specific emergency would need to take into account the nature of the challenge and other circumstances at the time.

Ministers and senior officials, as appropriate, from relevant UK government departments and agencies, along with representatives from other organisations, as necessary, are brought together in COBR to ensure a common appreciation of the situation and to facilitate effective and timely decision making.

Where COBR is activated in response to a no-notice incident, its default strategic objectives are to:

- protect human life (and, as far as possible, property and the environment); and alleviate suffering;
- support the continuity of everyday activity and the restoration of disrupted services at the earliest opportunity; and
- uphold the rule of law and the democratic process.

The COBR structure is designed to be flexible to adapt to the circumstances at hand. The Cabinet Office would, in consultation with the lead government department, decide on which components should be activated and how they might best be used. It would also provide the Secretariat support and ensure that business is managed effectively across all areas of activity in response to the emergency.

In practice, the start of an emergency would also be the point at which thoughts should turn to consequence management and the recovery work that will be needed once the immediate dangers have passed – provided, of course that that does not slow down the response itself. So an Impact Management Group (IMG) may be formally established by central government where there is added value in handling separately the input to consequence management activity. The IMG would provide detailed co-ordinated advice on all aspects of the Government's contribution to the emergency response and would ensure that a recovery strategy, including establishment of a Recovery Group, is put into place and endorsed. Once a Recovery Group is established, the role of the IMG in recovery would cease. This transition would take place in consultation with the Cabinet Office and the relevant Lead Government Departments.



## Flooding – local or national?

The table overleaf (figure 2.2) gives a broad indication of where flooding events match up to national CONOPS. But experience has shown that the media and political response to flooding events can escalate beyond the level of involvement which Defra, as Lead Government Department, might be expected to have if CONOPS is the only reference. In practice, factors such as media response, number of properties flooded, depth of flooding and impact on critical infrastructure will determine the level the emergency response and Lead Government Department involvement and role.

For example, the event at Boscastle in 2004 would be classed as “local” on the CONOPS scale, but it triggered major media interest and, consequently, significant activity across Government. The summer 2007 floods might well be regarded as Level 2, but, in practice, it was the Prime Minister who chaired most COBR meetings. A 1953 type flood (when over 300 died and there was widespread destruction over large areas) might be classed as a Level 3 event. So too might a future major tidal surge, or dam failure affecting a major conurbation or critical infrastructure.



**Figure 2.2:** CONOPS levels emergency

Level of emergency	Description	Level of engagement
<b>3: Catastrophic</b>	<p>A high and potentially widespread impact and requires immediate central government direction and support such as a 9/11 scale terrorist attack in the UK, or a Chernobyl scale industrial accident.</p> <p>Flooding example: floods affecting a number of regions; thousands of displaced persons; serious damage to critical infrastructure.</p>	<p>COBR/Civil Contingencies Committee. Prime Minister or nominated Secretary of State leads in the event of a catastrophic incident requiring the involvement of central government from the outset to deliver an effective response, or where Emergency Powers are invoked</p>
<b>2: Serious</b>	<p>Has, or threatens, a wide and prolonged impact requiring sustained central government co-ordination and support from many departments and agencies.</p> <p>Flooding example: floods in more than one region; hundreds of displaced persons; actual, or risk of, critical infrastructure disruptions.</p>	<p>Response co-ordinated from the Cabinet Office Briefing Room (COBR) by the Lead Government Department. The crisis response may require deployment of wider government resources. The Civil Contingencies Secretariat (CCS) provides support on impact management and recovery issues.</p>
<b>1: Significant</b>	<p>Has a narrower focus e.g. prison riots, severe weather or a terrorist attack with limited consequences.</p> <p>Flooding example: floods widespread across a region, some displaced persons, potential risk to critical infrastructure.</p>	<p>The Lead Government Department Minister runs the crisis response from their premises using their own emergency facilities as appropriate. The Civil Contingencies Secretariat (CSS) advises as and when necessary.</p>
<b>Local</b>	<p>Events which are routinely handled by the emergency services with local government, such as road crashes, localised flooding or industrial accidents.</p> <p>Flooding example: local flooding; small scale evacuation; no risk to critical infrastructure.</p>	<p>No significant central government involvement. Normally be led by the police/Gold commander for larger emergencies.</p>

## **Working collectively at the regional level to plan for, and respond to, flooding: Regional Resilience Forums**

Regional Resilience Forums (RRFs) have been formed to bring together key players from within each region, such as local authorities, central government agencies, the armed forces, and the emergency services. The role of the RRFs is to improve communication across and between the regions; between the regions and central government; and between the region and its local responders. They are also there to support planning for a response capability and provide multi-agency strategic direction to civil protection planning in each region. They have a particular value to add in focusing on planning for wider consequences of incidents and the means for an effective return to normality.

RRFs work closely with Local Resilience Forums (LRFs) to ensure that preparedness work is co-ordinated across the region. The building blocks of the response to a crisis will almost always be local plans developed at a local level. The role of the RRF is in helping to ensure that local plans are developed where they need to be, and that they work well with other, neighbouring, plans. There may also be specific areas where a regional plan is developed – building on scalable local plans to generate a region-wide response to a crisis.

## **Working collectively at the regional level to plan for, and respond to, flooding: Regional Coordinating Groups and Regional Civil Contingencies Committees**

Regional Resilience Forums have no role to play in the operational response to emergencies. There may, however, be exceptional circumstances in which the scale and geographical extent of an incident requires the response and recovery effort to be co-ordinated at a regional level.

A Regional Coordinating Group (RCG) is most likely to be established when an incident affects three or more police force areas, or has the potential to do so. In such circumstances, the Lead Government Department (in consultation with the Cabinet Office and CLG) may, on its own initiative, or at the request of local responders, convene a RCG in order to bring together appropriate representatives from local Strategic Coordinating Groups, or other relevant organisations

In the most serious circumstances, there may be a need to convene a Regional Civil Contingencies Committee (RCCC) to support response and recovery activity across the region. This would normally only happen where the local response has been, or may be, overwhelmed, or where there is a need for a consistent, structured approach normally across two or more regions

The role of an RCG or RCCC would be to:

- collate and maintain a strategic picture of the evolving situation within the region, with a particular (but not exclusive) focus on consequence management and recovery issues;
- assess whether there are any issues which cannot be resolved at a local level;
- facilitate mutual aid arrangements within the region and, where necessary, between regions;
- ensure an effective flow of communication between local, regional and national levels, including the co-ordination of reports to the national level on the response and recovery effort;
- raise to a national level any issues that cannot be resolved at a local or regional level;
- ensure that the national input to response and recovery is co-ordinated with the local and regional efforts;
- guide the deployment of scarce resources across the region by identifying regional priorities; and
- provide, where appropriate, a regional spokesperson.

The RCG/RCCC would not interfere in local command and control arrangements. But it might inform the deployment of national resources – it might, for example, take a view on the need for military aid and on priorities within the region for such aid if and when granted.

## International assistance mechanisms

The Cabinet Office is the UK's national point of contact for EU and NATO civil protection arrangements. These include mutual aid arrangements that can be used in the event of a disaster to share information and facilitate requests and offers of assistance. In the event of a disaster which overwhelms UK response capabilities, COBR could consider the need for international assistance and offers received.

The **EU Civil Protection Mechanism** is a legal framework enabling participating states (the 27 EU Member States, plus Norway, Iceland, Lichtenstein and Croatia) to provide assistance to each other and to third countries in disasters. The Mechanism's scope includes the European Commission's **Monitoring and Information Centre** (MIC) as a means of matching requests to offers of assistance internationally through the Common Emergency Crisis and Information System (CECIS), a web-based information sharing system.

The **NATO Euro-Atlantic Disaster Response Co-ordination Centre** (EADRCC), like the EU MIC, co-ordinates responses to disasters in the Euro Atlantic Partnership Council (EAPC) area and is a focal point for information sharing among EAPC countries.

## **Section 3:** What emergency planners and responders need to know about the legal framework

- The Civil Contingencies Act 2004
  - Part 1 of the CCA
  - Part 2 of the CCA (Emergency Powers)
  - Want to know more about the CCA? References
  
- The Reservoirs Act 1975
  - Requirements of the Reservoirs Act 1975
  - Enforcement of the Reservoirs Act 1975
  - The effect of the Flood and Water Management Act 2010: changes to the Reservoirs Act
  - Want to know more about the Reservoirs Act? References

There are a number of important pieces of legislation that impact on flood emergency planning and response. The key ones, covered in this section, are:

- **The Civil Contingencies Act 2004**; and
- **The Reservoirs Act 1975**.

The Reservoirs Act 1975 Act was amended by the **Flood and Water Management Act 2010**. The amendments in the 2010 Act have yet to be commenced, so do not currently have effect.

## The Civil Contingencies Act 2004

The **Civil Contingencies Act 2004** (CCA), and accompanying non-legislative measures, delivers a single framework for civil protection in the United Kingdom capable of meeting the challenges of the twenty-first century. The Act is separated into two substantive parts: local arrangements for civil protection (**Part 1**) and emergency powers (**Part 2**). The Cabinet Office is reviewing Part 1 of the Civil Contingencies Act.

### Part 1 of the CCA

Part 1 of the Act and supporting Regulations and statutory guidance establish a clear set of roles and responsibilities for those involved in emergency preparation and response at the local level. The Act divides local responders into two categories, imposing a different set of duties on each.

Those in Category 1 are organisations at the core of the response to most emergencies (e.g. emergency services, local authorities, NHS bodies). Category 1 responders are subject to the full set of civil protection duties. They are required to:

- assess the risk of emergencies occurring and use this to inform contingency planning;
- put in place emergency plans;
- put in place Business Continuity Management arrangements;
- put in place arrangements to make information available to the public about civil protection matters and maintain arrangements to warn, inform and advise the public in the event of an emergency;
- provide advice and assistance to businesses and voluntary organisations about business continuity management (Local Authorities only);
- share information with other local responders to enhance co-ordination; and
- co-operate with other local responders to enhance co-ordination and efficiency.

Category 2 organisations (e.g. Health and Safety Executive, transport and utility companies) are regarded as “co-operating bodies” and are less likely to be involved in the heart of planning work but will be heavily involved in incidents that affect their sector. Category 2 responders share the last two duties listed above with other Category 1 and 2 responders. That is, they must:

- share information with other local responders to enhance co-ordination; and
- co-operate with other local responders to enhance co-ordination and efficiency.

The **Civil Contingencies Act 2004 (Contingency Planning) Regulations 2005** establish the Local Resilience Forum, the principal mechanism for multi-agency resilience work. Category 1 and 2 organisations come together to form Local Resilience Forums (based on police areas) which help co-ordination and co-operation between responders at the local level.

The bulk of Part 1 of the Act was brought into force in November 2005 (the duty on local authorities to provide advice and assistance to business and voluntary organisations about business continuity management commenced in May 2006).

## **Part 2 of the CCA (Emergency Powers)**

Part 2 of the CCA updates the 1920 Emergency Powers Act to reflect the developments in the intervening years and the current and future risk profile. It allows for the making of temporary special legislation (emergency regulations) to help deal with the most serious of emergencies. The use of emergency powers is a last resort option and planning arrangements at the local level should not assume that emergency powers will be made available. Their use is subject to a robust set of safeguards - they can only be deployed in exceptional circumstances. The so-called ‘triple lock’ ensures emergency powers will only be available if:

- an emergency that threatens serious damage to human welfare, the environment or security has occurred, is occurring or is about to occur;
- it is necessary to make provision urgently in order to resolve the emergency as existing powers are insufficient and it is not possible to bring forward a Bill in the usual way because of the need to act urgently; and
- emergency regulations are proportionate to the aspect or effect of the emergency they are directed at.

In addition, emergency regulations:

- cannot prohibit or enable the prohibition in, or any activity in connection with, a strike or other industrial action;
- cannot instigate any form of military conscription;

- cannot alter any aspect of criminal procedures;
- cannot create any new offence other than breach of the regulations themselves;
- must be compatible with the Human Rights Act and EU law; and
- are open to challenge in the courts.

Emergency powers can be used on a regional and/ or devolved administration basis. The CCA also requires the appointment of a 'Regional Nominated Coordinator' ('Emergency Coordinator' in the devolved administrations). If emergency powers are used, he/she will act as the focal point for co-ordination of response efforts at the regional or devolved administration level.

## Want to know more about the CCA? References

You can find out much more about the Civil Contingencies Act on the **Cabinet Office's UK Resilience web pages**. Specific reference material you may want to access from time to time includes:

- **Civil Contingencies Act, A Short Guide** (broad description of both Part 1 and Part 2 of the CCA);
- **Civil Contingencies Act, 2004;**
- **Explanatory notes to the CCA;**
- **Civil Contingencies Act 2004 (Contingency Planning) Regulations 2005;**
- **Civil Contingencies Act 2004 (Contingency Planning) Regulations 2005, Explanatory Memorandum;**
- **Emergency Preparedness, Guidance on Part 1 of the Civil Contingencies Act 2004**, its associated Regulations and non-statutory arrangements; and
- **Details of CCA arrangements in place in the Devolved Administrations** and links to their websites.

## The Reservoirs Act 1975

Safety legislation for reservoirs in the United Kingdom was first introduced in 1930 after several reservoir disasters had resulted in loss of life. This Act was superseded by the **Reservoirs Act 1975**, which today provides the legal framework to ensure the safety of large raised reservoirs and applies to reservoirs that hold at least 25,000 cubic metres of water above natural ground level.



## Requirements of the Reservoirs Act 1975

Under the Reservoirs Act, reservoir owners (Undertakers) have ultimate responsibility for the safety of their reservoirs. They must appoint a Panel Engineer (a specialist civil engineer who is qualified and experienced in reservoir safety) to continuously supervise the reservoir (Supervising Engineer) and to carry out periodic inspections (Inspecting Engineer). A Panel Engineer must also be appointed to design and construct a new reservoir or repair or make changes to an existing reservoir (Construction Engineer).

A periodic inspection, by an Inspecting Engineer, is required every ten years or more frequently if necessary. As a result of that inspection, a safe operating regime will be specified and works required in the interests of safety may be recommended.

A Supervising Engineer is required to supervise the operation and maintenance of the reservoir and produce an annual statement. The Supervising Engineer can recommend that a periodic inspection is carried out.

For reservoirs below the threshold of 25,000 cubic metres, regulation is managed by the Health and Safety Executive (under the Health and Safety at Work (etc) Act 1974) and Local Authorities (under the Building Act 1984).

## Enforcement of the Reservoirs Act 1975

Prior to 1st October 2004 the enforcement of the Act in England and Wales was the responsibility of 136 Local Authorities. This role attracted varying responses from the Local Authorities, often coordinated by different departments. This led to an inconsistent application of the Act and highlighted the need for consistency of regulation to be provided by a single body. This requirement was recognised by an industry review of the Reservoirs Act 1975 and reported to government and publicly via the British Dam Society in 1996.

The Environment Agency is now responsible for the enforcement of the Reservoirs Act 1975 in England and Wales. **The Water Act 2003** transferred this responsibility from local authorities from 1 October 2004.

As the Enforcement Authority, the Environment Agency is responsible for:

- maintaining a register of reservoirs, and making this information available to the public;
- ensuring that the Undertaker has appointed a Supervising Engineer;
- ensuring that the Undertaker commissions regular inspections of the reservoir by an Inspecting Engineer;
- enforcing the Reservoirs Act 1975 by influencing, warning, cautioning and ultimately prosecuting non-compliant Undertakers;

- commissioning essential works required in the Interests of Safety in the event of non-compliance and recouping full costs incurred from the Undertaker;
- producing a Biennial Report to the Department for Environment, Food and Rural Affairs (Defra) and to the Welsh Assembly Government; and
- acting in an emergency if the Undertaker cannot be found.

## **The effect of the Flood and Water Management Act 2010: changes to the Reservoirs Act**

The Reservoirs Act 1975 Act was amended by the **Flood and Water Management Act 2010**. The amendments in the 2010 Act have yet to be commenced, so do not currently have effect, but when commenced they will:

- place a requirement for all reservoirs above a minimum volume capacity (reduced to 10,000 cubic metres from 25,000 cubic metres) to be included on an Environment Agency register;
- require the Environment Agency to classify each relevant reservoir according to whether they pose a threat to human life, or meet technical conditions (to be specified) which in effect mean the risk is negligible;
- specify the duties of reservoir undertakers; and
- specify panel engineers' duties in relation to these reservoirs based on the level of risk.

## **Want to know more about the Reservoirs Act? References**

Specific reference material on the Reservoirs Act 1975 that you may want to access from time to time includes:

- the full text of the **Reservoirs Act 1975**;
- the **full text of the amendments in Schedule 4 of the Flood and Water Management Act 2010**; and
- **Various information on the Reservoirs Act 1975 and reservoir safety on the Environment Agency's website.**

## Section 4: What emergency planners and responders can expect from central government

- What you can expect from central government and who does what
- What you can expect from central government generally
  - What you can expect from Defra as the Lead Government Department for flooding
  - What you can expect from the Government Offices for the Regions
  - What you can expect from the Department for Communities and Local Government
  - What you can expect from the Environment Agency
  - What you can expect from the Flood Forecasting Centre
  - What you can expect from the Met Office
  - What you can expect from the Department of Health
  - What you can expect from the Health Protection Agency
  - What you can expect from the Department for Transport
  - What you can expect from the Highways Agency
  - What you can expect from the Department for Business, Innovation and Skills
  - What you can expect from the Department for Energy and Climate Change
  - What you can expect from the Ministry of Defence
- National emergency management: working with the devolved administrations

## What you can expect from central government and who does what

Serious flooding emergencies require co-ordinated multi-agency responses, clear lines of demarcation and quick decision making – often by individual organisations but sometimes collectively. Central government departments, and their agencies, contribute to those multi-agency responses but have different roles to play, based on their policy responsibilities, expertise, experience and powers.

This section of the National Flood Emergency Framework is designed to help emergency planners and responders understand the division of responsibilities within central government and its agencies and to help you to know where to go for information, advice and assistance.

## What you can expect from central government generally

National flooding emergencies require central government to work singularly and collectively. Collectively, the overall strategic objectives of the government's involvement are to ensure that it will:

- react with speed and decisiveness;
- respect local knowledge and decision-making wherever possible, without losing sight of the national strategy;
- prioritise access to scarce national resources;
- use data and information management systems to gain a national picture and support decision making, without overburdening front-line responders;
- base policy decisions on the best available science and ensure that the processes for providing scientific advice are widely understood and trusted;
- draw on existing legislation to respond effectively to the event, and consider the need for additional powers;
- apply risk assessment methodology and cost benefit analysis within an appropriate economic model to inform decision-making;
- work with international partners to share information and request assistance if necessary; and
- explain policies, plans and practices by communicating with interested parties (including the public) comprehensively, clearly and consistently in a transparent and open way that addresses national and local concerns while encouraging and listening to feedback.

## What you can expect from Defra as the Lead Government Department for flooding

Within UK central government, departments deliver their responsibilities (generally through local agencies) and are accountable to Parliament for their effective delivery. This includes effectively managing emergencies affecting their responsibilities. One department – the Lead Government Department (LGD) - usually takes overall responsibility for assessing the situation, ensuring that Ministers are briefed, handling media and parliamentary interest, and providing co-ordinated policy and other support as necessary to local responders. Other government departments will provide support to the LGD to ensure a co-ordinated response; however, individual departments will remain responsible, including to Parliament, for their particular policy areas.

Defra is the Lead Government Department for flood emergencies in England. The Cabinet Office document **The Lead Government Department and its role – Guidance and Best Practice** sets out the requirements for handling an event.

**Figure 4.1:** Role of the Lead Government Department

### Role of the Lead Government Department

#### **Maintain a state of readiness.**

This entails:

- building up the Department's resilience to shocks and its capacity to lead the response;
- identifying and maintaining the capabilities that local responders and those at each level of crisis management can call upon;
- maintaining press/public information contacts, so that the Department is in a position to effectively co-ordinate the press/public information effort during a crisis;
- planning for and leading negotiations with the Treasury for any necessary additional funds; and
- keeping aware of the changing set of risks, threats and vulnerabilities which bear upon its fields of responsibility.

## **Move into action immediately an emergency arises, where central government co-ordination is required**

This entails:

- acting as the focal point for communication between central government and the multi-agency strategic co-ordinating group(s) on the ground;
- producing a brief, accurate situation reports on the nature and scale of the emergency and a handling plan;
- drawing upon and applying the relevant capabilities applicable to the emergency in hand;
- taking whatever executive decisions and actions are needed from the centre to handle the emergency or to help the local responders to deal with it;
- acting as the focal point for information flows;
- co-ordinating and disseminating information for the public and the media at the national level;
- accounting to Parliament and leading in the submission of evidence to any subsequent government-appointed inquiry; and
- learning and sharing the lessons from the emergency.

In line with the arrangements for application of the central government machinery, Defra will normally co-ordinate the cross-government response to lower level national flooding events (serious – level 1 (see section 2)) and will handle it within the Department. Level 2 events (significant) will still be co-ordinated by Defra but through COBR. More serious events (level 3 - catastrophic) will be fully escalated to central co-ordination by the Civil Contingencies Secretariat, with Defra support, within COBR.

Defra maintains a 24 hour, 7 day a week system duty rota for receiving reports of possible or actual flooding, with close working between the Defra Duty Officer and the Environment Agency. Defra's permanent emergencies team takes the lead when serious flooding is imminent or has already happened (in the event of unexpected severe weather for example) and maintains close liaison with the Environment Agency's incident teams.

Defra has a dedicated Emergency Operations Centre (EOC) located in London, with permanently available IT and communications capabilities.

As well as having a Lead Department role, Defra staff must also consider the impacts of a potential or actual flooding emergency on wider Defra policy interests, including animal welfare, farm businesses, countryside access, water supply and rural communities. So it is important that all relevant policy leads in Defra are engaged in the emergency response to:

- assess the impact of the flooding for their policy area;
- discharge their normal policy and regulatory responsibilities throughout the response to the emergency;
- co-ordinate their response activities with stakeholders both inside and outside Defra;
- disseminate information about their specific activities; and
- contribute to cross-Defra co-ordination.

An important aspect of any flooding event is the bringing of emergency operations to a close. Defra (and other government departments) will begin to scale down their involvement in the response as soon as Ministers are satisfied that it is prudent to do so. This is likely to depend on:

- the immediate emergency having passed;
- satisfactory cross-government recovery arrangements being in place;
- local resources being adequate to manage the situation; and
- formal arrangements being in place to learn lessons from the floods.

The Department for Communities and Local Government is the Lead Government Department for flood recovery (see separate entry later in this section).

Another important aspect of Defra’s Lead Department role is to ensure that flood emergency management processes are exercised at an appropriate frequency.

The following table provides a summary of what you can expect from Defra.

**Figure 4.2:** What you can expect of Defra

Stage	Defra actions
<b>Preparing for flooding</b>	<ul style="list-style-type: none"> <li>■ Ensuring that structures and resources are in place so that that the Flood Management team and other parts of Defra can play their part in responding to a flooding event.</li> <li>■ Encouraging Local Resilience Forums (LRFs) to prepare appropriate emergency plans for flooding and providing guidance.</li> <li>■ Ensuring central government has appropriate national planning assumptions for flooding.</li> <li>■ Planning and participating in emergency exercises.</li> </ul>

Stage	Defra actions
<b>When flooding is forecast</b>	<ul style="list-style-type: none"> <li>■ Using Flood Forecasting Centre, Environment Agency and Met Office reports to anticipate events (and their likely scale) as far as possible – and, on that basis, raise levels of preparedness in central government.</li> <li>■ Initiating communications across central government, including press offices and providing situation reports.</li> </ul>
<b>When flooding happens</b>	<ul style="list-style-type: none"> <li>■ Advising Defra Senior Management, Ministers, other government departments and agencies on the developing scale of events.</li> <li>■ Ensuring effective communications with Parliament, the news media and others.</li> <li>■ Collecting briefing on the impacts of the flooding on all Defra interests.</li> <li>■ Working with Cabinet Office on escalating or de-escalating the central government response.</li> <li>■ Co-ordinating the cross-government and multi-agency response to the flooding.</li> <li>■ Facilitating Ministerial and other VIP visits to the affected areas.</li> <li>■ Ensuring that clear responsibilities are established for overseeing recovery and aftermath issues.</li> </ul>
<b>When flooding subsides</b>	<ul style="list-style-type: none"> <li>■ Liaising with the Department for Communities and Local Government (CLG) on recovery matters.</li> <li>■ Advising on follow-up Ministerial/VIP visits.</li> <li>■ Ensuring arrangements are in place for identifying any lessons to be learned.</li> </ul>

## What you can expect from the Government Offices for the Regions

The UK central government response and support during an emergency is provided through a number of different organisations and agencies including UK central government departments, the Government Offices in England, Devolved Administrations and local response partners.

The Government has announced its intention in principle to abolish the Government Offices for the regions, subject to the satisfactory resolution of consequential issues. The final decisions on the future, including arrangements for transfer of on-going functions, will be made at the end of the Spending Review in the autumn. In making the announcement, the Government noted that some Government Office functions, such as arrangements for resilience and civil contingencies, will need to continue.



Until new arrangements are put in place, the Government Offices (GOs) will represent central government in the English regions, bringing together staff and activities from the various government departments operating in each region. Regional Resilience Teams (RRTs) have been established within each of the GOs to co-ordinate the response of the whole GO during an emergency. They are responsible for activating Regional Operation Centres where required, supporting local response and recovery efforts, and ensuring that there is an accurate picture of the situation in their region.

RRTs are the first place that government departments turn to for situation reports on flooding emergencies. RRTs in turn look to local responders for this information. In order to ensure an effective two-way flow of information between local responders and central government in an emergency, GOs may place a Government Liaison Officer (GLO) within the local Strategic Coordinating Group (SCG) set up to manage an emergency.

Information flows must be two-way however. So government departments may use GOs to cascade information and guidance to local responders. The GOs have substantial knowledge and experience of the workings of central government and so provide a valuable first port of call for advice and guidance.

The mechanisms for alerting, mobilising and information sharing between local responders and the GO will be set out in Regional Response Plans, agreed for each region. The plans will outline procedures for: activating the emergency management facilities in the GO; when necessary, activating Regional Coordinating Groups and/or Regional Civil Contingencies Committee (see section two for more on RCGs and RCCCs) ; and communicating with the local level, other regions and central government.

GOs can provide particular support in relation to consequence management - where the scale and nature of a flooding incident is such that the effects are likely to be felt outside the immediate locality or may overwhelm the local response - and in areas such as arranging Ministerial or VIP visits. They work closely with the Central Office of Information (COI) in the regions and, with their links to government departments, can help local responders to ensure that a coordinated and coherent message is given to the public.

GOs play an important role in cross-regional co-ordination, liaising with other GOs and/or the Devolved Administrations (DAs) to support the response effort during flooding emergencies affecting more than one region or spanning the border with Scotland or Wales.

## **What you can expect from the Department for Communities and Local Government**

During a major incident, the Department for Communities and Local Government (CLG) will liaise with the Regional Resilience Teams and:

- update them on decisions made at COBR;
- act as a conduit for information sent from a local and regional level to central government; and

- represent regional views at COBR as necessary, ensuring that regional situation reports are fed into national reporting mechanisms.

CLG also has a key role in co-ordinating Fire Service Assets at a National Level. Catastrophic and large scale incidents place significant demands on local Fire and Rescue Services and have often required a national co-ordinated response from across the country. The **National Co-ordination and Advisory Framework** (NCAF) provides support and advice to the Fire and Rescue Services and Central Government during incidents that are of national significance and/or require national co-ordination.

CLG's Chief Fire and Rescue Adviser (CFRA) will be responsible for the co-ordination and advisory framework structure during incidents of national significance and/or require national co-ordination.

During activation the CLG Emergency Room will be considered as the hub of the NCAF arrangements and will provide support for the Chief Fire and Rescue Adviser (CFRA) and the CLG Resilience Team.

CLG has a specific role in the recovery phase from a flooding emergency, where central government co-ordination is required, CLG will take on the role of Lead Government Department for recovery. In this role CLG will:

- act as the focal point for communication between central government and the multi-agency recovery co-ordinating group(s) at local level;
- agree, across government, clear aims and objectives for the recovery process, including criteria for standing down recovery mechanisms and structures;
- ensure that recovery issues are identified and acted on during the response phase of an emergency and that there is a smooth and effective handover from response to recovery;
- produce brief, accurate situation reports on the nature and scale of the emergency;
- produce a handling plan as soon as possible;
- draw upon and apply the relevant capabilities applicable to recovery from the emergency in hand and, if required, co-ordinate the support needed from other government departments and agencies through COBR;
- use its authority decisively to take whatever executive decisions and actions are needed from the centre to help the local responders to deal with it;
- co-ordinate and disseminate information for the public and the media at the national level, collaborating with other government departments, including the News Co-ordination Centre when activated and the Civil Contingencies Secretariat;
- account to Parliament and lead in the submission of evidence to any subsequent government-appointed inquiry; and

- learn and share the lessons from the emergency.

## What you can expect from the Environment Agency

The Environment Agency is the principal flood risk management operating authority in England and Wales, with powers to provide measures to reduce the risk of flooding on rivers and tidal waters and to provide a strategic overview on coastal erosion - soon to extend to flooding from other inland sources.

In carrying out this role, and with particular regard to flood emergency planning, the Agency will:

- communicate the risk of flooding to increase the awareness of people living, working and travelling in flood risk areas so that they can take steps to prepare themselves and their properties for flooding;
- work with civil contingency partners and critical national infrastructure operators to help them understand the risk of flooding in their locality, by providing flood data and mapping and to help them to develop flood response plans where required;
- work with spatial planners and advise developers on improving the development of locations so that flood resistance, resilience and safe access and escape are put in place;
- provide and develop flood forecasting and warning services, currently for fluvial and coastal flooding, so that prior notice of flooding can be provided to civil contingency partners, business and the public;
- operate its flood defences so that protection from flooding can be put in place; and
- provide operational support to other response organisations where resources allow.

## What you can expect from the Flood Forecasting Centre

The Flood Forecasting Centre (FFC) is a partnership between the Environment Agency and the Met Office, combining the organisations' meteorology and hydrology expertise to forecast for river, tidal and coastal flooding, as well as extreme rainfall which may lead to surface water flooding.

With a dedicated team in one national centre, the FFC provides the best possible intelligence and support to existing Environment Agency flood warnings and Met Office weather warning services for England and Wales. By combining knowledge and experience, the FFC has improved the ability to deliver countrywide longer lead time flood alerts and more accurate, targeted information to **Category 1 and 2 responders**. This will provide people in areas at risk of flooding with more time to protect themselves and their homes from the effects of flooding.

More detailed information on flood prediction tools is included elsewhere in the National Flood Emergency Framework. But the following provides a summary of the FFC's main services.

*Extreme Rainfall Alert (ERA) Service* - this is to alert emergency responders in England and Wales to the possibility of urban surface water flooding as a result of extreme rainfall. The alert is issued at county level to help local response organisations manage the potential impacts of flooding.

ERAs are issued when the probability of extreme rainfall is 20% or greater for the affected county, with updates and cancellations to alerts as and when required. When there is between a 10% and 20% probability of extreme rainfall, extreme rainfall guidance is incorporated in the Flood Guidance Statement referred to below.

The FFC has produced an **ERA Services User Guide** to help its customers interpret the information they receive and put it into relevant context for their areas.

Any Category 1 or 2 responder can register for the ERA Service by calling 0300 12345 01 or emailing **ffcenquiries@environment-agency.gov.uk** with their name and organisation contact details.

*The Flood Guidance Statement* – this provides information for Category 1 and 2 responders to help them with their planning decisions. It presents an overview of the flood risk across England and Wales over five days and identifies possible severe weather, which could cause flooding and significant disruption to normal life.

Statements are issued daily at the following times:

- very low and low risk situations — 10.30hrs;
- medium risk situations — 10.30 and 15.00hrs; and
- high risk situations — 10.30, 15.00 and 20.00hrs and/or as agreed with National Incident Rooms.

See this **Sample Flood Guidance Statement**.

The FFC has produced a **Flood Guidance Statement User Guide** to help its customers interpret the information they receive and put it into relevant context for their regions.

Any Category 1 or 2 responder can **register online** to receive daily Flood Guidance Statements or by calling 0300 12345 01 or emailing **ffcenquiries@environment-agency.gov.uk** with their name, organisation and contact details.

*Web Service* - The FFC's Web Service provides secure delivery of information to the emergency response community in England and Wales. Products are made available to registered users in one easy to access and secure location.

The service is currently available to all National Severe Weather Warning Service (NSWWS) users via their existing login details, as well as to Category 1 and 2 responders who wish to sign up. To register for the Web Service contact the FFC on 0300 12345 01

## What you can expect from the Met Office

The Met Office is the official source of meteorological information in the UK. With a resilient 24/7 capability it provides a number of services that help authorities prepare for, and respond to, flood emergencies.

The Met office will provide briefings on the meteorological situation to Government (including COBR when activated – see section 2) as required and will deploy a team of regionally based Public Weather Service (PWS) Advisors to work with the emergency planning community to:

- discuss predicted or ongoing severe weather events to help emergency responders assess the risk in their particular area and put preparations in place to mitigate the impacts;
- ensure emergency management teams are aware of all other meteorological factors which could affect the incident and their potential impact;
- ensure the consistency of meteorological information and that all responders within the Command and Control Centre use this information;
- interpret this information for the responders where required;
- source other scientific advice available from the Met Office and act as a point of contact between the Met Office and the responders, thereby freeing up the responders' resources and allowing them to focus on incident management; and
- if required and appropriate, arrange for routine forecasts and other information to be supplied to aid the recovery phase.

The Met Office will also provide specific additional information via an Emergency Support Website to enable effective decision making during an event.

Weather information and the National Severe Weather Warning Service are available to the public through the **Met Office website** and television broadcasts.

The Met Office also has an **Emergency Support service** - a free-at-point-of-use service, designed mainly for Category 1 and 2 Responders to aid the work of incident management teams in dealing with a variety of environmental emergencies situations, including flooding. The service is designed to supplement the role of the PWS Advisors in providing consistent weather related information and interpretation for the UK Emergency Response community.

The Emergency Support service is web-based and provides two types of information:

- up-to-date observations and forecast information, automatically updated, including:
  - rainfall radar data;
  - real-time rain-gauge observations;
  - forecast rainfall data;
  - wind observations;
  - forecast wind data;
  - severe weather warnings; and
  - lightning detection information.
- emergency event-specific content:
  - specifically generated products and guidance relevant to a particular emergency event.

The Emergency Support service should only be used in conjunction with the advice of a PWS Advisor. While it is designed to provide an easy-to-access, up-to-date source of information, a PWS Advisor should be consulted for advice on interpretation and guidance on the most appropriate response.

### **What you can expect from the Department of Health**

In the event of a widespread flood emergency, the Department of Health will initiate and direct the government health response, providing specialist advice and information to Ministers, other government departments and responding organisations. It will also be responsible for the effectiveness of the health response.

### **What you can expect from the Health Protection Agency**

The Health Protection Agency (HPA) in England – working in conjunction with its equivalent public health organisations in the devolved administrations – is the lead agency responsible for providing public health advice to the Department of Health and supporting all aspects of the public health response to a flooding emergency. See section 10 for more on the health consequences of flooding.

### **What you can expect from the Department for Transport**

The Department for Transport (DfT) works with all transport operators to ensure that they are aware of the implications of a flooding emergency and to ensure that facilities and communication channels are in place to meet any additional requirements that may be placed upon them.

## **What you can expect from the Highways Agency**

The Highways Agency is responsible for operating, maintaining and improving the strategic road network in England on behalf of the Secretary of State for Transport. The Highways Agency network is recognised as one of the safest and most efficient road systems operating in the world today. But severe weather can have a significant and negative impact upon traffic flows which can result in delays, the duration of which can be influenced by a whole host of variables.

The most effective way of relieving serious traffic congestion is to employ recognised incident management techniques and attempt to clear incidents as quickly as possible. There are occasions, however, where severe congestion and extended delays are unavoidable which can lead to the travelling public being stranded on the network. For that reason, the Highways Agency has published an **Area Management Memorandum on Emergency Customer Welfare**. This 2 part policy provides a structured approach to the provision of emergency welfare for persons, pets and livestock who become unavoidably detained and stranded on the Highways Agency network.

## **What you can expect from the Department for Business, Innovation and Skills**

The Department for Business, Innovation and Skills (BIS) engages with the telecommunications and postal services industry to ensure they have adequate plans in place to respond to an emergency. For flood related emergencies affecting these sectors, BIS will feed into the government response and act as a communication channel between these industries and central government.

## **What you can expect from the Department for Energy and Climate Change**

The Department of Energy and Climate Change (DECC) works closely with the energy sectors to ensure that industry recognise the impact an emergency would have on the UK and to ensure they have plans in place to deal with such situations, so that any disruption to consumers is minimised. Should it become necessary, the Department and industry, in consultation with other stakeholders, would introduce a range of measures to ensure the maintenance of essential supplies and services.

## What you can expect from the Ministry of Defence

Armed Forces support to civil resilience can be divided into two categories:

- **Niche capabilities.** These are assigned when, in the view of Defence Ministers, it is in the national interest to devote specific Armed Forces and MOD assets to specific operations in the UK, either in whole or in part. These assets are identified in Defence Planning Assumptions and are guaranteed; they include:
  - a UK-based and UK-focussed Command and Control structure;
  - an Explosive Ordnance Disposal and Chemical Biological Radiological and Nuclear render-safe capability;
  - an air surveillance, policing and defence system;
  - Fishery Protection vessels;
  - a Counter Terrorism capability; and
  - a Search and Rescue capability.
- **Augmentation Capabilities.** When civil contingencies arise, it is possible to deploy the armed forces in support of the civil authorities if Defence Ministers consider it appropriate. Resilience planners should not make assumptions about the criteria for a Defence Minister's decision in advance and should not make assumptions about the level of military deployment which will depend on the degree to which the regular and reserve forces are committed overseas.

It is typically these augmentation capabilities that the MOD would expect to deploy in flood emergency situations where assistance might include:

- surge personnel - the capability to provide general duties personnel.
- logistic advice - Sir Michael Pitt's recommendation 47 called for a small number of trained Armed Forces personnel who can be deployed to advise Gold Commands on logistics during wide-area civil emergencies and, working with Cabinet Office, identify a suitable mechanism for deployment. Logistics advice will be provided within the existing strategic (MoD) structure and at regional level by Joint Regional Liaison Officers or regional logistics staff, depending on scale and requirements.
- engineering - the total stock of engineering equipment held by the Armed Forces in the UK is likely to be less than that normally available in a medium-sized town - Although expertise and assets could be made available.
- estate - elements of the Defence Estate could be made available if appropriate to provide hard standings, storage, logistics hubs etc.



In general terms government would expect civil responders to have the capabilities to deal with most flooding emergencies, with the main Defence effort being with the planning and preparing for those hazards and threats at the highest categories in the National Risk Register.

## **National emergency management: working with the devolved administrations**

The balance of activity between UK central government and the devolved administrations will depend on the nature of the emergency and the terms of the devolution settlements, that being:

- whether the incident affects Scotland, Wales and/or Northern Ireland; and
- whether the response to the emergency includes activity within the competence of the administration.

The devolved administrations will mirror many of the tasks of the UK central crisis mechanism as well as fulfilling the same tasks as the English regional structures. In every case, the precise balance of activity will depend on the competence of the devolved administration involved (i.e. the terms of their devolution settlement) and the nature of the incident.

If the emergency takes place in Scotland, Wales or Northern Ireland and relates to a devolved matter, the devolved administration will be the nominated Lead Government Department. Flooding is a devolved matter. If the emergency occurs in England but has cross-border implications for devolved issues the relevant devolved administration will lead on this aspect in their territory and provide advice and support as necessary to the UK government so that effects can be understood and potential mitigation measures considered.

In areas of reserved responsibility, the UK Government Lead Government Department will lead the response in the devolved areas working closely with the relevant devolved administration. In practice, even where formal accountability rests with UK ministers and Westminster, the devolved legislatures will expect to be briefed on developments where these significantly affect their territory. Likewise, devolved ministers will be expected to comment by national and local media necessitating close co-operation and information sharing between UK departments and their counterparts in the devolved administrations. The UK territorial departments – Scotland Office, Wales Office and Northern Ireland Office – can play an important role in facilitating this process. The devolved administrations maintain their own facilities to support their response to emergencies within their competence or affecting their territory.

## Section 5: Tools for flood emergency planners and responders

- Overview
- Daily Flood Guidance Statements: vital information for flood emergency planners and responders
- Forecasting possible surface water flooding: the FFC's Extreme Rainfall Alert (ERA) Service
- Public flood warnings
- Met Office severe and extreme weather warnings
- Hazard Manager
- River and sea levels on the internet
  - How to use river and sea levels on the internet
- Decision support for flood planners and responders - EA Flood Advisory Service
- Other tools: UK resilience website
- Other tools: National Resilience Extranet

## Overview

One of the most difficult tasks for emergency planners and responders is knowing when to act. In the case of flooding, there are a number of factors that you need to take account of. And it's inevitable that a degree of judgement, based on a combination of data and instinct, will be needed.

But the extent to which flood emergency planners and responders need to apply judgement is gradually declining. Since April 2009, the new **Flood Forecasting Centre** has provided a valuable new tool to overcome the problems of converting Met Office weather information and Environment Agency hydrological information into flood risk assessments. And the Environment Agency's Flood Advisory Service, details of which can be found in this section, is intended to help planners and responder avoid much of the guesswork associated with flood forecasts and warnings.

**Figure 5.1:** Decision support – overview of products to consider

Product	Deliverer	Relevant to which types of flooding?	Importance
<b>Daily Flood Guidance Statements</b>	Flood Forecasting Centre	All	High – trigger for action
<b>Extreme Rainfall Alert</b>	Flood Forecasting Centre	Surface water	High – trigger for action
<b>Public Flood Warnings</b>	Environment Agency	River and coastal	High – trigger for action
<b>Severe/Extreme Weather Warnings</b>	Met Office	All	Medium – keep watch
<b>River and sea levels on the internet</b>	Environment Agency	River and coastal	Medium – keep watch
<b>Highways Agency website</b>	Highways Agency	All	Low – consequence of flooding
<b>Rail disruptions</b>	National Rail Enquiries	All	Low – consequence of flooding

## Daily Flood Guidance Statements: vital information for flood emergency planners and responders

The Flood Forecasting Centre (FFC) issues daily Flood Guidance Statements that provide information for Category 1 and 2 responders to help them with their planning decisions. It presents an overview of the flood risk across England and Wales over five days and identifies possible severe weather, which could cause flooding and significant disruption to normal life.

Statements are issued daily at the following times:

- very low and low risk situations — 10.30hrs;
- medium risk situations — 10.30 and 15.00hrs; and
- high risk situations — 10.30, 15.00 and 20.00hrs and/or as agreed with National Incident Rooms.

A **Sample Flood Guidance Statement** can be viewed on the FFC website.

Flood Guidance Statements provide county level information for days one to three and a regional scale illustration of the risk level for days four and five. They present an assessment of the probability and impact of flooding based on meteorological information and an understanding of the situation across river catchments and the coast.

The assessment of daily flood risk for England and Wales provides colour-coded maps showing the levels of risk of a major flood event happening for each day of a five day period. The colour-coding is based on the following key.

**Figure 5.2:** Flood Guidance Statement colour key

Key	Very low risk	Low risk	Medium risk	High risk
<p><b>River &amp; coastal flooding</b></p> <p>Probability of one or more of the following impacts occurring from rivers or the sea:</p> <ul style="list-style-type: none"> <li>■ extreme danger to life</li> <li>■ considerable numbers of people affected</li> <li>■ significant impact on capacity of Cat 1 &amp; 2 responders or the public to effectively respond</li> <li>■ approx &gt;100 properties will flood</li> <li>■ severe impact on infrastructure</li> <li>■ failure or overtopping of defences expected</li> </ul>	<20%	≥20% to <40%	≥40% to <60%	≥60%
<p><b>Extreme rainfall</b></p> <p>Probability that ERA thresholds will be met, leading to possible surface water flooding.</p>	<10%	≥10% to <20%	≥20% to <60%	≥60%
<p><b>Suggested actions</b></p>	<ul style="list-style-type: none"> <li>■ Business as usual</li> </ul>	<ul style="list-style-type: none"> <li>■ Consider liaising with partner organisations</li> <li>■ Be aware of the latest weather/ flood warnings and alerts</li> </ul>	<ul style="list-style-type: none"> <li>■ Consider liaising with partner organisations</li> <li>■ Consult surface water flood maps and local flood</li> </ul>	

Floods are difficult to forecast since the expected weather is just one factor. To identify and assign the risk level, the FFC takes into account an assessment of:

- the probability of a severe or extreme weather event occurring (low 20-40%, medium 40-60%, high 60% or greater);
- recent weather conditions – whether the event is shortly after an earlier period of prolonged rain or other high impact weather event;
- indicative knowledge about the condition of the catchments within the areas at risk – how saturated the catchments are, how high the rivers are and the underlying conditions;
- spatial and temporal extent of the event – whether it is expected to be short and localised or will affect a large geographical area over several hours;
- timing of the event – whether it coincides with a major sport, other outdoor activity or national holiday; and
- impact of fluvial flow and spring tides – if a major fluvial event is being assessed, whether river outflow will occur at a period of high (spring) tides.

Risk levels are agreed on a daily basis with each Environment Agency region via Forecasting Duty Officers (for river and coastal flooding) and with the chief forecaster at the Met Office (for probabilities of extreme rainfall).

All Category 1 and 2 responders can register to receive the Flood Guidance Statement. To start receiving them, call the FFC on 0300 12345 01; or email [ffcenquiries@environment-agency.gov.uk](mailto:ffcenquiries@environment-agency.gov.uk); or sign up online at [www.ffc-environment-agency.metoffice.gov.uk](http://www.ffc-environment-agency.metoffice.gov.uk).

The FFC has produced a fuller **Flood Guidance Statement User Guide** to help its customers interpret the information they receive and put it into relevant context for their regions.

## Forecasting possible surface water flooding: the FFC's Extreme Rainfall Alert (ERA) Service

Surface water flooding happens as a direct result of extreme rainfall. It differs from river flooding in that it can happen before water enters a river or watercourse, or where none exists. Advance warning is difficult as it can happen very quickly when the level of rainfall is more than drains can handle. The effect of its impact depends on local landscapes and local conditions such as the state of culverts.

The ERA Service is designed to alert emergency responders in England and Wales to the possibility of surface water flooding as a result of extreme rainfall. The alert is issued at county level to help local response organisations manage the potential impacts of flooding. The primary beneficiaries

of the ERA Service are Category 1 and 2 responders. The Service is designed to help responders take the right action and reduce the impact of surface water flooding, which will ultimately improve public safety and reduce disruption. Benefits include:

- impacts on road network, local transport and associated services minimised;
- local authorities and utility companies better informed to manage their response to surface water flooding;
- staff and resources deployed and managed more effectively;
- equipment, such as sandbags, mobilised and deployed in advance; and
- communication teams better informed and prepared to handle media and public response.

An ERA can take two forms:

- **ERA Guidance** — incorporated in the Flood Guidance Statement issued daily at 10.30 hours when there is between a 10% and 20% chance of extreme rainfall.
- **ERA Alert** — issued when there is more than a 20% chance of extreme rainfall for a particular county or counties.

Alerts may be issued without being preceded by Guidance in a rapidly developing situation. Similarly, Guidance will not always be followed by an Alert, for example if weather conditions improve.

Any Category 1 or 2 responder can register for the ERA Service by calling 0300 12345 01 or emailing [ffcenquiries@environment-agency.gov.uk](mailto:ffcenquiries@environment-agency.gov.uk). It is a free service. These services are issued via email, auto-voicemail, SMS or fax (though ERA guidance is not available by email at present).

The FFC has produced a fuller **ERA Services User Guide** to help its customers interpret the information they receive and put it into relevant context for their areas.

## Public Flood Warnings

The Environment Agency (EA) operates a flood warning service in areas at risk of flooding from rivers and the sea. If flooding is forecast, warnings are issued using a set of four easily recognisable codes.

EA's codes form part of its staged flood warning service. Flood watches and warnings are issued directly from Floodline Warnings Direct (See section 7 for more on Floodline warnings Direct or FWD). They are targeted to specific areas and tell people they are at risk of possible flooding and

**Figure 5.3:** Environment Agency Flood Warning Codes



## Flood Watch

### What it means

Flooding of low lying land and roads is expected. Be aware, be prepared, watch out.

### What to do

- Monitor local news and weather forecasts.
- Be aware of water levels near you.
- Be prepared to act on your flood plan.
- Check on the safety of pets and livestock.
- Charge your mobile phone.



## Flood Warning

### What it means

Flooding of homes and businesses is expected. Act now!

### What to do

- Move cars, pets, food, valuables and important documents to safety.
- Get flood protection equipment in place.
- Turn off gas, electricity and water supplies if safe to do so.
- Be prepared to evacuate your home.
- Protect yourself, your family and help others.
- Act on your flood plan.



## Severe Flood Warning

### What it means

Severe flooding is expected. There is extreme danger to life and property.

Act now!

### What to do

- Collect things you need for evacuation.
- Turn off gas, electricity and water supplies if safe to do so.
- Stay in a high place with a means of escape.
- Avoid electricity sources.
- Avoid walking or driving through flood water.
- In danger call 999 immediately.
- Listen to emergency services.
- Act on your flood plan.



## All Clear

### What it means

Flood watches or warnings are no longer in force for this area.

### What to do

- Keep listening to weather reports.
- Only return to evacuated buildings if you are told it is safe.
- Beware sharp objects and pollution in flood water.
- If your property or belongings are damaged, contact your insurance company. Ask their advice before starting to clean up.



need to be alert and stay vigilant. People choose whether or not to receive this information. All properties in flood warning areas are encouraged to sign up for this service. Floodline and EA's website contain up to date information on the situation.

Flood planners and responders are able to receive automated email summaries of the flood warnings in force tailored to their local area. These summaries are in addition to individual flood warnings and will only be sent when there are flood warnings in force for the local area. Your local Environment Agency office can provide details of how to sign-up for this service.

## Met Office severe and extreme weather warnings

The Met Office website includes public weather information, including severe and extreme weather warnings. These include warnings for heavy rain, heavy snow and strong winds – all factors that can significantly affect flood risk. Severe weather warnings occur frequently, particularly in winter. Extreme weather warnings are rare however.

Detailed **severe weather warnings** are available at county/unitary authority level for up to five days ahead. They are in the form of advisories, early warnings and/or flash warnings.

- Advisories - advisories are issued by 1100 daily as routine and indicate confidence of expected severe or extreme weather. Early and flash warnings supersede advisories when confidence levels are 60% or greater;
- Early warnings - an early warning of severe weather will normally be issued up to several days in advance whenever the overall risk of widespread disruption in any UK region is 60% or greater; and
- Flash warnings - Flash warnings of severe weather are issued when confidence of an event reaching **specified criteria** is above 80%, and should give a minimum of two hours notice. Warnings are issued for every affected county or unitary authority.

The following tables illustrate the criteria for advisories, early and flash warnings and the predicted impact and public advice.

**Figure 5.4:** Criteria for weather warnings

## Severe weather

Colour and risk levels for severe weather events (can often occur, particularly in winter)					
	Green		Yellow	Amber	
Warning	None		Advisory	Early	Flash
Risk	Very low <20%	Low ≥20% <40%	Moderate ≥40% <60%	High ≥60% <80%	Very high ≥80%
Headline	No severe weather expected		Moderate risk of severe weather	High risk of severe weather	Severe weather is imminent or is occurring
Impact			Moderate risk of some damage to infrastructure and local disruption	High risk that there will be some damage to infrastructure and local disruption	Very high risk that there will be some damage to infrastructure and local disruption
Advice			Ensure you access the latest weather forecast	Remain vigilant and ensure you access the latest weather forecast	Ensure you access the latest weather forecast and take precautions where possible

## Extreme weather

Colour and risk levels for extreme weather events (these are rare)					
	Green	Yellow	Amber	Red	
Warning	None	Advisory	Advisory	Early	Flash
Risk	Very low <20%	Low ≥20% <40%	Moderate ≥40% <60%	High ≥60% <80%	Very high ≥80%
Headline	No extreme weather expected	Low risk of extreme weather	Moderate risk of extreme weather	High risk of extreme weather	Extreme weather is imminent or occurring
Impact		Low risk of major damage to infrastructure and the environment	Moderate risk of major damage to infrastructure and the environment	High risk of major damage to infrastructure and the environment. Casualties are possible	Major damage to infrastructure and the environment is likely. Casualties are possible
Advice		Ensure you access the latest weather forecast	Remain vigilant and ensure you access the latest weather forecast	Remain extra vigilant and access the latest weather forecast. Be aware of risks that might be unavoidable. Follow any advice given by authorities	Remain extra vigilant and access the latest weather forecast. Follow orders and any advice given by authorities under all circumstances and be prepared for extraordinary measures

## Hazard Manager

Hazard Manager is a Met Office one-stop information source for the emergency response community, allowing access to all services in one location, using a single username and password. Hazard Manager provides:

- a one-stop information source;
- a password-protected web portal dedicated to Category 1 and 2 responders;
- improved visualisation and a map viewer;
- single user name and password to access all services;
- automatic password resetting; and
- individual login arrangements.

Some Met Office and FFC products have already moved to Hazard Manager. The remaining will be migrated across over time.

Anyone who works for a Category 1 or Category 2 responder organisation can access Hazard Manager (with some of the services restricted to approved users). Before you can access the service you will need to **register**.

## River and sea levels on the internet

The Environment Agency (EA) website provides emergency planners and responders with near real time information about river and sea levels.

EA has monitoring stations across England and Wales that measure the level of rivers, lakes, sea and groundwater. Most of the measurements are taken electronically and automatically sent to databases used by the Agency's forecasting systems. These water level measurements for rivers and the sea are now sent straight to the EA website and published online. The information is updated daily, and in some cases, when water levels are high, the information is updated more regularly.

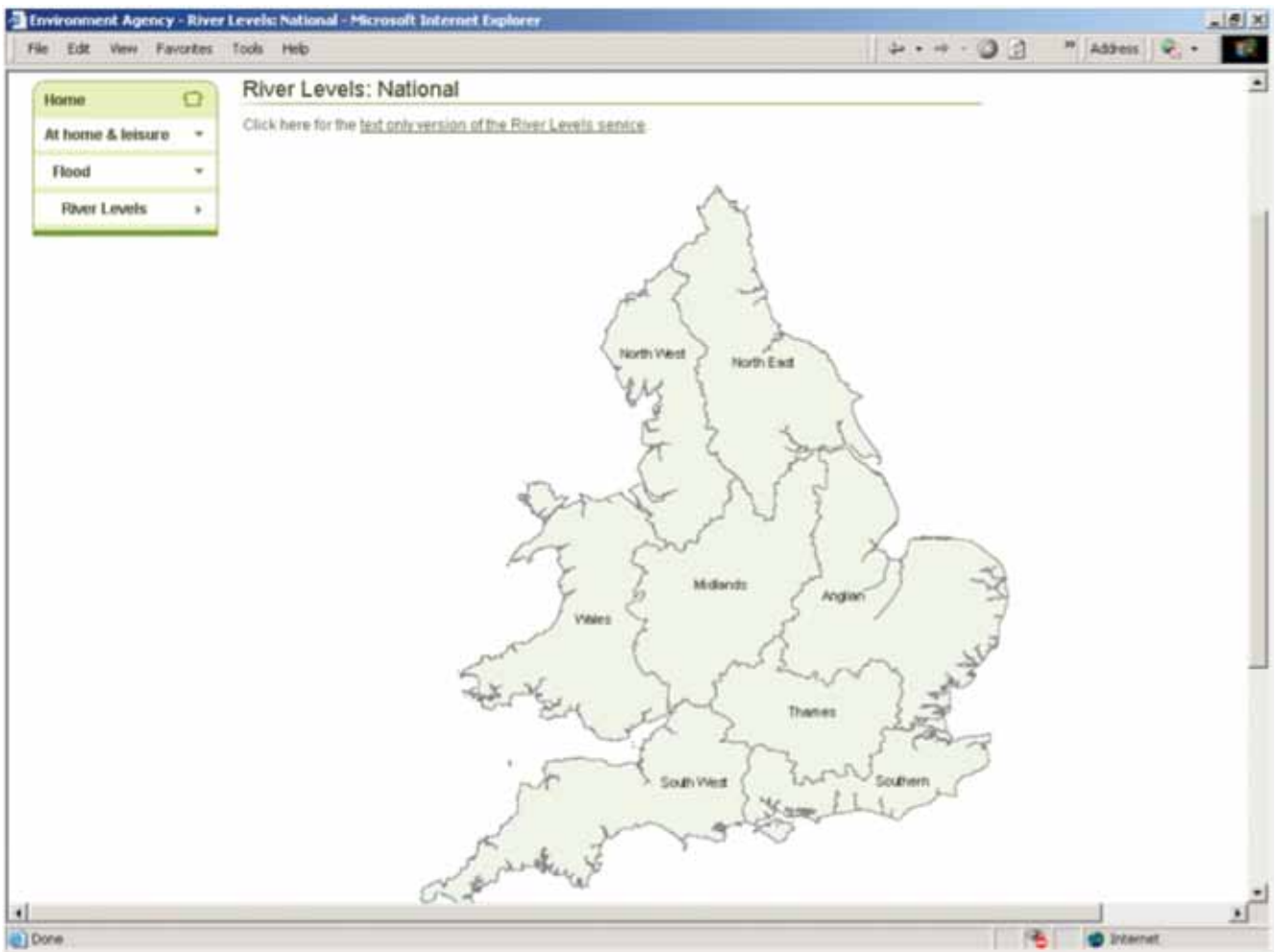
Having up to date information on local water levels will help people living in flood risk areas be better informed about the situation and decide what actions to take as the water levels change. This information will also benefit people that use rivers for recreation such as anglers and boaters. It will help local authorities identify where raised water levels could result in problems with surface water flooding, so it should be an important component of the information set that emergency planners and responders will use to help inform decisions and actions when dealing with flooding from rivers and the sea.

## How to use river and sea levels on the internet

People are able visit the **floods section of Environment Agency's website** to access river and sea levels free of charge.

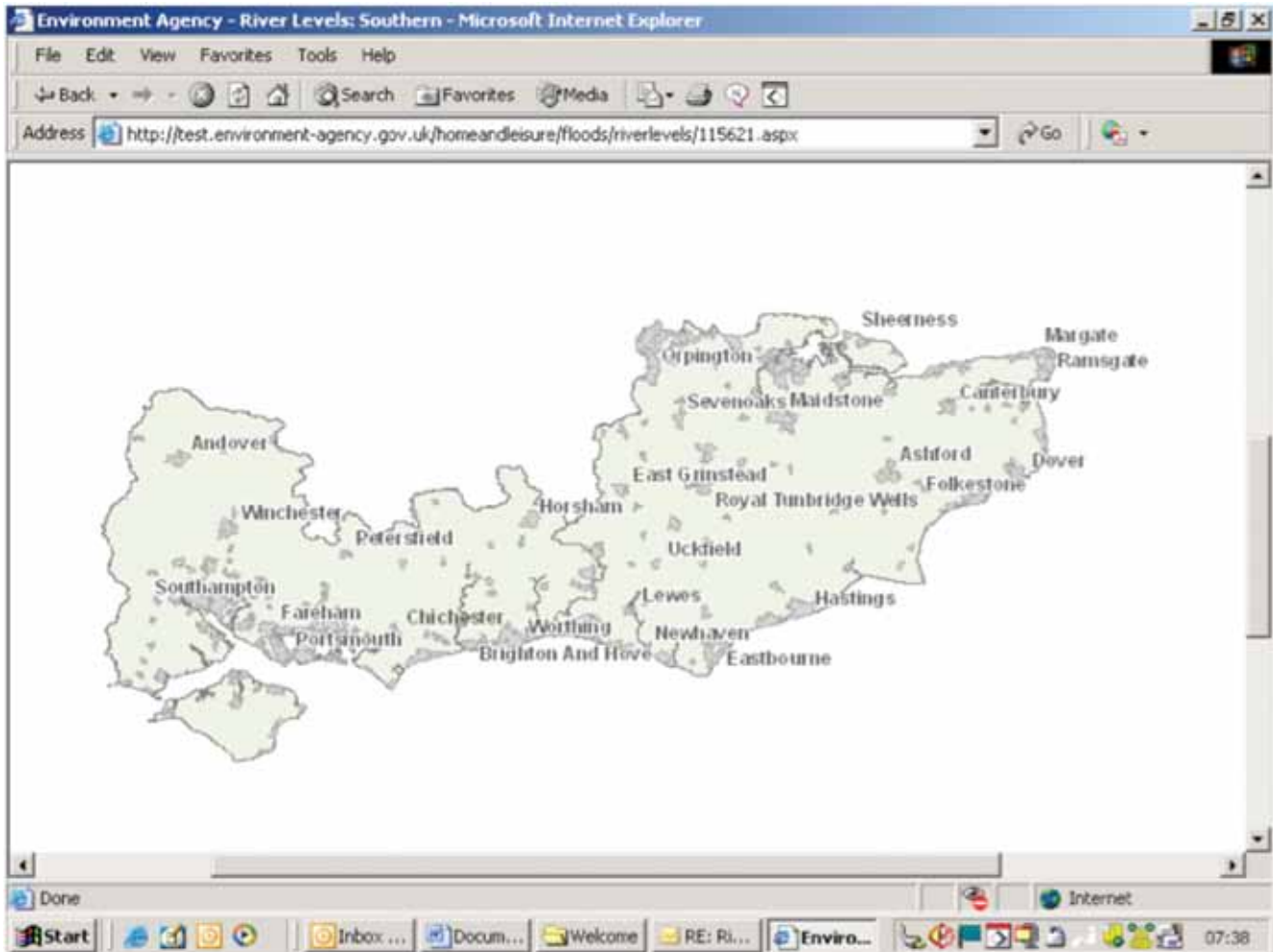
Users will be given a national map (see figure 5.5) and will be required to either click on the Environment Agency region they are interested in or click the link to get text only information.

**Figure 5.5:** National river levels map



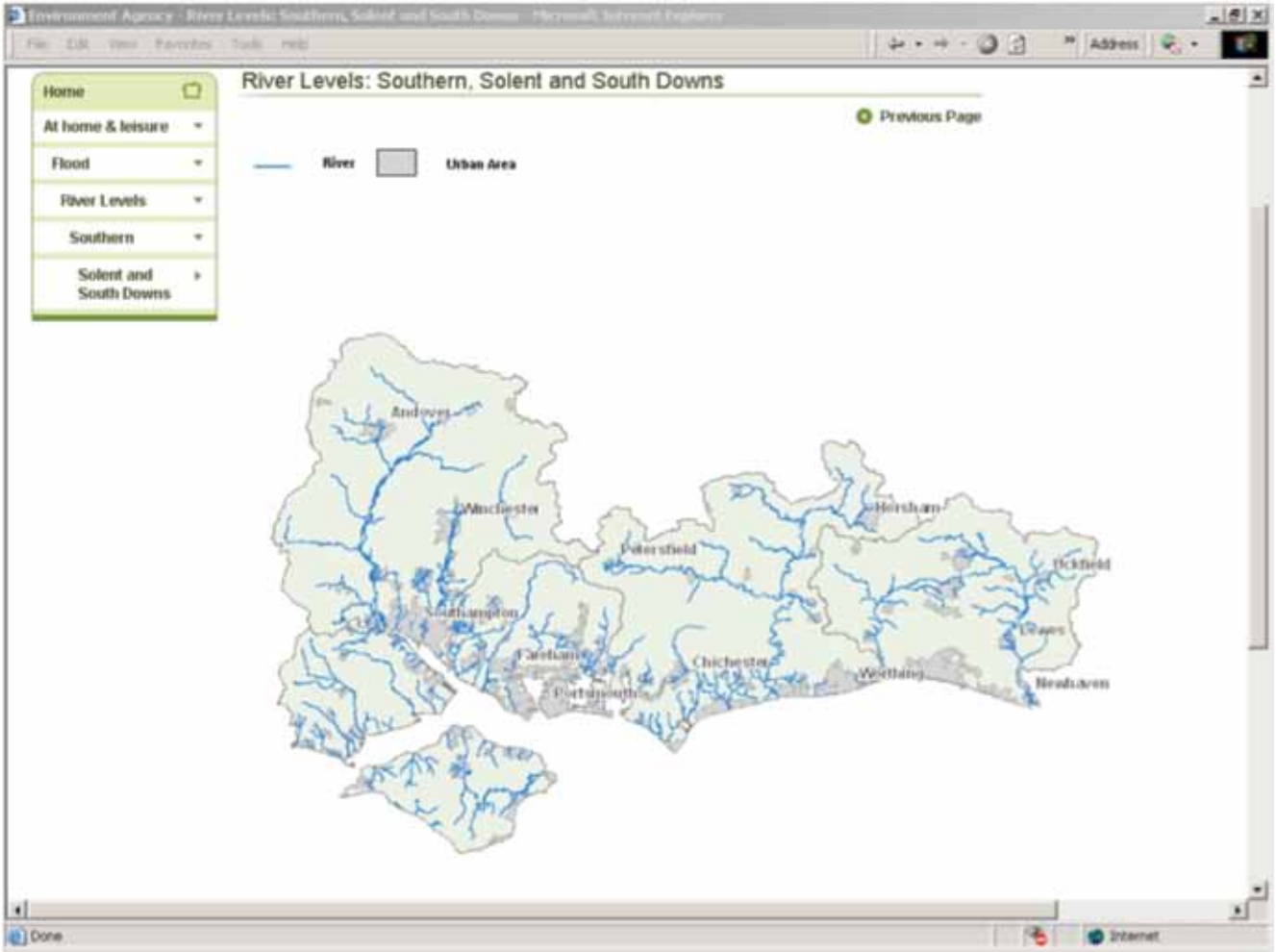
Once the user has clicked on the Environment Agency Region they are interested in, they will be shown a map similar to that shown below (figure 5.6). They will then need to click on the location they are interested in on the map. This will take them down to the relevant Environment Agency Area.

**Figure 5.6:** Regional river levels map



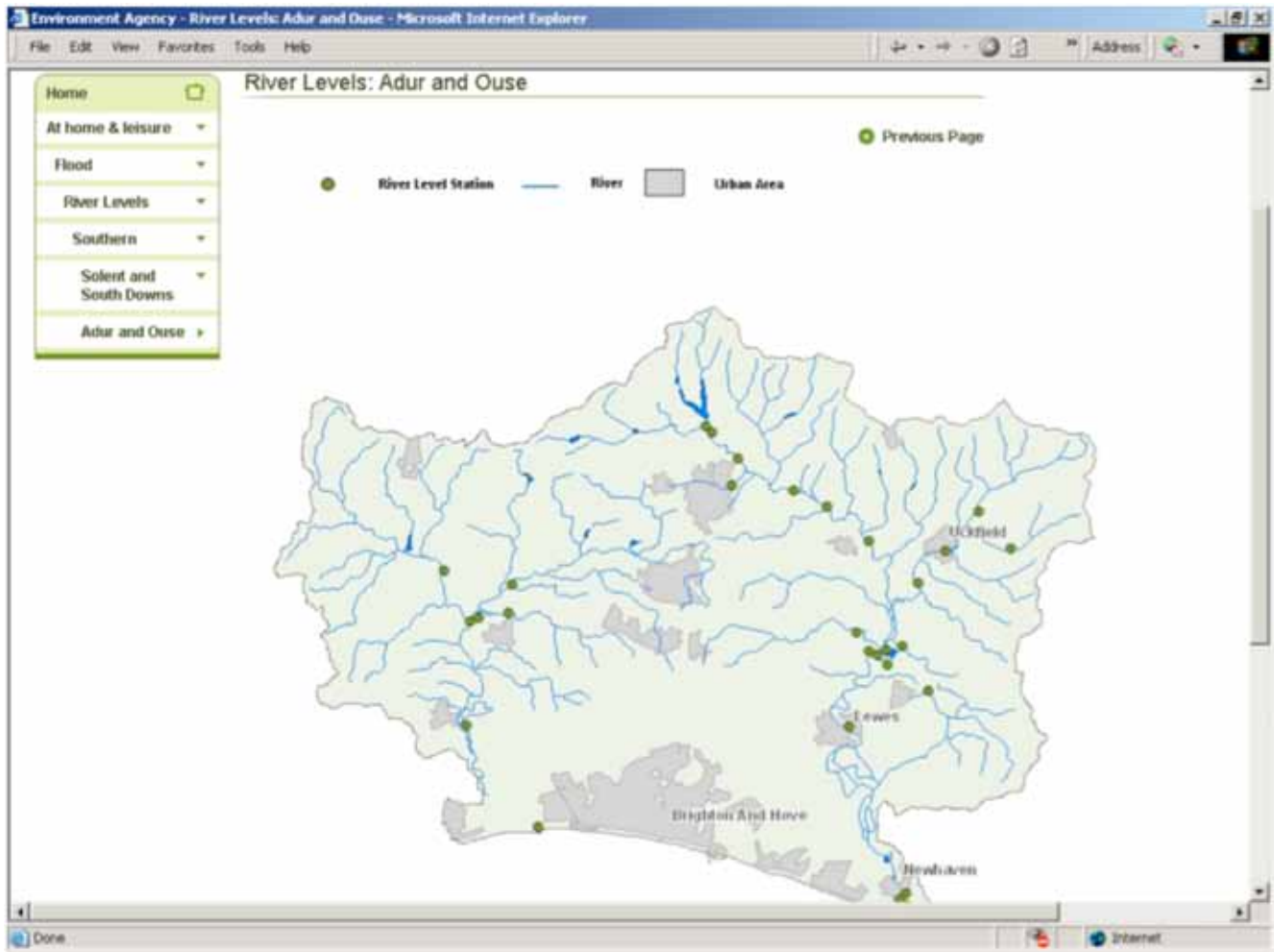
Users are then shown a map of the Environment Agency Area featuring rivers and urban areas (figure 5.7). Users then need to click on the location they are interested in and drill down to the relevant river catchment.

**Figure 5.7:** River levels area map



Users are then shown maps of the river catchment (figure 5.8). The maps show rivers, urban areas and the river level stations (green dots). Users then need to click on the river level station (green dot) they are interested in.

**Figure 5.8:** River levels catchment map

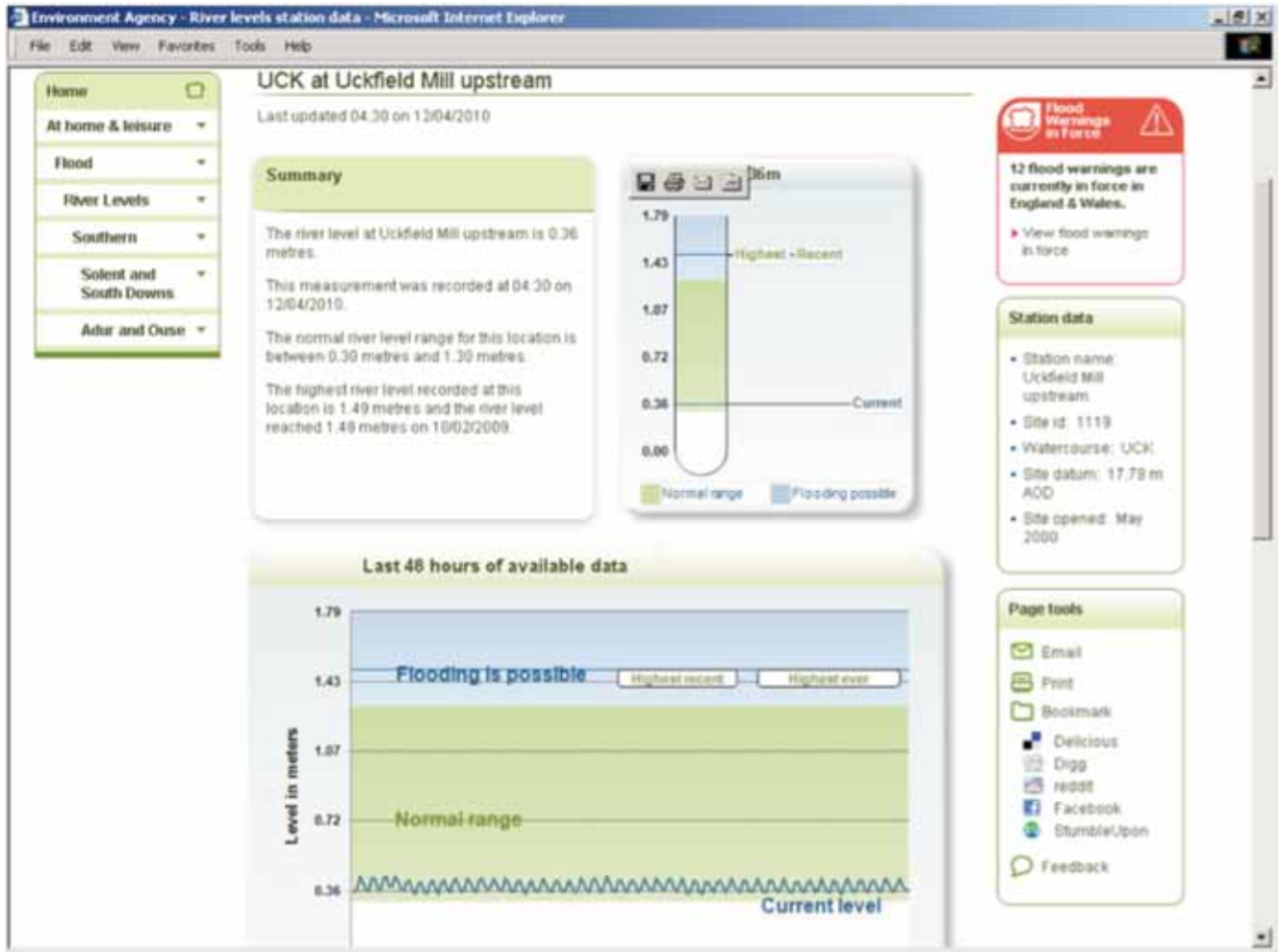


Once a user has clicked on the river level station they are interested in they will be shown the following information for that particular station (see figure 5.9):

- a summary providing contextual information about the situation;
- river level 'thermometer' – which shows the current water level at a particular point and includes information to put this in context (such as the highest level recorded and the level where flooding is possible);
- a hydrograph - showing the recent water levels over the last 48 hours, along with information to help put these in context;
- station data which provides details such as the station name, station identifier, watercourse, and when the site was opened; and
- flood warnings - when there is one or more flood warning in force, a link will appear directing users to the Environment Agency's online live flood warning information.



**Figure 5.9:** River levels station details



## Decision support for flood planners and responders - EA Flood Advisory Service

The number and complexity of factors that flood planners and responders must pay attention to is such that it is very difficult to be able to make the right call at the right time in terms of activating your flood plan.

To address this, the Environment Agency has introduced a Flood Advisory Service for local partners. The service will involve a joint teleconference chaired by your local Environment Agency representative, with the assistance of your Public Weather Service (PWS) Advisor where possible. This may be called, for example, when the Flood Guidance Statement is highlighted as amber (medium flood risk) or there is significant flood risk in your area. The service will provide more co-ordinated and consistent information for partners on developing flood risk.

You can access full details of the teleconference number and other important information from your local Environment Agency contacts or PWS Advisor.

## Other tools: UK resilience website

The UK resilience website exists to provide a resource for civil protection practitioners, supporting the work which goes on across the United Kingdom to improve emergency preparedness. As such it provides greater detail on some of the material included in this National Flood Emergency Framework. It has two main sections:

- the **Emergency Preparedness section** has advice for practitioners on the pre-emergency phase, with generic material on key frameworks like the **Civil Contingencies Act** and disciplines like **Risk Assessment** and **Business Continuity**; it also contains details of the UK Government **Capabilities Programme** and a section on **Resilient Telecommunications**;
- the **Emergency Response & Recovery section** has advice for practitioners on the post-emergency phase, with generic material on key frameworks such as the **Central Government's Concept of Operations** and **Lead Government Department principle**, and the **National Recovery Guidance**; It also contains details of the **Central Government Emergency Response Training programme**.

## Other tools: National Resilience Extranet

The National Resilience Extranet (NRE) is a software package with 3 levels of service available through subscription. The NRE provides a browser-based tool to enable efficient and secure (accredited to RESTRICTED level) exchange of information during both routine planning and response to emergencies. The tool provides ready access to centrally stored information including templates and good practice guidance, and enables timely communication of documents such as Commonly Recognised Information Pictures (CRIPs) and Situational Reports (SitReps).

The NRE is designed to support strategic collaboration between partners locally, regionally and with central government, including the Devolved Administrations. It also supports applications for incident management. Its overall aims are:

- to provide a secure software solution that will link the resilience community together at all levels from central government to regional/local responders;
- to share RESTRICTED documents;
- to support collaborative working;
- to provide a level of "standardisation" and interoperability;

- to enable timely communication and sharing of information; and
- to provide an easily accessible library of templates and information.

The NRE can be accessed via any standard Internet connection but requires adherence to connection guidance.

There are three levels of buy-in. The basic, day-to-day information sharing collaborative working package includes sections on:

- document storage and templates;
- calendar and on-line booking;
- situation reports;
- news room;
- brokerage facility;
- message storage;
- discussion boards;
- instant messenger;
- events information; and
- contacts.

The next level Emergency Information Management Package adds on a message log facility; a facility to deposit emergency plans; a tasks section; and an incident log facility.

The highest level adds a commercially available Geographic Information System (GIS) Package.

Get the NRE by contacting: **[NREenquiries@cabinet-office.x.gsi.gov.uk](mailto:NREenquiries@cabinet-office.x.gsi.gov.uk)**.

# Part two:

## Being prepared



## Section 6:

# The Importance of multi-agency planning

- Planning for all
- Emergency planning at the UK Government level
- Emergency planning at the local level
- Help with your multi-agency planning
- Why have specific flood plans?
- Focus your planning

## Planning for all

The Government would like to see all organisations have effective, well-practised emergency plans in place – plans to reduce the risk of emergencies occurring; and plans to reduce, control or mitigate the effects of the emergency.

## Emergency planning at the UK Government level

The UK Government Capabilities Programme is the core framework through which the Government is seeking to build resilience across all parts of the United Kingdom. The programme uses risk assessment over a five year period to identify the generic capabilities that underpin the UK's resilience to disruptive challenges, and ensures that each of these is developed. These capabilities include dealing with mass casualties and fatalities, response to chemical, biological, radiological or nuclear incidents, provision of essential services and warning and informing the public.

The Government has in place a co-ordinated cross-governmental exercise programme covering a comprehensive range of domestic disruptive challenges, including accidents, natural disasters and acts of terrorism. The programme is designed to test rigorously the concept of operations from the coordinated central response through the range of Lead Government Department responsibilities and the involvement of the Devolved Administrations, to the regional tier and local responders. These national processes feed into the Devolved Administrations, regional and local levels to ensure fully integrated emergency planning at all levels throughout the UK.

## Emergency planning at the local level

Emergency planning is at the heart of the civil protection duty on Category 1 responders under the **Civil Contingencies Act 2004**. The Act requires Category 1 responders to maintain plans for preventing emergencies; reducing, controlling or mitigating the effects of emergencies; and taking other action in the event of emergencies. These should draw on risk assessments and should have regard for the arrangements to warn, inform and advise the public at the time of an emergency.

Plans must contain a procedure for determining whether an emergency has occurred; provision for training key staff; and provision for exercising the plan to ensure it is effective. Procedures should also be put in place to ensure that the plan is reviewed periodically and kept up to date.

Category 1 responders should involve Category 2 responders - and organisations which are not subject to the Act's requirements - as appropriate throughout the planning process. Category 1 responders are required to have regard to the activities of relevant voluntary organisations when developing plans.

Category 1 responders also have a statutory duty to publish their emergency plans, to the extent necessary or desirable for the purpose of dealing with an emergency.

## Help with your multi-agency planning

Government has drawn up guidance for multi-agency flood planning, based on good practice from a range of existing plans, guidance and documents and lessons learned from real flooding events and exercises. The guidance forms part 12 of the National Flood Emergency Framework.

This guidance should be used by LRFs to undertake flood response planning, including recovery planning where it relates to flooding. It contains examples of how to set out the various components of a flood plan, all of which have been drawn from current good practice in the UK. The guidance is provided to aid the preparation of a multi-agency flood plan, but should be a good source of information, advice and guidance for any individual business or agency looking to complete a flood plan.

The guidance is aimed at LRFs and the emergency plans that flow from it are normally designed specifically for LRF member organisations. But with removal of any sensitive and/or confidential information, those plans could be made suitable for wider or general publication, where LRFs wish to provide such public information.

## Why have specific flood plans?

The **Civil Contingencies Act 2004** requires Category One Responders to have plans in place to respond to all emergencies. Emergency plans may take the form of either generic plans that describe a response to a wide range of possible scenarios (e.g. Local Resilience Forum (LRF) Incident Plan) or specific plans that deal with a particular kind of emergency (e.g. animal disease or Evacuation and Sheltering). Many LRFs will probably have both types depending on how emergency planning has evolved in the area. There may also be area-wide plans (e.g. at county-level) or site/local area specific plans (e.g. district, ward or parish).

For many parts of England and Wales, flooding poses a significant risk and is well-recognised within many Community Risk Registers. LRFs are encouraged to develop a specific flood plan to both complement other plans and to provide more detail to generic Major Incident Plans or Strategic Emergency Response Plans. The reason for having a specific flood plan is because of the complex nature of flooding and the consequences that arise, requiring a comprehensive and often sustained response from a wide range of organisations. The guidance is therefore geared toward helping LRFs to collectively develop a Multi-Agency Flood Plan.

## Focus your planning

Plans should focus on at least three key groupings of people: the vulnerable; victims (including survivors, family and friends) and responder personnel.

Vulnerable people may be less able to help themselves in an emergency than self-reliant people. Those who are vulnerable will vary depending on the nature of the emergency, but plans should consider: those with mobility difficulties (e.g. those with physical disabilities or pregnant women); those with mental health difficulties; and others who are dependent, such as children.

Victims of an emergency, include not only those directly affected but also those who, as family and friends, suffer bereavement or the anxiety of not knowing what has happened.

Responder personnel should also be considered. Plans sometimes place unrealistic expectations on management and personnel. Organisations should ensure their plans give due consideration to the welfare of their own personnel. For instance, the emergency services have health and safety procedures which determine shift patterns and check for levels of stress.

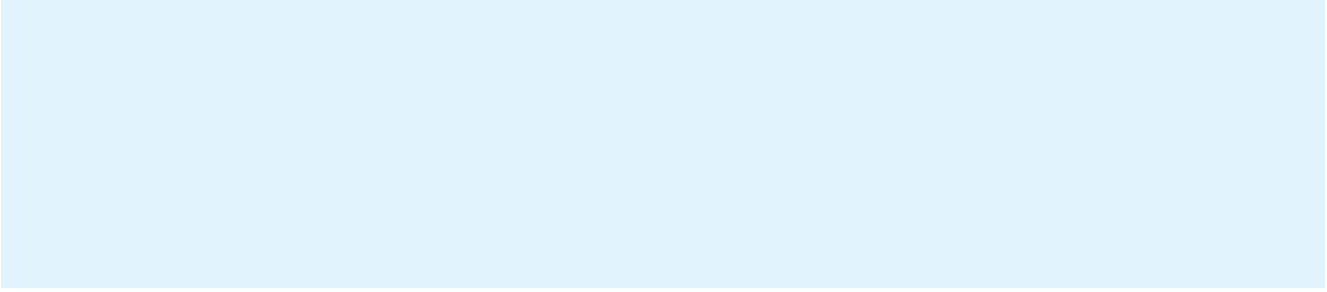
Organisations should aim to maintain plans for reducing, controlling or mitigating the effects of an emergency. The main bulk of planning should consider how to minimise the effects of an emergency, starting with the impact of the event (e.g. alerting procedures) and looking at remedial actions that can be taken to reduce effects. For example, the emergency services may be able to stem the emergency at source by fighting fires, combating the release of toxic chemicals or the extent of floods. The evacuation of people may be one direct intervention which can mitigate the effects of some emergencies. Recovery plans should also be developed to reduce the effects of the emergency and ensure long term recovery. The **National Recovery Guidance** provides more detail on recovery issues.

Not all actions to be taken in preparing for an emergency are directly concerned with controlling, reducing or mitigating its effects. Emergency planning should look beyond the immediate response and long term recovery issues and look also at secondary impacts. For example, the wave of reaction to an emergency can be quite overwhelming in terms of media attention and public response. Plans may need to consider how to handle this increased interest.

As obvious as it sounds, emergency plans should include procedures for determining whether an emergency has occurred, and when to activate the plan in response to an emergency. This should include identifying an appropriately trained person who will take the decision, in consultation with others, on when an emergency has occurred.

The maintenance of plans involves more than just their preparation. Once a plan has been prepared, it must be maintained systematically to ensure it remains up-to-date and fit for purpose at any time if an emergency occurs.





It may be that multiple organisations can develop a joint emergency plan where the partners agree that, for a successful combined response, they need a formal set of procedures governing them all. For example, in the event that evacuation is required, the police would need carefully pre-planned co-operation from various other organisations such as fire and ambulance services and the local authority, as well as involvement of others such as transport organisations.

## Section 7: Good communications are essential: plan how you will communicate during an incident

- The importance of communications
- It's your duty to communicate!
- What information is needed when?
- Communicating via the media at the national level
- Working with the media at the local level
- Planning to communicate with the public
  - Warning the public directly
  - Floodline Warnings Direct
  - What should you tell the public?

## The importance of communications

The Government believes communicating with the public about emergencies is essential. The **Preparing for Emergencies** booklet is a key example of efforts to raise public awareness about risks and preparedness for a number of types of emergency. A well-informed public is better able to respond to an emergency and to minimise the impact of the emergency on the community. By informing the public as best they can, all organisations will build their trust. Part of this is also avoiding unnecessary alarm.

Communications arrangements between all agencies responding to a flood need to be planned for, as flooding often causes failure of telecommunications systems. These plans should be included in Local Resilience Forum telecommunications plans, where they exist, or otherwise in the Multi-Agency Flood Plan (see section 12). All agencies should assume that telecommunications may be compromised during flood events and include provision for dealing with failure.

## It's your duty to communicate!

The **Civil Contingencies Act 2004** (CCA) places a duty on Category 1 responders to communicate with the public. This is based on the belief that a well-informed public is better able to respond to an emergency and to minimise the impact of the emergency on the community. The Act includes public awareness and warning and informing as two distinct legal duties – advising the public of risks before an emergency; and warning and keeping them informed in the event of an emergency.

The Statutory guidance **Emergency Preparedness** details the requirements of the legislation and gives good practice guidance on how responders can carry out their duties to comply with the legislation. Chapter 7 relates to Communicating with the Public.

## What information is needed when?

Organisations engaged in warning and informing will need to think carefully about what information different audiences will want, and when, in an emergency.

For instance, immediately when an emergency occurs, and during the first hour...

**Figure 7.1:** Communications guide

**The PUBLIC NEEDS:**

- basic details of the incident - what, where, when (and who, why and how, if possible);
- to know the implications for health and welfare;
- advice and guidance (e.g. stay indoors, symptoms, preparing for evacuation); and
- reassurance (if necessary).

**The PUBLIC WANTS to know:**

- other practical implications such as the effect on traffic, power supplies, telephones, water supplies, etc;
- a helpline number; and
- what is being done to resolve the situation.

**BROADCASTERS will REQUIRE:**

- well-thought-out and joined-up arrangements between the emergency services, local authority and other organisations, capable of providing agreed information at speed;
- an immediate telephone contact; and
- a media rendezvous point at the scene.

## Communicating via the media at the national level

An accurate, timely and consistent flow of information to the public and other key stakeholders is essential to maintaining confidence in the response to an emergency and for influencing public behaviour. The Lead Government Department's press office will lead on public presentation in support of the lead minister and government. However, where an emergency has wide ranging impacts or gives rise to considerable public and media interest, a News Co-ordination Cell (NCC) may be activated. This is always in place whenever COBR is activated, but may also be stood up in support of the lead government department in response to a level 1 emergency (see section 2 for details on levels of emergency).

The News Co-ordination Cell can be activated at various levels depending on the nature and demands of the emergency. The duties can include:

- advising the lead department on media handling;

- compiling and maintaining a 'top lines brief' summarising the key facts and messages for distribution to ministers and others involved in the response at a national and local level;
- briefing COBR meetings on media handling;
- developing in conjunction with local responders and government departments a coherent public information strategy for consideration by COBR;
- establishing a fully functioning cross-government media centre under the leadership of the lead department and supporting the policy direction from COBR.

When established the NCC will handle all requests to government for information on the emergency and co-ordinate requests for interviews with Ministers.

Decisions on the level of support required from the media co-ordination role, including activation of the NCC, will be taken by the Cabinet Office in consultation with the Lead Government Department and the Prime Minister. Where there is a significant devolved dimension, an information officer from the relevant devolved administration will also normally join the NCC. The devolved administrations will provide 24/7 cover at their Emergency Co-ordination Centres, where necessary, and link into the press teams at a local Strategic Coordinating Group and the NCC.

## Working with the media at the local level

All organisations should be familiar with the media organisations and outlets in their own areas, and should aim to develop good relations with them. There is a considerable amount of advice on how to achieve this in the **BBC's - Connecting in a Crisis** initiative.

It is clear that poor communications can be damaging. The damage done to public confidence by the release of inconsistent and contradictory messages can be hard to repair. Similarly, great damage can be done by speculation about causes or future developments. It is better to say when something is not known than to guess, particularly if this is going to raise the hopes of the affected public - for example, about when they can return to their homes.

The key to effective communication via the media is getting the message right for the right audience. How information and advice are delivered can greatly affect how they are received. Organisations should give careful thought ahead of any emergency about who may act as their official spokespeople and undertake media interviews and ensure those people have suitable training. Other public-facing people in the organisation should have a basic level of information so that they can handle inquiries confidently.

## Planning to communicate with the public

In some circumstances, it will be central government that first provides warning that an emergency is about to occur or is occurring. There are well established processes to warn and inform the public about the whole range of possible emergencies.

The Environment Agency organise public awareness campaigns, arrange for the broadcasting of messages and provide advice of what to do before during and after a flood event. There is a lot of flooding information on the Agency's website including a search facility on postcodes to see if properties are in a flood risk area. Nevertheless, it's important that other emergency planners and responders have collectively agreed plans on how they will raise the public's awareness prior to an incident about the risk of flooding and how they may be affected by floods. Such plans need to include arrangements to communicate with certain vulnerable people who are dependent upon their telephone lines (e.g. dialysis patients) and how they are dealt with if the network fails.

No single communications system will be the solution to all situations or achieve an absolutely resilient alerting capability. A variety of methods will always be necessary to alert the largest proportion of the target audience or assess their needs. Using different methods will also help to alert vulnerable groups (e.g. hard of hearing, elderly, transient population etc). Local responders need to assess which methods are most suitable in a given situation, taking into account local circumstances and this should feature in emergency plans, including flood emergency plans, prepared by Local Resilience Forums.

### Warning the public directly

The methods available to deliver urgent information to members of the public are extremely varied. Options that should be considered, depending on the circumstances, include:

- mobilising officers to go round on foot and knock on doors;
- from car or helicopter, by loudhailer or other amplified means;
- media announcements;
- electronic/variable message boards, e.g. at the roadside;
- announcements in public buildings, shopping centres, sports venues, transport systems, etc.;
- automated telephone/fax/e-mail/text messages to subscribers; and
- site sirens.

Door-knocking and similar low technology methods will be the most resilient to disruption to telecommunications and power. Organisations such as Police giving direct instructions to the public, or building managers communicating with their tenants, allows the public to receive

messages from a known (and generally trusted) source. At the same time, Category 1 responders need to be aware that door-knocking may require large numbers of personnel for it to be effective, which may be difficult to sustain for anything other than short periods. They also need to have regard to health and safety implications to ensure that any door knocking takes place well before flooding is expected.

### **Floodline Warnings Direct**

The Environment Agency operates a flood warning service in areas at risk of flooding from rivers and the sea. If flooding is forecast, warnings are issued using a set of four easily recognisable codes.



Figure 7.2: Flood warning codes



## Flood Watch

### What it means

Flooding of low lying land and roads is expected. Be aware, be prepared, watch out.

### What to do

- Monitor local news and weather forecasts.
- Be aware of water levels near you.
- Be prepared to act on your flood plan.
- Check on the safety of pets and livestock.
- Charge your mobile phone.



## Flood Warning

### What it means

Flooding of homes and businesses is expected. Act now!

### What to do

- Move cars, pets, food, valuables and important documents to safety.
- Get flood protection equipment in place.
- Turn off gas, electricity and water supplies if safe to do so.
- Be prepared to evacuate your home.
- Protect yourself, your family and help others.
- Act on your flood plan.



## Severe Flood Warning

### What it means

Severe flooding is expected. There is extreme danger to life and property.

Act now!

### What to do

- Collect things you need for evacuation.
- Turn off gas, electricity and water supplies if safe to do so.
- Stay in a high place with a means of escape.
- Avoid electricity sources.
- Avoid walking or driving through flood water.
- In danger call 999 immediately.
- Listen to emergency services.
- Act on your flood plan.



## All Clear

### What it means

Flood watches or warnings are no longer in force for this area.

### What to do

- Keep listening to weather reports.
- Only return to evacuated buildings if you are told it is safe.
- Beware sharp objects and pollution in flood water.
- If your property or belongings are damaged, contact your insurance company. Ask their advice before starting to clean up.



The Environment Agency's codes form part of its staged flood warning service. Flood watches and warnings are issued directly from Floodline Warnings Direct. They are targeted to specific areas and tell people they are at risk of possible flooding and need to be alert and stay vigilant. People choose whether or not to receive this information. All properties in flood warning areas are encouraged to sign up for this service. Floodline and EA's website contain up to date information on the situation.

Flood planners and responders are able to receive automated email summaries of the flood warnings in force tailored to their local area. These summaries are in addition to individual flood warnings and will only be sent when there are flood warnings in force for the local area. Your local Environment Agency office can provide details of how to sign-up for this service.

## What should you tell the public?

The Environment Agency has prepared general public advice, which is reproduced here. In short, before flooding happens you may want to ensure that you reinforce the key EA messages:

**Figure 7.3:** Flood warning key messages

### If flooding is predicted

- Pack a small bag with essential belongings and include warm clothes, torch (check batteries), radio (wind up or battery powered), food, water, other drink, mobile phone (pre input useful numbers), any medicines that you might need to take, any important documents that you have and a first aid kit. Keep this bag easily accessible.
- Collect personal belongings, including insurance and bank details, and essential telephone numbers together, and keep them in a waterproof bag.
- Move people, pets, valuables and sentimental items upstairs or in a high place downstairs.
- Keep a separate list of useful telephone numbers to hand (this should include your local Council, your insurance company and Floodline – 0845 988 188).
- Find out where and how to turn off your Gas and Electricity. Ensure that you switch it off if flooding is imminent before evacuating.
- If possible, move electrical equipment and furniture upstairs.
- Any furniture that you cannot move upstairs, try to raise well off the floor.
- Alert neighbours and assist the elderly, infirm and those with small children.
- Block doorways and air bricks.
- Avoid walking and driving through floodwater, there could be hidden hazards.

- Keep up to date with local radio for further information and announcements and via Floodline 0845 988 1188.
- Continue to listen to situation updates on your local radio and via Floodline 0845 988 1188.
- Keep dry and out of floodwater if possible
- Stay in your property, if safe to do so, until advised otherwise by the emergency services or the floodwater has receded.
- Do not walk or drive through flowing floodwater.
- If it is necessary to walk through shallow floodwater, take care for hidden holes, obstacles or other hazards
- Do not walk on river banks, sea defences or cross bridges over torrential rivers.
- Avoid contact with floodwater and wash any exposed parts before handling food or attending to wounds.
- If possible, move electrical equipment and furniture upstairs.

## If evacuation becomes necessary

- Stay calm and do not panic.
- Police officers and / or other officials will try to visit all properties at risk to advise on the requirement to evacuate.
- If road conditions permit, move vehicles to unaffected areas and ask friends / family if you can share their parking facilities.
- You will hear about your evacuation point for transport and the location of the reception centre either verbally or by a leaflet.
- Try to check that any elderly / vulnerable family members or neighbours know about the evacuation.
- Try to inform family members / friends as to where you are evacuating.
- Listen to the advice of the authorities and follow any instructions to leave a property.

## After a flood / returning home

- Contact your insurers as soon as possible and follow their advice. Most insurers have a 24hr helpline. Do not throw away damaged goods until your insurer has authorised you to do so. It is a good idea to take photographs of the damage.
- Check the safety of electricity and gas before use. A qualified electrician needs to check any electrical equipment and circuits that have been exposed to floodwater.
- Avoid contact with any remaining floodwater or items having had contact with floodwater unless wearing protective gloves / clothing.
- Boil all tap water until it is declared safe by the water supply company
- Wash yours and your children's hands frequently with bottled water if your supply has not been declared fit for use. Disinfect any children's toys.
- Dispose of any contaminated food, including tinned food, defrosted food, and packaged food that have been exposed to floodwater.
- Seek medical assistance if any health issues appear, especially flu like symptoms.
- Ventilate your property whilst taking care for security.
- Do not throw rubbish and furniture outdoors; wait for an organised collection.
- During these hard times, bogus / cowboy builders / traders are frequently offering their services. Make sure that you get a written quotation that is on letter headed paper with a landline contact number and address.

## Section 8: Important aspects of flood preparedness

- Think, especially, about vulnerable people
  - It's your duty
  - Identifying vulnerability and communicating through other organisations
- Infrastructure and flooding
  - Flood Warnings for Infrastructure (FWFI) service
- Evacuation and Sheltering of People
- Mutual aid
  - Local authority mutual aid guidance
  - Co-ordinate offers of material help
  - Roles and responsibilities
- Working with the voluntary sector
  - Recognition of collaborative arrangements
  - Issues for consideration
- Business continuity
- Dealing with fatalities and injuries
  - Fatalities
  - Roles and Responsibilities
- Sandbags
  - Advise residents and businesses how to obtain and use sandbags

## Think, especially, about vulnerable people

The guidance on developing a multi-Agency Flood Plan (see section 12 of this Framework) provides detailed recommendations for sharing information about vulnerable people in various facilities.

More generally, the Cabinet Office has published a booklet on **Identifying People Who Are Vulnerable in a Crisis: Guidance for Emergency Planners and Responders**. The guidance is intended for the development of local action plans for identifying groups of people who may be vulnerable in an emergency. It is primarily intended for those who are involved in local emergency planning for vulnerable groups, particularly those within a Local Resilience Forum (LRF).

The guidance is based around four key stages of establishing an emergency plan for identifying people who are vulnerable in a crisis:

- Building networks - The most effective way to identify vulnerable people is to work with those who are best placed to have up-to-date records of individuals and who will be aware of their needs. This may range from care homes (older people) to the local hotel industry (tourists).
- Creating lists of lists - It would be impossible to maintain a central up-to-date list of vulnerable people. Therefore it is recommended that lists of organisations and establishments are made, who can then be contacted in the event of an emergency to provide relevant information.
- Agreeing data sharing protocols and activation triggers - Once relevant agencies have been identified and networks developed, agreed data sharing procedures can be put in place, which should have the flexibility to adjust to changing circumstances with clear agreed triggers between responders.
- Determining the scale and requirements - By building networks and agreeing data sharing protocols, the potential scale of requirements of vulnerable people can be estimated in advance of an emergency, without divulging information about individuals. This information can then feed into emergency planning in terms of resources and equipment.

### It's your duty

The statutory guidance **Emergency Preparedness** sets out the responsibilities on Category 1 responders (with the cooperation of Category 2 responders) to plan for and meet the needs of those who may be vulnerable in emergencies. In this context, by vulnerable people we mean those who are less able to help themselves in an emergency:

- Making and maintaining plans for reducing, controlling or mitigating the effects of an emergency.

- Warning & Informing - Chapter 7 of the Cabinet Office guidance shows how the needs of vulnerable persons, including those who may have difficulty understanding warning and informing messages, need to be taken into consideration by those Category 1 responders with lead responsibility for communicating with the public, both in public awareness programmes and in a crisis. Arrangements will need to address how information and assistance can be managed by local authorities and health authorities who are in regular contact with vulnerable individuals.
- Business continuity - Chapter 8 of the Cabinet Office guidance sets out the responsibility of local authorities to provide advice and assistance to those undertaking commercial activities and to voluntary organisations in their areas, in relation to business continuity management in an emergency. This is a 'light-touch' duty but responders may consider including advice on the identification of persons who may be vulnerable in an emergency. Building community resilience through good business continuity planning will help reduce reliance on public sector bodies in the event of an emergency, enabling Category 1 and 2 responders to focus their resources on the most vulnerable.

The emphasis falls significantly upon local authority departments (most notably emergency planning and social care) and their partner health authorities to meet the planning and response need of these statutory responsibilities, most of which apply to information dissemination or warning and informing campaigns.

Other legislation may interact with responsibilities under the Civil Contingencies Act - in particular the **Disability Discrimination Act**.

## **Identifying vulnerability and communicating through other organisations**

The following table will help you think about who might be categorised as vulnerable, for the purposes of your emergency planning.

**Figure 8.1:** Potentially vulnerable people/groups

Potentially Vulnerable Individual/Group	Examples and Notes	Target through the following organisations/agencies
<b>Children</b>	Where children are concerned, whilst at school the school authorities have duty of care responsibilities. Certain schools may require more attention than others.	LEA schools through Local Authorities, and non-LEA schools through their governing body or proprietor. Crèches/playgroups/nurseries
<b>Older People</b>	Certain sections of the elderly community including those of ill health requiring regular medication and/or medical support equipment	Residential Care Homes Help the Aged Adult Social Care Nursing Homes
<b>Mobility impaired</b>	For example: wheel chair users; leg injuries (e.g. on crutches); bedridden/non movers; slow movers.	Residential Care Homes Charities Health service providers Local Health Authorities
<b>Mental/cognitive function impaired</b>	For example: developmental disabilities; clinical psychiatric needs; learning disabilities.	
<b>Sensory impaired</b>	For example: blind or reduced sight; deaf; speech and other communication impaired.	Charities e.g. the Deaf Council Local groups

Potentially Vulnerable Individual/Group	Examples and Notes	Target through the following organisations/agencies
<b>Temporarily or permanently ill</b>	Potentially a large group encompassing not only those that need regular medical attention (e.g. dialysis, oxygen or a continuous supply of drugs), but those with chronic illnesses that may be exacerbated or destabilised in the event of evacuation, or because prescription drugs were left behind.	GP surgeries Other health providers (public, private or charitable hospitals etc.) Community nurses
<b>Individuals supported by health or local authorities</b>		Social services GP surgeries
<b>Individuals cared for by relatives</b>		GP surgeries Carers groups
<b>Homeless</b>		Shelters, soup kitchens
<b>Pregnant women</b>		GP surgeries
<b>Minority language speakers</b>		Community Groups Job Centre Plus
<b>Tourists</b>		Transport and travel companies Hoteliers
<b>Travelling community</b>		Local authority traveller services Police liaison officer



## Infrastructure and flooding

The Cabinet Office cross-sector programme to improve the resilience of critical infrastructure and essential services to severe disruption by natural hazards is intended to establish a shared, consistent, proportionate and risk-based approach to delivering reductions in vulnerability over a number of years. One of the early products of that work - **The Strategic Framework and Policy Statement on Improving the Resilience of Critical Infrastructure to Disruption from Natural Hazards** - sets out the proposed policy intent, scope, aims, timescales and workstreams of the programme.

At present, the framework doesn't include practical help for emergency planners in this area. The advice is that they may wish to engage with asset owners in their area to discuss the proposed resilience standards within the framework. There are a number of policies being developed that should be of direct assistance in the future - for example on information sharing to clarify LRFs' access to information on critical sites and expectations of what should be done with the information.

### Flood Warnings for Infrastructure service

**Flood Warnings for Infrastructure** (FWFI) is a way of issuing flood warnings to infrastructure owners and operators. An infrastructure operator is any organisation which owns or operates fixed assets or networks. This web-based service is operated for the Environment Agency by approved providers.

FWFI works by matching assets at risk of flooding with Environment Agency flood warning areas. An asset could be any site specific equipment or development such as sewage treatment works, telephone exchange, an office or depot. The service also applies to transport networks such as motorway, road and rail infrastructure.

The status of all Environment Agency flood warnings is updated every 15 minutes. The FWFI system automatically updates the flood warning status of each registered asset within the flood warning areas. The infrastructure operator can then log into FWFI and view the flood warning status for their registered assets. This approach allows users to concentrate on the flood response required specifically for their own assets.

Any number of staff designated by the asset owner or operator can access the system using personalised usernames and passwords. As well as providing the latest flood warning status at each asset, the system can give users information about the asset, location maps and details of the Environment Agency Area and Incident Rooms in the area.

When the first asset reaches flood watch or flood warning status, an e-mail alert is sent to staff designated by the registrant. This alert can also be integrated with the registrant's own internal systems to raise awareness that one or more asset is at risk from flooding. The alert prompts staff to log in to the system and take the relevant action. When staff log in, they see a list of their

assets with the flood warning status clearly shown. The assets at highest risk of flooding always appear at the top of this list. Users can add as much detail to these assets as they wish - such as location, unique identification references, and descriptions.

When assets are no longer at risk of flooding and the system shows 'all clear' status, an e-mail is sent.

Any operator with site specific assets or an infrastructure network can sign up to FWFI and benefit from a more tailored flood warning service. The service is chargeable.

## Evacuation and Sheltering of People

The purpose of evacuation is to move people, and where appropriate other living creatures, away from an actual or potential danger to a safer place. There is more on evacuation and sheltering in section 12.

Evacuation planning should be bespoke to local risks and circumstances and will require the involvement of many different organisations. It is therefore primarily an issue for local response organisations and Local Resilience Forums, who may have an evacuation sub-group organised to manage this planning.

**Evacuation and Shelter Guidance** has been written by the Cabinet Office to assist organisations in developing their evacuation plans. This guidance is intended to help responders scope the issues and develop their own evacuation and shelter plans that can be used to respond to a wide range of scenarios proportionate to the risks their particular communities face. It covers:

- the range of evacuation and shelter scenarios that planners should consider;
- the responsibilities of key organisations;
- legal and other considerations to be taken into account; and
- examples of good practice.

## Mutual aid

Successful response to emergencies in the UK has demonstrated that joint working and support can resolve very difficult problems that fall across organisational boundaries. Large scale events have shown that single organisations acting alone cannot resolve the myriad of problems caused by what might, at first sight, appear to be relatively simple emergencies caused by a single source.

Mutual aid can be defined as an arrangement between Category 1 and 2 responders and other organisations within the same sector or across sectors and across boundaries, to provide

assistance with additional resource during an emergency, which may overwhelm the resources of an individual organisation. Although the **Civil Contingencies Act 2004** lays down duties regarding bi-lateral co-operation, that should not be seen to restrict responders working closely.

While there is no UK wide policy specifically relating directly to mutual aid, many areas such as police, fire, NHS and local authorities have inter (and intra) agency mutual aid protocols in place. Some of these are formal, but many are informal.

Formal protocols detail how each partner will undertake or allocate responsibilities to deliver tasks. Protocols may cover matters of broad agreement or details for working together, including how to hand over tasks or obtain additional resources. Protocols may or may not be legally binding depending upon the nature of the agreement between the parties.

### **Local authority mutual aid guidance**

The Civil Contingencies Secretariat in collaboration with the Local Government Association (LGA) and the Society of Local Authority Chief Executives and Senior Managers (SOLACE) has produced a short guide to support local authorities in developing effective mutual aid arrangements.

**Mutual Aid: a short guide for local authorities** offers advice on a range of practical considerations and provides a general framework that can be developed by authorities to satisfy local requirements.

### **Co-ordinate offers of material help**

A significant part can be played by the voluntary sector and others. For example, the Red Cross may work with local authority social services to open rest centres and deal with the needs of displaced people. And local businesses might work with the emergency services regarding evacuation plans for industrial estates, shopping centre etc. The National Voluntary Sector Civil Protection Forum, in partnership with the Civil Contingencies Secretariat, has produced a **Voluntary Sector Engagement Guidance Note** which provides some suggestions to support Category 1 responders and their voluntary sector partners when considering collaborative arrangements.

More generally, it is likely that many offers of help will arrive from the general public, businesses, charities, voluntary agencies and others both during the response and recovery phase. Some will be of practical assistance. Others will be of physical goods for those directly affected.

Consideration should be given to:

- procedures to register and co-ordinate offers of help;
- forming a panel to assess needs and the distribution of donated help;
- identifying storage areas; and
- a disposal mechanism for unused donations.

## Roles and responsibilities

Local Resilience Forums (LRFs) are well placed to facilitate the provision of formal mutual aid agreements between its members. Regional Resilience Forums (RRFs) can also be used for facilitating wider mutual aid agreements, e.g. between all local authorities in a region.

Mutual Aid arrangements exist within and between many of the voluntary sector organisations. In the event of a major emergency, voluntary sector support may be accessed through the head offices of the relevant voluntary organisations or through the **Voluntary Sector Civil Protection Forum** or the National Voluntary Aid Societies' Emergency Committee (NVASEC).

Links with the voluntary sector will normally be co-ordinated through the local authorities in an area - often through a sub-group of the Local Resilience Forum – and activation and co-ordination arrangements for voluntary sector involvement in both response and recovery phases should be formalised as part of emergency planning work.

## Working with the voluntary sector

The voluntary sector has an important role to play in supporting the statutory services in response to many emergencies. Experience shows that active engagement of the voluntary sector in emergency preparedness work such as planning, training, and exercising, will enable them to be more effective in the event of an emergency.

Planning for and responding to emergencies is primarily delivered at the local level. Therefore, the engagement of the voluntary sector in civil protection is most effectively managed at the local level, supplemented by regional co-ordination and a national policy framework.

**The Civil Contingencies Act 2004** establishes a statutory framework for civil protection at the local level, setting out a clear set of roles and responsibilities for local responders. The Act's **supporting Regulations** require that Category 1 responders "have regard" to the activities of certain voluntary organisations in the course of carrying out their emergency and business continuity planning duties. (more detail can be found in **Chapter 14 of Emergency Preparedness**).

This has created an expectation that Category 1 responders will make the most of the resources and expertise that the voluntary sector can offer, putting this relationship on a more robust and long-term footing.

## Recognition of collaborative arrangements

By establishing the most appropriate organisational framework, the voluntary sector can be properly factored into the planning process. Sound co-operation through the Local Resilience Forum (LRF) processes and directly with individual Category 1 responders should be based on an agreed framework that can lead to an effective structure. This structure needs to suit local circumstances, be understood by all concerned and have clearly identified points of contact. Arrangements must be kept up to date by regular formal and informal contact.

Effective engagement of the voluntary sector at a local level will also facilitate a more effective engagement and response in the event of regional, national and international emergencies.

In order to ensure that arrangements are fully understood and recognised by all the organisations involved in partnerships between the Category 1 responders and voluntary organisations, it may be worth considering how to organise these arrangements in a way that best suits the nature of the partnership. This could be done in a number of ways:

- service level agreements;
- memoranda of understanding;
- establishing protocols; and/or
- formally reflecting arrangements within actual plans.

## Issues for consideration

There are a number of elements that need to be considered for inclusion in collaborative arrangements in order to ensure that the expectations of each organisation are understood fully and met effectively.

**Figure 8.2:** Considerations when working with the voluntary sector

Element	Issues for consideration
<b>Existing arrangements</b>	<ul style="list-style-type: none"> <li>■ What existing arrangements has the voluntary organisation entered into?</li> <li>■ What priority will the new partnership be given?</li> <li>■ Will the other arrangements have any impact on the level of support the voluntary organisation is able to provide i.e. if there are duplicate demands?</li> <li>■ Are existing arrangements formal e.g. MOU, contract?</li> <li>■ Is the contribution of the organisation included in existing local plans?</li> </ul>
<b>Personnel</b>	<ul style="list-style-type: none"> <li>■ What is the personnel capacity of the voluntary organisation i.e. numbers, skills?</li> <li>■ Is the estimate of the emergency response realistic?</li> <li>■ Would the capacity be impacted by time of day, day of week, nature of emergency?</li> <li>■ Is the organisation able to call on a mutual aid facility?</li> </ul>
<b>Services and activities</b>	<ul style="list-style-type: none"> <li>■ What types of services and/or activities does the organisation provide?</li> <li>■ Do these services and/or activities respond to a likely need in an emergency?</li> <li>■ Do these services and/or activities complement or supplement similar services and/or activities provided by another organisation?</li> <li>■ Is there flexibility in the organisation's emergency response capability?</li> </ul>
<b>Payment of Costs</b>	<ul style="list-style-type: none"> <li>■ Will the Category 1 responder be expected to meet or contribute to costs incurred by the voluntary organisation during:               <ol style="list-style-type: none"> <li>i. The planning phase e.g. volunteers' involvement in training and exercising.</li> <li>ii. The response phase e.g. if the emergency is a protracted one.</li> <li>iii. The recovery stage e.g. aftercare – Humanitarian Assistance Centre.</li> </ol> </li> </ul>

Element	Issues for consideration
<b>Insurance</b>	<ul style="list-style-type: none"> <li>■ Does the voluntary organisation provide insurance for its volunteers on a daily basis? Does it provide insurance for its volunteers in an emergency response; if so is the cover appropriate/adequate?</li> <li>■ Does the Category 1 responder’s insurance cover include volunteers undertaking tasks on its behalf?</li> </ul>
<b>Training and Exercising</b>	<ul style="list-style-type: none"> <li>■ What training programmes does the voluntary organisation have in place?</li> <li>■ What additional joint-training would the voluntary organisation and/or Category 1 responders want to undertake?</li> <li>■ Could voluntary organisations contribute to the delivery of training?</li> <li>■ To what extent would the voluntary organisation be involved in exercise programmes i.e. planning, operation, review and evaluation?</li> <li>■ Will there be assistance with funding for the costs of training and inclusion in exercises?</li> <li>■ Is there any opportunity for internal/external accreditation of standards in training?</li> </ul>

## Business continuity

The purpose of Business Continuity is to ensure the continuance of ‘Mission Critical’ activities of organisations and businesses during a disruptive challenge.

Business Continuity Management is a holistic management process that identifies potential threats to an organisation and the impacts to business operations that those threats, if realised, might cause. It provides a framework for building organisational resilience with the capability for an effective response that safeguards the interests of key stakeholders, reputation, brand and value-creating activities.

The objective is to continue the critical activities of an organization and facilitate the return to pre-incident levels of lost position or information within the defined maximum tolerable period of disruption.

The following documents/web pages have been written by the Cabinet Office to assist organisations in developing their evacuation plans:

- **Business Continuity Toolkit** - This guidance is intended to provide a grounding to any size of organisation or business in the key areas of understanding 'Business Continuity Management' and offer guidance in a route map to putting in place Business Continuity Plans.
- **Cabinet Office / Business Continuity Web Pages** - These pages introduce business continuity and offer further areas for exploration in the various strands of the subject.
- **Emergency Planning College / Business Continuity Training Pages** - These pages offer details on training and courses open to all sectors to build and develop skills within Business Continuity Management.
- **Advice for Businesses** - These pages offer an array of practical and varied advice on business continuity management and link in to the Business Continuity Toolkit and the National Risk Register.
- **National Risk Register** - The National Risk Register or NRR sets out the Cabinet Office assessment of the likelihood and potential impact of a range of different risks that may directly affect the UK. The NRR has a chapter dedicated to 'Considerations for Organisations'. The NRR is a classified document.

## Dealing with fatalities and injuries

A mass fatality incident is defined as any incident where the number of fatalities is greater than normal local arrangements can manage. Any plan for dealing with fatalities needs to be integrated with all aspects of the response and recovery from such situations and incidents.

It is likely that your multi-agency flood plan will be separate from, but complementary to, your plan for dealing with mass fatalities and injuries.

### Fatalities

The Mass Fatalities Workstream (under the Civil Contingencies Secretariat Capabilities Programme) aims to build generic capability to deal with large scale events involving large numbers of fatalities both in the UK and overseas. In such cases there is a need to ensure integrity of identification of the deceased whilst balancing the needs of families and any investigation.

### Roles and Responsibilities

The local authority is responsible for establishing and equipping mortuaries that are required in a mass fatalities emergency. Local Authorities are encouraged to use mutual aid arrangements, where necessary, to fulfill this responsibility. The local authority is responsible for alerting social services, the Environment Agency and calling on support from faith leaders and the voluntary sector to assist in welfare provision for family and friends of the deceased.



Social Services will liaise with the police Family Liaison Co-ordinator to assess the need for trauma support staff and other tangible support for families and friends who view the deceased and/or need to deal with funeral arrangements.

The local authority will usually appoint and support a Mortuary Facilities Manager. This appointment may be achieved by utilizing the principles of mutual aid. The Local Authority within whose area the mortuary is situated (unless otherwise agreed) will assist in matters relating to:

- the management of all sub-contracted services (unless stated as otherwise in agreements contained within the National Emergency Mortuary Arrangements);
- public health;
- Health & Safety;
- hazardous waste collection;
- the management of effluent discharges in consultation with the water service, utility provider and the Environment Agency;
- refuse collection;
- cleaning and road-sweeping;
- the provision of garden and landscaping services; and
- the upkeep and appearance of all public areas within the mortuary.

It is recognised that local plans might be insufficient to cope with large scale events, and so sub-regional or regional response mass fatality plans might be required. Regional Resilience Forums should engage with local authorities in their area to agree the scale of planning required.

The Home Office is the Lead Government Department on mass fatalities. In recognition that a regional response may become overwhelmed, the Home Office have worked with the Regional Resilience Forums and the devolved administrations to establish national capability to deal with mass fatality incidents. Requests for central assistance must be put to the Home Office Mass Fatalities Section. National approval is required so that central resources can be tracked against the potential for further incidents.

It is the responsibility of the Coroner to establish cause of death, circumstances and identification of a body. If an incident crosses more than one coroner's jurisdiction, a lead coroner will have to be identified. The coroner will decide if post mortems are required to establish death. Coroners should have emergency plans to deal with multiple deaths that may impact on normal working arrangements.

## Sandbags

Traditionally, sandbags have been used to block doorways, drains and other openings into properties as well as to weigh-down manhole covers, garden furniture and to block sink, toilet and bath drains to prevent water backing up. Used properly, sandbags can be very effective since they:

- can keep water out for short periods which can be improved by using them in conjunction with plastic sheeting;
- can filter out some muddy sediments found in flood waters; and
- are cheap and easy to obtain.

However, sandbags are relatively ineffective when compared to purpose-designed flood protection products. Some of the pitfalls are:

- it takes two people to fill them (unless you have a sandbag filling machine);
- they take time to fill (approximately one hour to fill 12 sandbags);
- they can be difficult to handle;
- laying them can be very time-consuming;
- sacking material is biodegradable and will perish if left in place for a long time;
- it is difficult to place sandbags in water and particularly in running water; and
- sandbags do seep water even when well-stacked and trodden into place.

As a result, the Environment Agency strongly encourages the use of purpose made flood protection products, such as flood boards, non-return valves for plumbing and air brick covers.

### **Advise resident and businesses how to obtain sandbags**

Some local authorities will provide sandbags in a flood emergency. But not all are geared up to do so to the extent that may be necessary. So it's important to ensure residents and businesses know what they can expect from local authorities and others, and what they ought to do for themselves.

The Environment Agency has published **Sandbags and how to use them properly for flood protection**. It is important that your communities know what they can expect, and that those who have responsibility for sandbagging, or advising others on how to do it are aware of the advice.

## Section 9: Reservoir flood safety

- The Reservoirs Act 1975
- Public attitudes to reservoir safety
- Planning for reservoir failures
  - On-site reservoir flood plans
  - Off-site reservoir flood plans
  - Who to Warn and Inform – Public Information Zones
  - What information and when?
  - Informing methods
  - Ensuring your communications are robust and fit for purpose
  - Emergency warning methods
- Handling the media

There have been no fatalities in the UK from reservoir failure since the 1920s and, across the country as a whole, the likelihood of individual dam failure is very low. However, the potential impact of a failure can be high.

## The Reservoirs Act 1975

Safety legislation for reservoirs in the United Kingdom was first introduced in 1930 after several reservoir disasters had resulted in loss of life. This was superseded by the **Reservoirs Act 1975**, which today provides the legal framework to ensure the safety of large raised reservoirs and applies to reservoirs that hold at least 25,000 cubic metres of water above natural ground level.

Under the Reservoirs Act 1975, reservoir owners (Undertakers) have ultimate responsibility for the safety of their reservoirs. They must appoint a Panel Engineer (a specialist civil engineer who is qualified and experienced in reservoir safety) to continuously supervise the reservoir (Supervising Engineer) and to carry out periodic inspections (Inspecting Engineer). A Panel Engineer must also be appointed to design and construct a new reservoir or repair or make changes to an existing reservoir (Construction Engineer).

A periodic inspection, by an Inspecting Engineer, is required every ten years or more frequently if necessary. As a result of that inspection, a safe operating regime will be specified and works required 'in the interests of safety' may be recommended.

A Supervising Engineer is required to supervise the operation and maintenance of the reservoir and produce an annual statement. The Supervising Engineer can recommend that a periodic inspection is carried out.

For reservoirs below the threshold of 25,000 cubic metres regulation is managed by the Health and Safety Executive (under the Health and Safety at Work (etc) Act 1974) and Local Authorities (under the Building Act 1984).

For more on the Reservoirs Act, including enforcement, see section 3 on the legal framework.

## Public attitudes to reservoir safety

In summer 2009, the Environment Agency commissioned a total of 10 extended group discussions with residents living within the flood zones of 5 reservoirs in England, for which outline flood maps had already been created.

In summary the conclusions of the group discussions were as follows:

- there was low awareness and understanding of reservoirs;
- there was difficulty grasping how they pose a flood risk from “failure”;
- awareness and perceptions of risk are influenced by:
  - type of community/residents: long term residents have lived safely with the reservoir and see less risk;
  - type of reservoir: tendency to view familiar type as safer than another;
  - different perceptions of small sailing “lake”, rather than big obvious reservoir;
  - type of undertaker: trust in water companies but concern that a private owner may cut corners on inspection and maintenance; and
  - topography and proximity: harder to imagine a “wall of water” in a flatter area, and perception that only those close to the reservoir are at risk.

After discussion, there was strong recognition of the need for transparency to inform residents of the possible risk and for a very clear and consistent list of key information that should be provided in a letter or leaflet:

- basic information on status and safety at local reservoirs;
- reassurance that inspections and maintenance procedures are followed and enforced;
- confirmation that emergency response plan is in place;
- details of evacuation routes and locations;
- impact of reservoir risk on home insurance;
- contact details for general queries and for emergency situations; and
- details of where further information can be found.

There was a general consensus that maps should be available.

## Planning for reservoir failures

The 2007 summer flooding, and the consequent Pitt Review, identified shortcomings in the Reservoirs Act 1975 and reservoir emergency preparedness and response. The threat of a breach of the Ulley Dam in South Yorkshire reinforced the need to amend the Act and to ensure that the resilience community was better prepared. Part of those preparations need to include collaborative working between the local authority and the emergency services, who should facilitate effective communications for the whole community. A joint communication is more effective at getting information across to the community as well as being a more efficient use of resources.

On the specific planning that reservoir owners/users and LRFs should do, the Government has, to date, sought to address that in two ways:

### **On-site reservoir flood plans**

In January 2010 the then Government consulted on a proposal to introduce a legal requirement for reservoir undertakers to produce a reservoir flood plan.

The proposals would mean that owners or operators of at least the 100 highest risk reservoirs around the country would be required to produce a flood plan. These reservoirs are no more likely to fail than any others, but are considered to be “highest risk” on the basis of the number of people potentially affected if the reservoir was to fail.

The plans would include:

- a reservoir flood map, to provide an indication of the areas that could be flooded in the worst case scenario if a dam fails completely;
- key roles and responsibilities for staff working at the reservoir;
- descriptions of the engineering and operational characteristics of the dam;
- detailed actions to take in response to a potential uncontrolled release of water;
- a communications plan to activate the off-site emergency response; and
- a range of other measures.

Under the proposals, reservoir owners would have a year to complete their reservoir flood plans. They would be legally required to comply and the Environment Agency would have the power to prosecute for failure to do so.

Although the Government has yet to take decisions on implementation of these proposals reservoir owners should be encouraged to adopt these good practices more widely, in liaison with Local Resilience Forums and the local communities who would be affected by reservoir failure.

### **Off-site reservoir flood plans**

The Environment Agency has produced high level flood maps for the approximately 2,100 reservoirs covered by the Reservoirs Act. Based on these, the Government would like to see the top-tier local authority in which a reservoir is sited co-ordinate production and maintenance of the counterpart off-site plan, engaging others Local Resilience Forum members as required (and downstream Local Resilience Forums where applicable) as well as the reservoir undertaker. Both warning the public in the event of an emergency and informing the public in advance (and possibly subsequent to an event) should be carried out in liaison with reservoir undertakers.

Adjoining top tier local authorities should liaise with each other to ensure that messaging and, as far as practicable, format are consistent when communicating. For example, where a property is in the flood zone of more than one reservoir and those reservoirs are in different top tier authorities areas, local authorities should ensure that the information given is essentially the same and given in a similar format to reduce the potential for confusion.

## **Who to warn and inform – Public Information Zones**

Planning for reservoir failure is necessarily based on flood maps, showing the likely extent of any flooding. It is recommended that the maps should be used to designate Public Information Zones, comprising all those who would be affected within two hours of the failure within the extent of the wetted area; and all those within what the maps show as the extreme Hazard zone.

Those to consider targeting specifically within an flood zone and others who need further information include;

- all those at risk generally;
- groups who may have particular needs (vulnerable groups/individuals);
- infrastructure operators;
- all Category 1 and 2 responders; and
- vulnerable sites - such as holiday camps, industrial estates, schools etc.

Downstream LRFs may also need to be part of an information sharing protocol

## **What information and when?**

Those engaged in warning and informing the public will need to think carefully about what information different audiences will want, and when. Specific information will be needed in an emergency and more general awareness information should be shared with the public prior to any emergency.

As well as clear instructions, relevant to the audience, the frequency of the communications should be considered to ensure that community awareness is maintained. Communications should provide site and emergency planning unit contact details for handling issues or concerns from the community and set out the procedures that you have in place for dealing with queries and concerns/ complaints.

Warning and informing material should also refer to central websites where more information can be found.

## **Informing methods**

The methods available to deliver important and urgent information to members of the public are extremely varied. For informing prior to an emergency methods to consider should include (but not necessarily be limited to):

- mail shots (letters, laminated cards, calendars etc.) media campaign (local press or radio for example);
- information in public libraries and council offices;
- websites (such as LRF/local authority ones); and
- meetings with community groups, housing associations, etc.

When using mailings make clear the importance of the information contained to reduce the possibility of it being thrown away as junk mail. In mailings, consider including with any letter a card/laminate of the emergency instructions and contact numbers. People are less likely to throw these away.

It is worth considering including reservoir failure within broader preparedness community liaison events. Such events give the local community an opportunity to raise queries and their concerns. They provide useful feedback on the effectiveness of communications and provide an opportunity to reassure the public of the safety record and the site's beneficial role in the community. These groups work well when there is representation from the site, the local authority (e.g. emergency planning/business continuity advisors), emergency services, residents, businesses and local representatives.

Messages need to be consistent and presented in a consistent way. The level of detail should be proportionate to the risk and impact. People are likely to want to be told:

- the level of risk – both generic and site specific – and why action is being taken now;
- what the consequences of a dam breach would be;
- impact on any planning applications;
- the current safety record and any safety measures in place;
- what the responders would do in the event of an emergency;
- how they will receive information in the event of an emergency;
- trigger points;
- what they should do with the information they have been given;
- evacuation routes and whether cars should be used or not;
- safe areas;
- how to prepare for an evacuation (tying in to community resilience);
- existence and location of reception centres and/or rest centres;
- anticipated level of damage/properties at risk of demolition; and
- source of/ reason for the risk: particularly important where more than one reservoir might affect them.



Decisions will need to be made as to what it is practical and sensible to communicate and reasons why some information is not being relayed, if that is the case.

The main purpose of communications with those in the flood zone is to avoid, or minimise the effect of an emergency. The local community must be aware of and understand the emergency instructions so that they can take effective action. Communications and instructions must be clear and relevant for the whole community, including those who are partially-sighted, hard of hearing, elderly, residents, employers, landlords, workers, schools, hospitals, shops and commuters.

Site owners/ undertakers and Local Authorities should work together to ensure that arrangements to communicate with residents, local businesses and the wider community are crafted in such a way as to ensure local business needs are met; making provision where appropriate for joint communications with relevant bodies.

## **Ensuring your communications are robust and fit for purpose**

**Guidance on reservoir emergencies: warning and informing the public** includes templates that can be used as the basis for your Public information material. If you do not use the template or if you produce any additional communications material it is recommended that it should contain the following:

- name of reservoir and agencies involved in planning and potentially response evident;
- very brief history of reservoir and purpose it serves;
- indication of the risk;
- brief description of the type of flooding a reservoir failure could cause - i.e. deep fast-moving water in some areas;
- statement that there is no increase in risk and why the work is being done now;
- indication of how people are likely to be contacted;
- dos and don'ts;
- evacuation routes where available;
- listing of communication routes likely to be affected (road closures, train and bus routes); and
- where to find out more information both during and prior to (e.g. local radio in the event and EA or LRF websites prior to) an event

You should also follow the guidance given in Chapter 7 of the Civil Contingencies Act guidance, Emergency Preparedness, Warning and Informing the Public.

## Emergency warning methods

The methods available to deliver important urgent information to members of the public are extremely varied and some depend on the availability of power supplies or telephone lines. Some may require careful consideration of the risks to human life and health, in case at the time of an emergency staff or members of the public are exposed to danger while they are warning or being warned.

For warning in the event of an emergency, methods to consider should include (but not necessarily be limited to):

- mobilising officers to go round on foot and knock on doors with evacuation cards (where time and safety considerations allow);
- from car or helicopter, by loudhailer or other amplified means;
- media announcements;
- announcements in public buildings, shopping centres, sports venues, transport systems, etc.;
- automated telephone/fax/e-mail/text messages where practicable;
- information in public libraries and council offices;
- websites;
- meetings with community groups, housing associations, etc.; and
- electronic/variable message boards, e.g. at the roadside or on motorways.

## Handling the media

The media may be present in large numbers from an early stage of a reservoir emergency, arriving locally within hours, and seeking information probably before the emergency services co-ordinated response is operational. They will attempt to get as close to the site as possible, in search of information and images. They will be equipped with up-to-date communications technology seeking information for immediate broadcast and to reporting deadlines. Most importantly, they are likely to provide the most effective and resilient method of quickly reaching large numbers of people.

In the event of, or in advance of, a major potential or actual emergency, arrangements should be put in place to co-ordinate the response to the media. The following should also be considered:

- establishment of a media briefing centre (MBC);
- responder organisations providing agreed media briefing on their own areas of responsibility through the MBC;

- development of a media strategy to provide a clear framework for press officers and reporters detailing the regularity of press conferences, briefings, locations etc.;
- systems to ensure that press releases from the various organisations can be shared and agreed prior to issue;
- how an ongoing stream of information might be collated in order to meet the needs of the broadcast media; and
- arrangements for updating information on organisations' websites or, where available, for the multi-agency major incident website to be 'switched on'.

## Section 10: Dealing with the consequences of flooding – health and environmental considerations

- Flooding can seriously damage health
- Health protection
- Health and Safety considerations
- Flooding can seriously damage the environment
- Disposing of animal by-products: fallen stock & other animal carcasses
  - Fallen cattle aged over 24 months need to be tested
  - National Fallen Stock Scheme
  - Horses

## Flooding can seriously damage health

Drowning is the clearest and most immediate health risk during floods. Serious injury can also be caused by falling into fast-flowing water or from hidden dangers under the water, such as missing manhole covers.

There is also a serious danger posed by carbon monoxide fumes from the use of generators and other fuel-powered equipment brought indoors to dry out buildings.

Do not underestimate the stress and strain of being flooded and cleaning up after floods. Take time to consider affected individuals' mental health and well-being. Do not overdo it when cleaning up, and remember that tiredness, difficulty sleeping and anxiety are normal in these circumstances.

## Health protection

In the event of major floods, the Health Protection Agency (HPA) works with local agencies, including the NHS, police, local government and the Environment Agency to provide expert advice on protecting the health of the local community, particularly from microbiological and chemical hazards. Local Health Protection Units, liaising with national advisers who specialise in environmental hazards, infectious diseases and emergency planning, can provide a focal point for health protection advice to local responders and the public.

The main threats to health during and immediately after a flood are drowning, and injuries caused by accidents in flowing water. Walking or even driving through floodwater is risky - six inches of fast flowing water can knock people over and two feet of water will float a car. Manhole covers may have come off and there may be other invisible hazards.

The other main health hazard in floods come from the stress and strain of the event and clean-up. The public should be advised to take time to look after their family's mental health and wellbeing and not overexert themselves in the clean-up. There is also a serious danger posed by carbon monoxide fumes from the indoor use of generators and other fuel-powered equipment, such as driers.

The HPA and other website includes a wealth of important information for the public, but flood planners and responders should also be familiar with this advice – or, at least, able to access it quickly. Key reference material includes:

- the **HPA's flooding pages**, including detailed Q&A;
- **HPA leaflets**; and
- **HPA's detailed guidelines and reference material** on flooding.

Food safety in the event of flooding is also important and the Food Standards Agency has published **food safety advice for people affected by flooding**.

## Health and Safety considerations

All responding organisations, including voluntary agencies, should be aware of the risks associated with working in or nearby to floodwater, such as:

- health issues when contact is made with floodwater;
- risk of electrocution;
- hidden objects / trip hazards beneath the water; and
- the power of water, how easy it is to become unbalanced.

As part of their multi-agency flood planning (which is covered in detail in section 12 of this Framework) Local Resilience Forum members should decide whether any specific health and safety issues relating to flood risk in the area should be included in their plans. In all cases, people/staff who are expected to play a role in flood response and recovery should receive appropriate training in relevant health and safety policies and procedures of their organisation.

## Flooding can seriously damage the environment

Flooding can create a number of environmental problems, all of which need to be planned for. Examples are:

- disposal of animal carcasses if farmland is flooded;
- disposal of personal property;
- disposal of silt and gravel;
- disposal of contaminated sand bags;
- saline intrusion of a freshwater Site of Special Scientific Interest (SSSI);
- pollution if sewage / industrial sites are flooded.

All of the above aspects should be considered when constructing multi-agency flood plans (see section 12 for more on this).

## Disposing of animal by-products: fallen stock & other animal carcasses

Following flooding incidents carcasses can end up in a variety of places including: fields, hedgerows, depressions, towns, roads, canals, rivers, sea, beaches etc.

Where a carcass is deposited on private land, wherever possible the owner of the carcass should be identified and is responsible for the collection and disposal. If ownership cannot be proven then responsibility for disposal rests with the landowner. It can be difficult to identify who owns animals if swept away from farm/holding/home.

Where a carcass is deposited elsewhere, including public land or highways, and ownership of the carcass cannot be ascertained then the local authority is responsible for the disposal.

The Environment Agency will remove a carcass from a watercourse but only if there is a pollution or flood risk and the animal's owner or landowner cannot be identified.

Fallen stock cannot be buried or burned in the open because of the risk of disease spread through groundwater or air pollution. Instead, animals must be taken to/ collected by an approved knacker, hunt kennel, incinerator or renderer, either by private arrangement, or under the National Fallen Stock Scheme (see below).

Farmers with fallen stock should locate an approved knacker, hunt kennel, incinerator or renderer by contacting their **local Animal Health Office**.

### **Fallen cattle aged over 24 months need to be tested**

Cattle over 48 months of age, which have died or been killed on farm other than for human consumption, must be tested for BSE. They must undergo brainstem testing at **approved sampling sites** prior to disposal and it is the responsibility of the livestock producer to ensure such animals are sent for testing.

Anyone in possession or control of a fallen bovine must make arrangements for it to be delivered to an approved sampling site within 24 hours, or if delivering it themselves, must make arrangements with an approved sampling site within 24 hours and deliver the carcass themselves within a further 48 hours.

If the carcass cannot be collected for any reason e.g. because it is in an inaccessible place, or if there is doubt about the age of the animal, the Veterinary Laboratories Agency at Newcastle must be notified on 0845 601 1367 and they will advise on a case by case basis.

## National Fallen Stock Scheme

**The National Fallen Stock Company** (NFSCo) was set up in partnership with Government and the farming industry to run a National Fallen Stock Scheme. NFSCo is a not for profit organisation dedicated to delivering a valued service for the farming community. The Scheme is voluntary, and is designed to assist farmers and horse owners in complying with the Animal-By-Products Regulation by providing a reliable, low cost means of disposal of fallen stock.

If you need to advise on the disposal of animal carcasses, you should refer to the National Fallen Stock Company, **Animal Health** or the local council trading standards department.

Those who dispose of dead animals must make sure that the disposal complies with the requirements of the Animal by-products regulations (ABPR). There is **online advice on the requirements of the ABPR**. Dead animals must not be buried or burned.

Pet owners can bury their own pets, provided that the pet is one normally kept as a pet, such as dogs and cats. Animals such as sheep and goats, which are primarily kept as farm animals, cannot be buried. Even if they are kept as pets, they must be disposed of by an approved route.

If owners do not wish to have their dead pets returned to them, the use of a registered waste carrier must be arranged to dispose of them. They must be disposed of at a licensed animal crematorium or pet cemetery.

## Horses

The **National Fallen Stock Company** provides a reliable, low-cost scheme to collect and dispose of horse carcasses or provide owners with contact details for local disposal services.

If owners arrange the disposal of horse carcasses themselves, they should ensure that removal is by:

- a renderer approved by **Animal Health**, or a licensed knacker's yard;
- incineration in an incinerator licensed under the **ABPR**; or
- hunt kennels approved by **Animal Health**.

The owner must ensure that the recipients of the carcasses hold the appropriate licence, permit or authorisation.



## Section 11: Flood rescue

- Introduction
- Flood rescue concept of operations
- Responses to minor or localised flooding events
- Responses to major or wide area flooding events
- Guidance for specialist flood rescue – interim arrangements for accessing mutual aid
- Information required from requesting authorities
- Air asset support for water rescue operations

## Introduction

Flooding and subsequent flood rescue operations can pose significant risks for members of the public and rescuers alike. These risks can be controlled through the use of competent rescuers who have the training and the rescue and personal protective equipment to enable them to work safely in the flood environment.

Defra is leading a national project to improve flood rescue capability across England (and Wales) so that a comprehensive emergency response can be deployed and co-ordinated between all flood rescue service providers, including public, private and voluntary organisations, making best use of existing and future flood rescue assets.

The Flood Rescue National Enhancement Project (FRNEP) is improving flood rescue capability across England and Wales so that a comprehensive emergency response can be deployed and co-ordinated between all flood rescue service providers, including public, private and voluntary organisations.

The FRNEP has produced a draft register of known, flood rescue resources that could be called upon to support major or national flood events. The draft register contains contact information of competent flood rescue teams from both statutory agencies and the voluntary sector, along with experienced strategic and tactical advisers who can provide specialist advice and support to impacted areas. This is a live document.

## Flood rescue concept of operations

A key objective of the Flood Rescue National Enhancement Project is the production of a Flood Rescue Concept of Operations (FRCO). This document sets out the framework for enhancing the capability and national co-ordination of flood rescue and will provide more clarity for flood rescue, especially in major flooding events, through such measures as:

- the setting of national standards for equipment and training;
- the use of standard operating procedures and defined command and control structures;
- a framework for how agencies involved will respond to flooding incidents; and
- processes for management and engagement of national assets and team types.

This FRCO will also serve as a basis for co-ordination with other government departments, the blue-light services, and other agencies, in meeting the country's requirements for flood rescue. This document will be updated and reviewed on an annual basis, to ensure it reflects flood rescue requirements and emerging best practice.

The FRCO is expected to be published for public consultation in the second half of 2010. It affords the following benefits:

- greater clarity and certainty in respect of roles and responsibilities for specialist flood rescue operations during a major flood event;
- greater clarity and certainty in respect of roles and responsibilities of supporting flood rescue operations such as medical support (air ambulances etc), animal rescue (e.g. RSPCA), dive-teams, vehicle retrieval (e.g. the AA) and other flood response efforts operating simultaneously in flooded areas;
- improved visibility of the capabilities and capacity of flood rescue resources available to Gold Commands during flood events, achieving greater utilisation of available resources;
- assurance for the public, requesting authorities and incident commanders that rescue teams responding to mutual aid requests are capable of carrying out the tasks required of them safely and effectively;
- improvements in the co-ordination of resources on the ground and with air Search and Rescue operations, the provision of logistical support, the decontamination of equipment and the return of specialist resources to normal duties at the end of the incident;
- reduced costs by taking a national multi-agency approach to strategic resilience and making best use of existing assets;
- standardisation of approach and equipment across all agencies with a common procurement framework which will also drive down costs and enhance resilience through greater interoperability;
- ensuring the best use of available resources in order to provide capability in the most efficient and effective manner;
- a basis for defining the requirements of all resources being procured by the programme and ensuring that what is supplied meets the capability needed; and
- clarity on co-ordination of all search and rescue activity during severe flooding.

## Responses to minor or localised flooding events

Rescue responses to minor or localised flood events will continue to be managed at a local level by emergency services, usually under direction of the police. The decision to deploy specialist flood rescue teams rests with emergency service organisations and it is their responsibility to assure themselves that any teams they deploy are competent to operate safely in the flood environment.

However, when considering whether to deploy external resources, it can be difficult for emergency services to judge the competence and capabilities of the flood rescue teams offering assistance.

Whilst it is a matter for the Police and emergency services to decide whether to deploy rescue teams who are not on the FRNE national asset register, reference to the register can provide assurance that the teams to be deployed have been assessed as competent to work in the flood environment.

## Responses to major or wide area flooding events

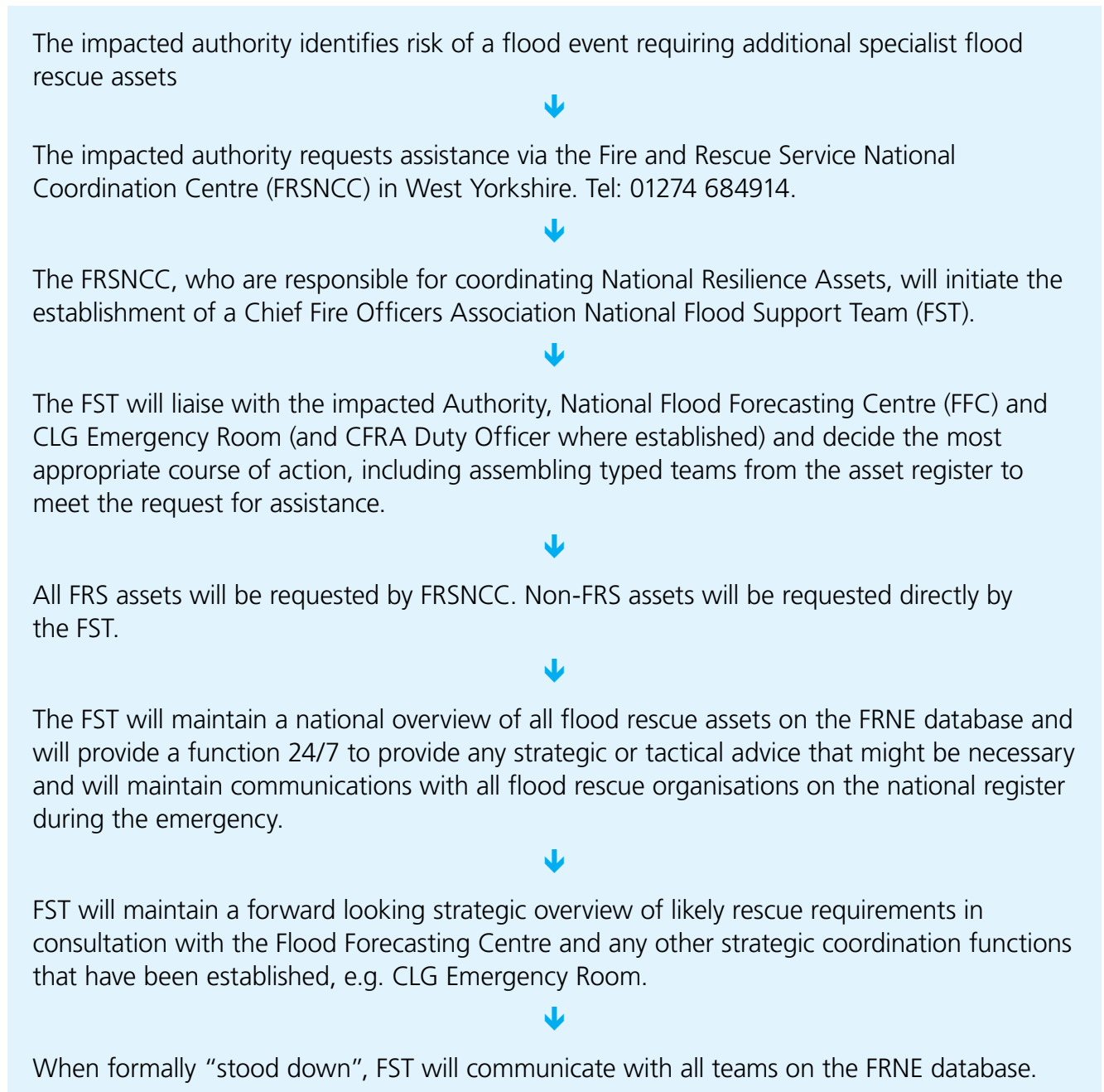
For the purpose of flood rescue, a major or wide area event may be defined as any flood event requiring mutual aid for specialist flood rescue teams from outside the Local Resilience Forum (LRF) area, or an event requiring extensive flood rescue operations simultaneously impacting more than one LRF area. During major or wide area flooding events emergency services requesting mutual aid should bear in mind that the specialist teams from neighbouring areas and the voluntary sector that they might normally call upon may be registered in more than one LRF area.

Whilst flash flooding can occur with little warning, in many circumstances early warnings of a major flood event will enable the establishment of robust command and control frameworks before the event impacts the local area. This early warning can also be used to provide an opportunity for specialist mutual aid teams to be requested early and pre-deployed to the area. Effective use of early warning has a number of significant operational advantages, reducing risk for communities and responders alike.

## Guidance for specialist flood rescue – interim arrangements for accessing mutual aid

Government intends to introduce substantive new arrangements for the coordination of multi-agency flood rescue assets. Until these new arrangements are finalised and published as part of the FRCO, **interim arrangements**, based on those drawn up by the Fire and Rescue Service in response to the 2007 floods, will be used in the event of wide-area, severe flooding.

**Figure 11.1:** Interim flood rescue arrangements



## Information required from requesting authorities

Affected authorities who request assistance should contact the FRSNCC passing the following information as a minimum:

- location of incident or expected time/location of impact;
- nature of incident and any specific hazards, i.e. known chemical contamination;
- prevailing weather and (where known) water conditions;
- estimated number of persons requiring rescue;
- local resources already in attendance/available;
- estimate of mutual aid resources required; and
- location (grid reference / name and address) of rendezvous point. Including local access issues created by the flooding.

## Air asset support for water rescue operations

All of the above refers to land/water based specialist rescue teams only. During a major flood event, air assets will also form an invaluable part of the overall rescue effort. The protocol for requesting Military/Coastguard Helicopters for emergency assistance is set out below.

The Aeronautical Rescue Co-ordination Centre (ARCC) will respond to all requests from the emergency services for helicopter assistance in an emergency. The potential contribution offered by air assets to a flooding event is considerable. The ARCC provides a common tasking procedure for all UK SAR helicopters.

ARCC has the following resources available:

- RAF Sea King helicopters with winching; Infra-red and NVG search capability; and NHS equivalent qualified and equipped paramedic (when available);
- Royal Navy Sea King helicopters with winching, infra-red and NVG search capability and NHS equivalent qualified and equipped paramedic (when available);
- Coastguard AW139 and S-92 helicopters with very similar capabilities; and
- RAF Mountain Rescue Teams, each available at one hour's notice and fully equipped with their own vehicles, communications and qualified and equipped paramedics.

In the event of an operational incident where the affected FRS/Incident Commander believes the use of air assets may be appropriate, they should contact the Duty Officer at the ARCC, with the following information:

- location of incident (grid reference);
- description of incident;
- nature of tasking (e.g. rescue, reconnaissance, transport);
- number and position of casualties;
- hazards (overhead power lines etc.);
- weather/environmental conditions; and
- other resources on scene.

**Figure 11.2:** ARCC contact details

<b>ARCC Contact Details</b>	
Emergency	<b>01343 836036</b>
Admin/general	<b>01309 678302</b>

## Part three:

Detailed planning for flood emergencies





## Section 12: Detailed guidance on developing a Multi-Agency Flood Plan (MAFP)

- Introduction
  - Why have specific flood plans?
  - About this guidance
- Related resources
  - MAFP checklist
  - MAFP Templates, Figures & Tables document
- Flood emergency planning
  - Developing the plan
  - Consultation and cross boundary considerations
  - Format and style
  - Including maps in your MAFP
  - Protective marking of sensitive information in MAFPs
- Constructing your Multi-Agency Flood Plan (MAFP) - context
  - Introduction
  - Aim and objectives of the plan
  - Ownership and audience
  - Related and interdependent plans
  - The risk of flooding
- Constructing your Multi-Agency Flood Plan (MAFP) - communication planning
  - Communication arrangements
  - Communicating with the public about the risk
  - Warning the public: loudhailer announcement in case of evacuation
  - Sirens
  - General public advice

- Plan activation – thresholds and triggers
  - The range of triggers
  - What do flood warnings mean and what do responders do?
- Planning roles and responsibilities
  - Actions, roles and responsibilities
  - Environmental considerations
  - Health and safety considerations
- Vulnerable people
- Critical infrastructure
- Being rescued and cared for in an emergency
- Recovery
- Training and exercising
- Plan sign off and revision
- Important records to maintain
  - Contact details of key personnel
  - Location of control centres
  - Resource availability

## Section 12: Detailed guidance on developing a multi-agency flood plan

### Introduction

This guidance replaces the 'Preliminary Guidance on Developing a Multi-Agency Flood Plan' which was published in February 2008 as a stand-alone document. It draws on good practice from a range of existing plans and guidance and feedback from stakeholders in spring 2010 and at the Multi Agency Flood Plan workshop held in January 2010. It has also taken into account the then Government's response to the Pitt Review on the summer 2007 flooding.

It is important to remember that while this guidance provides advice and assistance to help develop Multi-Agency Flood Plans (MAFPs), it is ultimately for Local Resilience Forum (LRF) members to determine what information to include and the level of detail. LRFs are best placed to determine what will work in a real flood.

The guidance sets out the reasons for having MAFPs and the context for developing your plan. But, most importantly, it provides a framework for constructing your plan. It also contains some examples and reference material for you to draw on as appropriate.

### Why have specific flood plans?

The Civil Contingencies Act (2004) requires Category One Responders to have plans in place to respond to all emergencies. Emergency plans may take the form of either generic plans that describe a response to a wide range of possible scenarios (e.g. a Major Incident Plan) or specific plans that deal with a particular kind of emergency (e.g. Chemical, Biological, Radiological or Nuclear (CBRN) or Evacuation and Sheltering). A Local Resilience Forum (LRF) will probably have both types depending on how emergency planning has evolved. There may also be area-wide plans (e.g. at county-level) or site/local area specific plans (e.g. at district-level).

For many parts of England and Wales, flooding poses a significant risk and is well recognised within many Community Risk Registers. LRFs are encouraged to develop a specific flood plan to both complement other plans and to provide more detail to generic Major Incident Plans or Strategic Emergency Response Plans. The reason for having a specific flood plan is because of the complex and diverse nature of flooding and the consequences that arise, requiring a comprehensive and often sustained response from a wide range of organisations. This guidance is therefore geared toward helping LRFs to collectively develop a Multi-Agency Flood Plan (MAFP).

### About this guidance

This guidance should be used by LRFs to undertake flood response planning, including recovery planning where it relates to flooding. It contains examples of how to set out the various components of a flood plan, all of which have been drawn from current good practice in the UK. The LRF should decide on the type of flood plan needed (depending on local circumstances) as well as deciding if a MAFP is to supersede or complement existing plans.

This guidance provides advice on flood plan content, where and how to find any relevant information and suggests what government would consider an appropriate level of detail. It should be read in conjunction with the Checklist document (see below) to ensure you have an understanding of what needs to be incorporated into your plan. With minor modifications and the removal of personal data / confidential information, any plan based on this guidance could be suitable for general publication - for example on the LRF website.

Deciding whether a MAFP is 'required' or not, is most sensibly determined at a local level by each Local Resilience Forum (LRF) or a nominated flooding sub-group. For many LRFs a MAFP ought to be produced for each borough or district that has more than 250 properties (residential and/or business) in 'significant and/or moderate' flood risk areas, according to the Environment Agency flood map. It is recommended that, at the very least, a strategic level MAFP be created (for example at a county-wide level) with a target audience being local authority Chief Executives and those with a responsibility in Strategic Co-ordinating Groups ('Gold' level). In many instances, depending on the flood risk (as recorded in a Community Risk Register), it is advisable to complement the Strategic MAFP with tactical level MAFPs providing more detail. These plans would equate to 'Silver' level documents for command and control structures established in a flood event. Alternatively a LRF may choose to produce a single county-level MAFP with a separate annex for each borough/district with greater than 250 properties in 'significant and/or moderate' flood risk areas.

A number of LRFs have provided material for this guidance. You may want to contact them to see if they would be willing to share their plan, or a part of it. Cumbria LRF is, for example, willing to share their plan which was effectively used in responding to the floods in November 2009.

## Related resources

There are two related publications which those responsible for constructing MAFPs should find useful.

### MAFP Checklist

The first, the MAFP Checklist, is a tabulated summary of the contents of this Guidance and should be used to check the completeness of your MAFP.

Multi-Agency Flood Plans and related emergency plans (evacuation plans, warning and informing plans, business continuity plans and more generic major incident plans for example) should include a sufficient level of information and detail for it to be considered as being 'satisfactory'.

The definition of 'satisfactory' is set out in the Checklist.

To get a copy of the Checklist, email [floodemergencies@defra.gsi.gov.uk](mailto:floodemergencies@defra.gsi.gov.uk). The MAFP checklist will be incorporated in the National Flood Emergency Framework in due course.

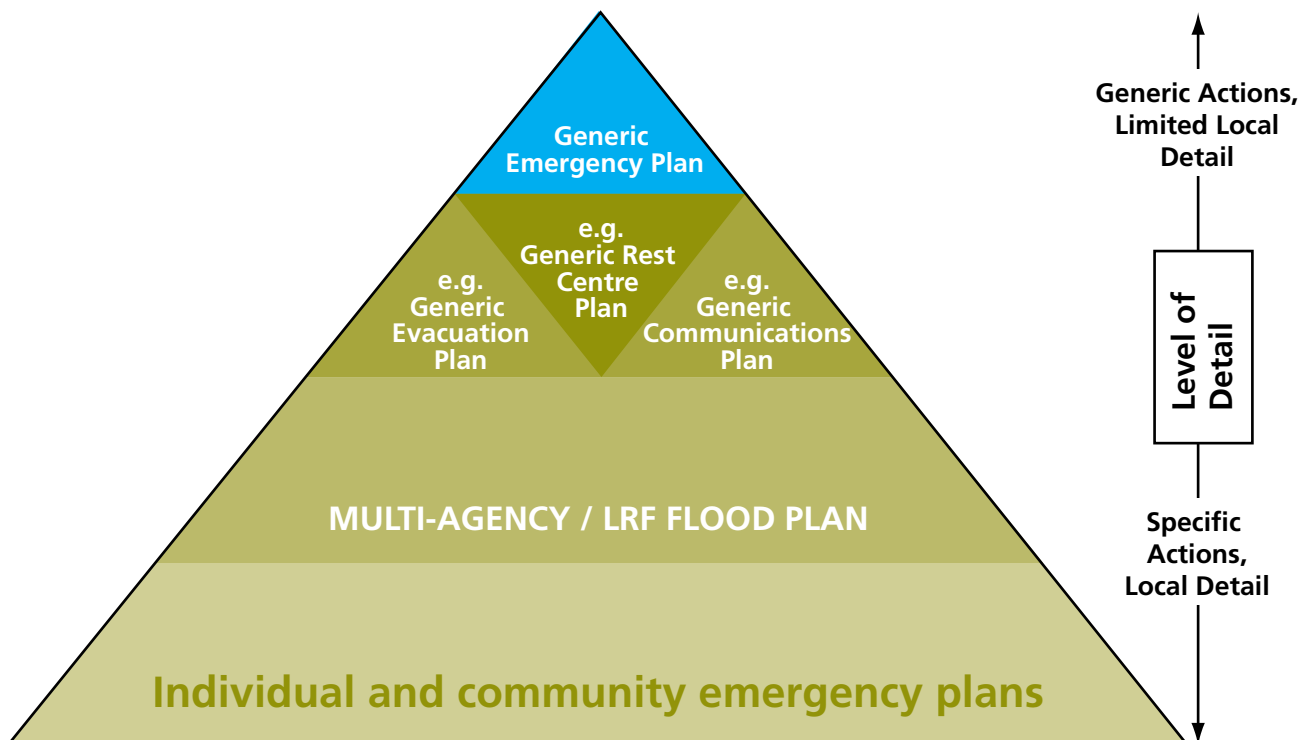
## MAFP Templates, Figures & Tables document

The second related document is the separate template, figures and tables document (which will also be incorporated into subsequent versions of this framework, but which you can get now by emailing [floodemergencies@defra.gsi.gov.uk](mailto:floodemergencies@defra.gsi.gov.uk)). The document provides blank versions of the model tables included in this guidance. You are not obliged to use them but may select or adapt those which best meet your needs.

## Flood emergency planning

Development of Multi-Agency Flood Plans (MAFPs) allows all responding parties to work together on an agreed coordinated response to severe flooding. Figure 12.1 shows a hierarchy of emergency plans and how a MAFP might link to other related response plans. This is just an example of some of the plans to be considered but there are others that may also need to be referred to.

**Figure 12.1:** How a MAFP fits with other emergency plans



## Developing the plan

A good plan is the product of a good planning process. In other words, the process of working together to create the plan is as important as the end product. With this in mind, LRFs are encouraged to use “Task and Finish” groups or Flood Working Groups to lead the production of the plan and to encourage involvement of Category One and Two Responders who will have a role in its delivery.

To develop the MAFP, it is recommended that reference is made to the section called **Emergency Planning (Chapter 5) of Emergency Preparedness** - part one of the Civil Contingencies Act (2004).

A working group with representatives from all relevant departments and agencies is a good way to develop a flood plan that considers all the consequences and impacts (short, medium and long term). Local authorities should consider contributions from relevant departments including Emergency Planning, Highways, Drainage, Social Services and Environmental Health.

A representative from the Environment Agency’s Flood Incident Management team should also be a member of the working group to provide flood risk and flood warning advice and information. Contributions from Category 2 responders are critical in terms of considering assets and infrastructure in the floodplain that may be impacted by flood water. For example: failure of a pumping station, collapse of a major drain, contamination of water supplies or power failure over large areas are all consequences that need to be worked through as part of developing a MAFP.

Though not a substitute for MAFPs, community flood plans can also be part of the approach to flood risk planning and management in some localities. The community engagement needed to develop such a plan is in itself a very positive process. Further guidance on community flood planning is available from the Environment Agency and related information on community resilience can be found on the **UK Resilience website**.

## Consultation and cross boundary considerations

To enable other responders to comment on the plan and, in particular, the links with their own plans, we recommend that the LRF or appropriate working group circulate the plan amongst its members. It is recommended that plans are shared with neighbouring LRFs so that cross boundary issues can be carefully considered. The loss of infrastructure (energy, transport, water assets) often affects adjacent regions and organisational boundaries and jurisdictions are rarely spatially coherent.

## Format and style

A flood plan should complement other plans, as stated above. The level of detail will depend on the needs of the responding organisations and the existence of other related emergency response plans. MAFPs should not contain information about the decisions that are made ‘on the day’ when a flood is taking place but should aim to provide a clear and concise, yet

adaptable, response tool under which each responding organisation has clearly defined roles and responsibilities. The most critical part of the plan is the section on “Activation”. This should set out the triggers, and who is expected to do what once certain thresholds are met. It also determines where the high risk, high consequence areas are and how this will influence plan activation and triggers.

The plan should be intuitive so that any professional responder can pick it up and understand what action or response is required in different circumstances. For example, use colour-coded dividers or tabs to help users navigate through the plan together with appropriate use of maps, tables, diagrams and even pictures.

Consider if it would be beneficial for the document to be accessible via the National Resilience Extranet in order to aid document control and distribution, although hard copies should also be available for business continuity reasons and in incident control rooms.

### **Including maps in your MAFP**

A separate folder containing spare / laminated maps may be useful to enable responding officers to remove maps without dismantling the plan. The Environment Agency Flood Incident Management team can advise where it is appropriate to use the flood map and / or flood warning areas as the basis of the maps contained within the plan.

Geographical Information System (GIS) software is a useful way to produce maps to include in your MAFP – see a **Guide to GIS Applications in Integrated Emergency Management**. To save having large numbers of maps in the hard copy of your plan, you could consider saving maps on a CD and storing the disc in with the hard copy of the MAFP. To avoid duplication consider what maps are already available on Environment Agency ‘Gold laptops’ and in Local Flood Warning Plans (e.g. flood zone, flood warning area and surface water maps). You may decide that it would be useful to keep certain hard copies of maps in control rooms too. It is important for the LRF partners to agree what is needed and will work for you in a flood emergency.

### **Protective marking of sensitive information in MAFPs**

In order to facilitate ease of handling and storage of Multi-Agency Flood Plans, the lowest possible protective marking should be applied, consistent with the security of the contained information. Few Multi-Agency Flood Plans are likely to need a protective marking higher than RESTRICTED. In many cases MAFPs can be marked PROTECT, or remain unclassified.

Particular issues to consider in relation to the protective marking of MAFPs:

- Is there information (including maps) which flags infrastructure as Critical National Infrastructure is likely to increase the classification to CONFIDENTIAL or higher?
- Does the MAFP include sensitive personal information (e.g. staff members’ home telephone or personal mobile numbers)?

- Does the MAFP included information which could jeopardise the security of physical assets (e.g. access codes to buildings)?
- If it is vital that sensitive information is included in the MAFP, could it be annexed in a separate document (e.g. log of key infrastructure, details of facilities for vulnerable people)?
- If the content of the MAFP warrants it being protectively marked, can an edited, unclassified version be published - for example on the LRF's website?

Advice on which Protective Marking to apply can be found in the **Security Policy Framework** (Cabinet Office, October 2009) and **Security Vetting and Protective Markings: A Guide for Emergency Responders** (Cabinet Office, March 2008).

For guidance on sharing personal data please consult **Data Protection and Sharing: Guidance for Emergency Planners and Responders**.

## Constructing your Multi-Agency Flood Plan (MAFP) - context

The following section sets out, in detail, how you may wish to construct your MAFP

### Introduction

This section should be short and cover aspects not covered in subsequent sections. It should: put into context emergency planning in your area or region; explain why the plan is needed; clarify if it supersedes other, previous plans; set out broadly what the plan includes and excludes; and state when the plan will be reviewed.

Each Multi-Agency Flood Plan needs to adequately address river, coastal and surface water flood risk (as defined in Community Risk Registers) and the associated emergency response arrangements. The plan is not expected to include flood risks from:

- foul sewage;
- burst water main;
- canals and private lakes;
- reservoir dam failure (see separate section for guidance on this).

It is useful to include a 'Document control / distribution' table at the front of your MAFP.



## Aim and objectives of the plan

This section should broadly describe the purpose of the plan including:

- whether the plan is a strategic or tactical plan;
- the strategic or tactical outcome expected in responding to a flood (i.e. what successful implementation of the plan would look like);
- the different types/sources of flooding and their status within the Community Risk Register; and
- the area covered, preferably with the aid of map(s) that show the flood outline. (Figure 12.2 is an example of this).

The aim and objectives should specify what the plan will and will not be able to achieve. The objectives that you set should follow the SMART principle where possible (i.e. the objectives should be Specific, Measurable, Achievable, Relevant and Time-bounded). For example, it would not be sensible for the plan to state that its objective is to prevent floodwater entering any property as this is likely to be unrealistic and beyond the logistical capabilities of responding organisations.

An example of the 'Aims and Objectives of the Plan' section taken from the Cumbria MAFP (2009) is provided in the Templates, Figures and Tables document.

Figure 12.2: Example overview map of flood risk



## Ownership and audience

In this section, the person responsible for updating and maintaining the plan should be identified. There should also be clarity on the intended audience and how they will be notified of updates and modifications to the plan.

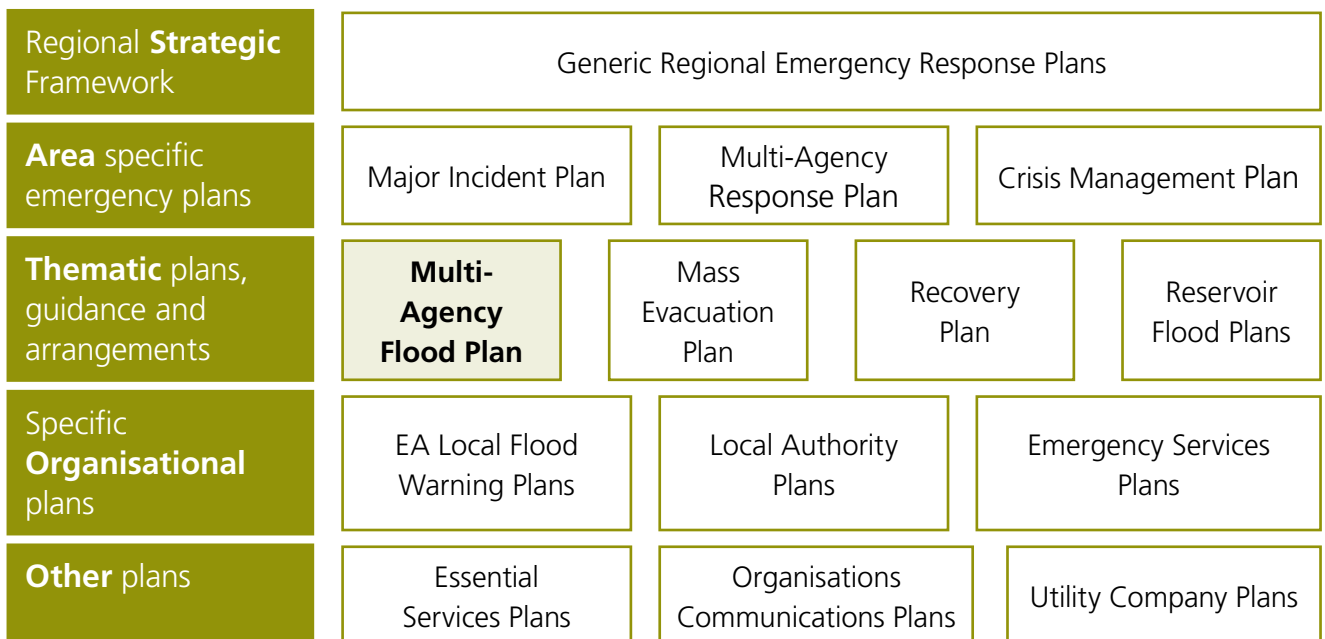
A number of agencies contribute to and jointly own multi-agency plans. Depending on local circumstances, some Local Resilience Forums (LRF) will opt to place the accountability for the plan with the LRF members collectively. If so, the agency/individual responsible for updating and maintaining the plan (often from the local authority or Police Emergency Planning Unit) should be given a clear mandate from the LRF.

## Related and interdependent plans

In this section, you should either list other related and interdependent plans or insert a diagram showing the plans and linkages between them.

The plan(s) should not duplicate information that is already available elsewhere so cross-referencing is encouraged. It is important that the MAFP is prepared as part of a complementary set of emergency plans some of which may contain sections on flood response.

**Figure 12.3:** Emergency Plans – fitting them together



The diagram above (figure 12.3) is an illustration of how to link existing plans covered by your LRF and will help you work out how various plans complement each other and how to avoid duplication. For example, if you have a plan for Warning and Informing or for Evacuation and Sheltering it may be that there is no need to cover these aspects in the MAFP. Similarly, if the roles and responsibilities of the various organisations are set out in a generic Major Incident Plan covering your LRF, then there is no need to repeat this information. Instead, insert a cross reference and include only specific or additional information that is relevant to a flood response.

The Environment Agency produces the Local Flood Warning Plans included in figure 12.3. All parts of England and Wales have been assessed by the Environment Agency for the level of flood risk from river (fluvial) and coastal flooding and susceptibility to surface water flooding. As part of warning the public where flooding from rivers or the sea is likely to occur, the Environment Agency has identified “flood warning areas”. These are issued with a flood warning when weather forecasts or a rise in river levels dictate. The Environment Agency Local Flood Warning Plans are operational plans and contain detailed information and maps on these areas. These plans are often used by Strategic (gold) and Tactical (silver) controls as reference documents in incident control rooms during a flood. So, in preparing your MAFP, you may want to insert an appropriate cross-reference, or link, to the Environment Agency Local Flood Warning Plans, rather than duplicate information.

## The risk of flooding

This section can be separated into subdivisions by ‘community’ or ‘source of flooding’. It should begin with an overview of flood risk for coastal and river flooding in the area and susceptibility to surface water flooding (see figure 12.4 for an example of a fluvial flood risk map and figure 12.5 for an example of a surface water flooding susceptibility map). A strategic plan should as a minimum, contain an overview of susceptibility to surface water flooding; whereas a tactical plan should contain more detail about areas with a higher susceptibility to surface water flooding.

Your Environment Agency representative must be consulted before surface water flooding data is published since there are licence control restrictions.

The risk information should be consistent with the risk assessment information published in the related Community Risk Registers (LRFs should consider the flood risks listed in the local risk assessment guidance when preparing and updating Community Risk Registers). The Civil Contingencies Secretariat publishes this guidance each year to inform this process. The Risk Rating Matrix used for local risk assessment purposes is shown in figure 12.6.

There are a number of information sources you may be able to draw on:

- the Environment Agency’s Local Flood Warning Plans contain information on river, sea and tidal flood risk;

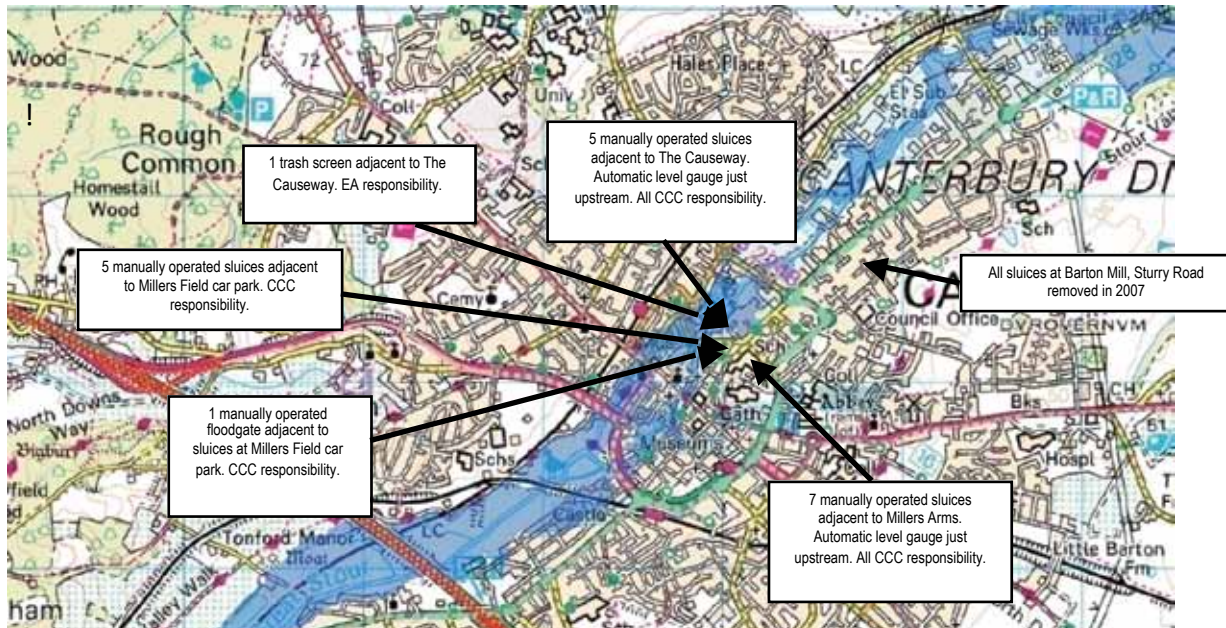
- you may find it useful to consult the tide tables to include information on high tides if applicable;
- where they exist, Surface Water Management Plans should be referred to for information on the risk of surface water flooding and strategies for managing that risk - upper tier or single tier local authorities lead on producing these plans, in cooperation with other partners;
- historic records will be another useful source of information with regard to surface water and drainage flooding problems;
- water companies may have on-site and/or off-site emergency plans and flood maps; and
- many COMAH (Control of Major Accident Hazards) sites will have risk assessment information that can be considered as part of determining and describing the impact of flooding.

If there are Internal Drainage Boards (IDBs) within your area you need to factor in their response to a flood event. Although IDBs are not category 1 or 2 responders under the Civil Contingencies Act, they are a Drainage Authority and provide flood protection and water level management in areas of special drainage need (low-lying flood risk sensitive areas). They also operate control structures and pumping stations under their jurisdiction, so it is important they are consulted in preparing your plan.

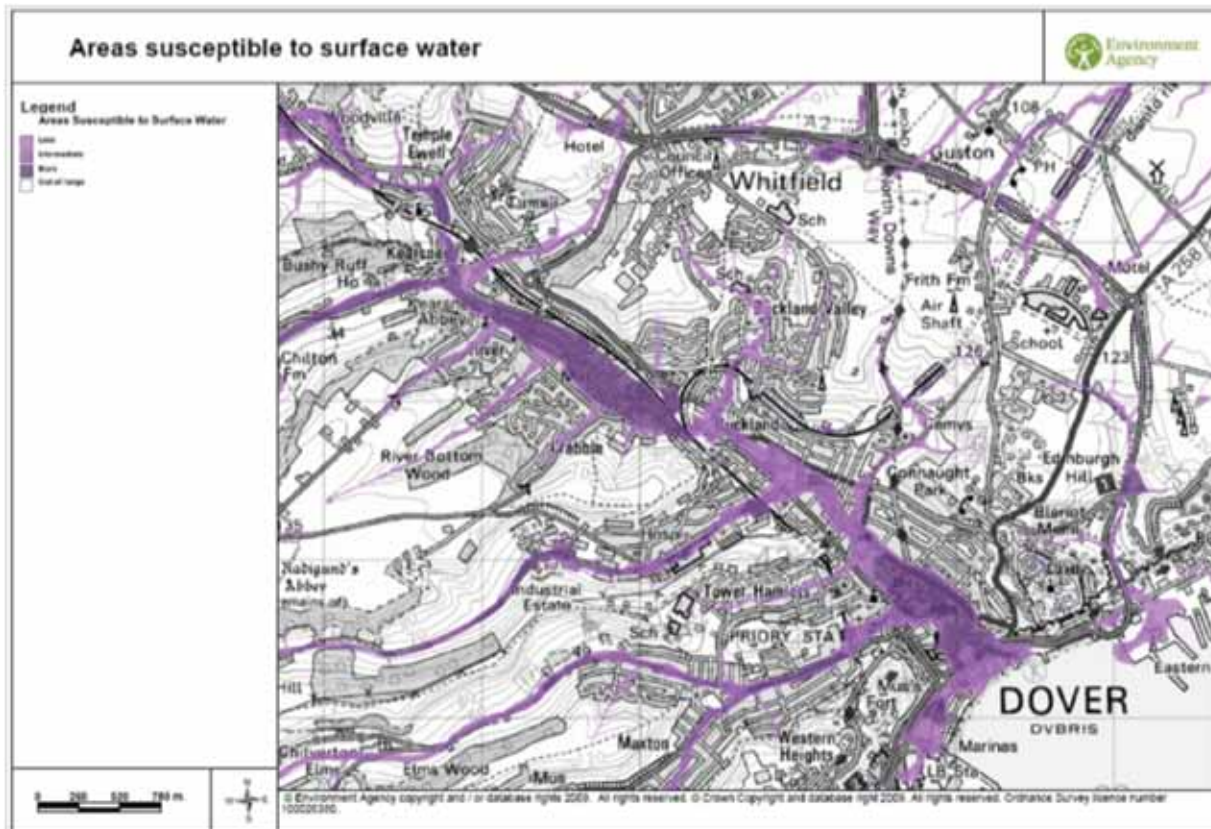
To prepare flood risk in this section of the MAFP, start by compiling flood risk summary sheets for each community together with associated maps (detailed maps will help responders during an incident, to quickly identify the areas that are at risk). The summary sheets should also show known locations of vulnerable groups and sites of key infrastructure.

Figure 12.7 is an example of a community flood risk summary sheet. The example provided shows flood risk areas together with locations of vulnerable groups and critical infrastructure. In communities with significant flood risk, it may be necessary to split communities into smaller sub-areas presented over multiple sheets. These sub-areas should be consistent with the Environment Agency's flood warning areas. Where appropriate, the tables can be adapted to capture information on other types of flood risk as described above.

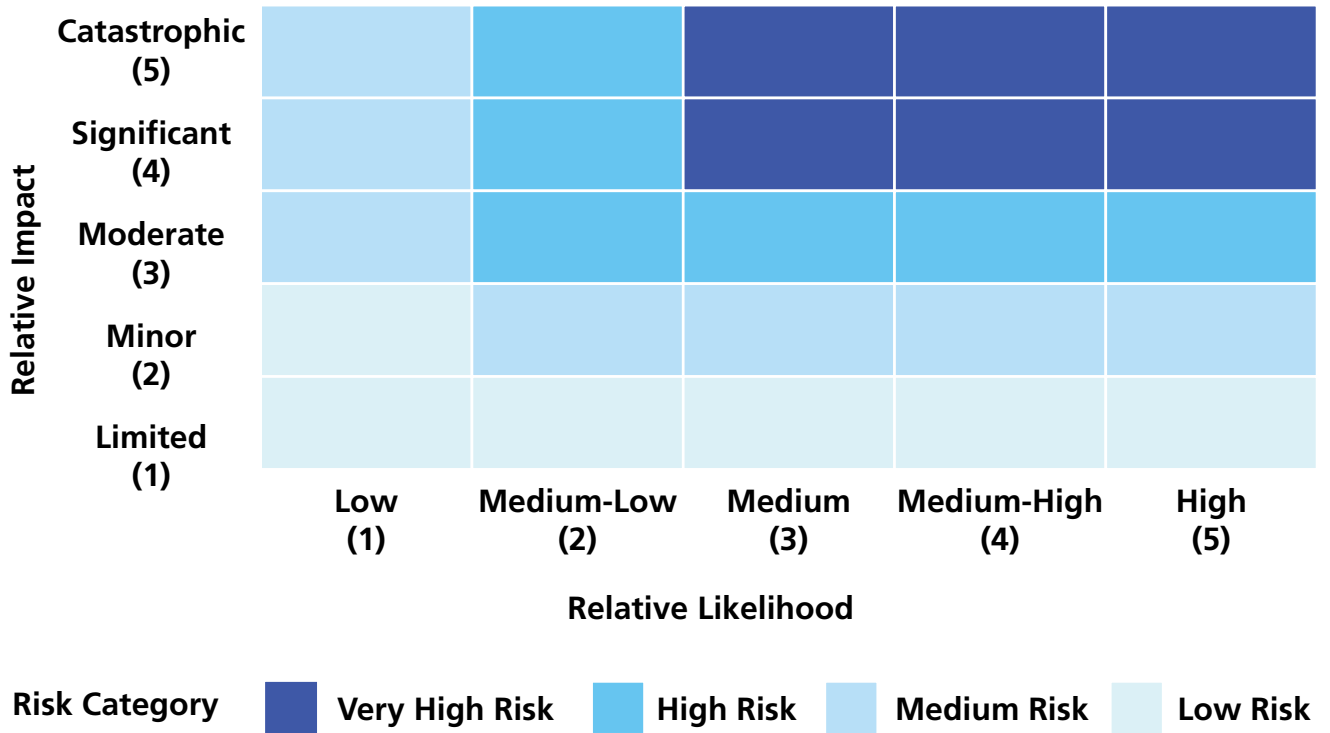
**Figure 12.4:** Example overview flood map taken from the local level Multi Agency Flood Plan covering Canterbury City Council area (2009)



**Figure 12.5:** Example of a surface water susceptibility flood map



**Figure 12.6:** Risk Rating Matrix (from Emergency Preparedness, Annex 4F)



**Figure 12.7:** Example of a Community Flood Risk Summary Sheet for a community that is covered by the Environment Agency’s flood warning service (taken from Cleveland MAFP).

Note: The table can be adjusted as appropriate for a community not covered by the flood warning service. The table could also be adapted and used to describe other flood risks such as surface water flooding.

<b>Skinningrove – Covered by EA Flood Warnings</b>		
<p>There is a significant population at risk of Tidal and Fluvial flooding in Skinningrove. The majority of properties at risk are residential accommodation. Areas at risk border Kilton Beck and include the Zetland Row , Beach Road, New Grove Terrace, Chapel Street, Marine Street and the High Street. The EA identify that 189 households are at risk of flooding. The Fishermans sheds and storage, Community centre and a limited amount of commercial properties are also at risk. The primary risk of flooding will be from a combination of high tides exacerbated by flooding form Kilton Beck, which would back up during high tides.</p>		
<b>No. of properties at risk</b>	<b>No. of vulnerable people at risk</b>	<b>Critical vulnerable infrastructure</b>
189 however additional properties outside of flood warning zone may be affected.	Currently unknown.	No critical infrastructure identified, other infrastructure identified below.
<b>No. of properties registered to Flood Warning service</b>	<b>Return Period</b>	<b>Lead Time</b>
35	Unknown	2 – 12 hours
<p><b>Vulnerable Infrastructure:</b> Road access to Grove Hill Terrace. Substation located at NZ XXX,XXX. Water treatment plant at NZ XXX,XXX and the Riverside Community Centre. Skinningrove bridge has 2 pipelines on the downriver side, believed to be domestic gas supply pipes. Mill Lane, High Street, Beach Road are liable to flooding.</p>		



## Access and Egress

**Primary Access:** is via the A174 Skinningrove Road and Mill Lane however this may be disrupted in the event of high water in Kilton Beck.

**Alternative Access:** A174 via Carlin How, Grove Road, Via A174 Loftus, Hummersea Lane, Skinningrove Bank Road.

In the event of the defences being closed foot access is possible via a footbridge on Mill Lane. Emergency 4x4 access may be possible either via Deepdale Lane and fields or via the footpath leading from the mining museum – Caution this is very narrow see photo (x).

**Road Closures:** In the event that the bridge at NZ 714,198 is closed there will be no vehicular access to Grove Hill and Zetland Road. It is essential that emergency services control rooms are notified if the bridge is closed as per following procedure. Grove Road from Carlin Howe may also require closing to reduce congestion/risk to members of the community.

**Advanced Signage:** A174 Brotton Road junction with Skinningrove Road.

## Flooding History (if known)

Skinningrove flooded twice in 2000, June and November, on both occasions as a result of high tides combined with significant amounts of rainfall. Resulting in significant damage to a number of residential properties, no lives were lost, however there was a significant impact on the community. Many residents properties required refurbishment.

## Rest Centres

The nearest designated rest centre is Loftus Youth and Community Centre, an alternative centre is located at Skelton Civic Centre. Both centres are a significant distance and will require transport.

It is likely that the Riverside Community Centre may be opened as a rest centre by members of the community and would provide a good staging location. Consideration should be given to using it as an alternative rest centre/command post.

## Vulnerable Populations

Residents of Zetland Row, Stone Row, Beach Road, The Square, High Street, Chapel Street, New Grove Terrace, Wilson Terrace and Marine Terrace are particularly at risk.

Evacuation routes have been identified by the community wardens, wardens are also able to assist with the identification of vulnerable community members in private residences.

### Flood Defences / Alleviation Schemes

Sea defences were refurbished in 2007. The bridge in the centre of the village is likely to be closed by volunteers or Carillion (Council Partners) in the event of high water (6" below the bridge soffit see photo). Closing this bridge stops vehicle access to Zetland Row and Grove Hill.

In the event of the siren sounding the village should be evacuated immediately. The siren can be automatically activated by the Environment Agency or manually by EA/Carillion or Flood Wardens at the site. Approximately 1,000 sandbags are available in a container in the riverside community centre yard these are for use by the community. Trash Screens are located at NZ758,185 on Kilton Beck, previously debris has blocked the river resulting in sudden surges of water and debris.

### Traffic Management

Traffic flows will be severely hampered in the event of flooding it is likely that the A174 may also be affected.

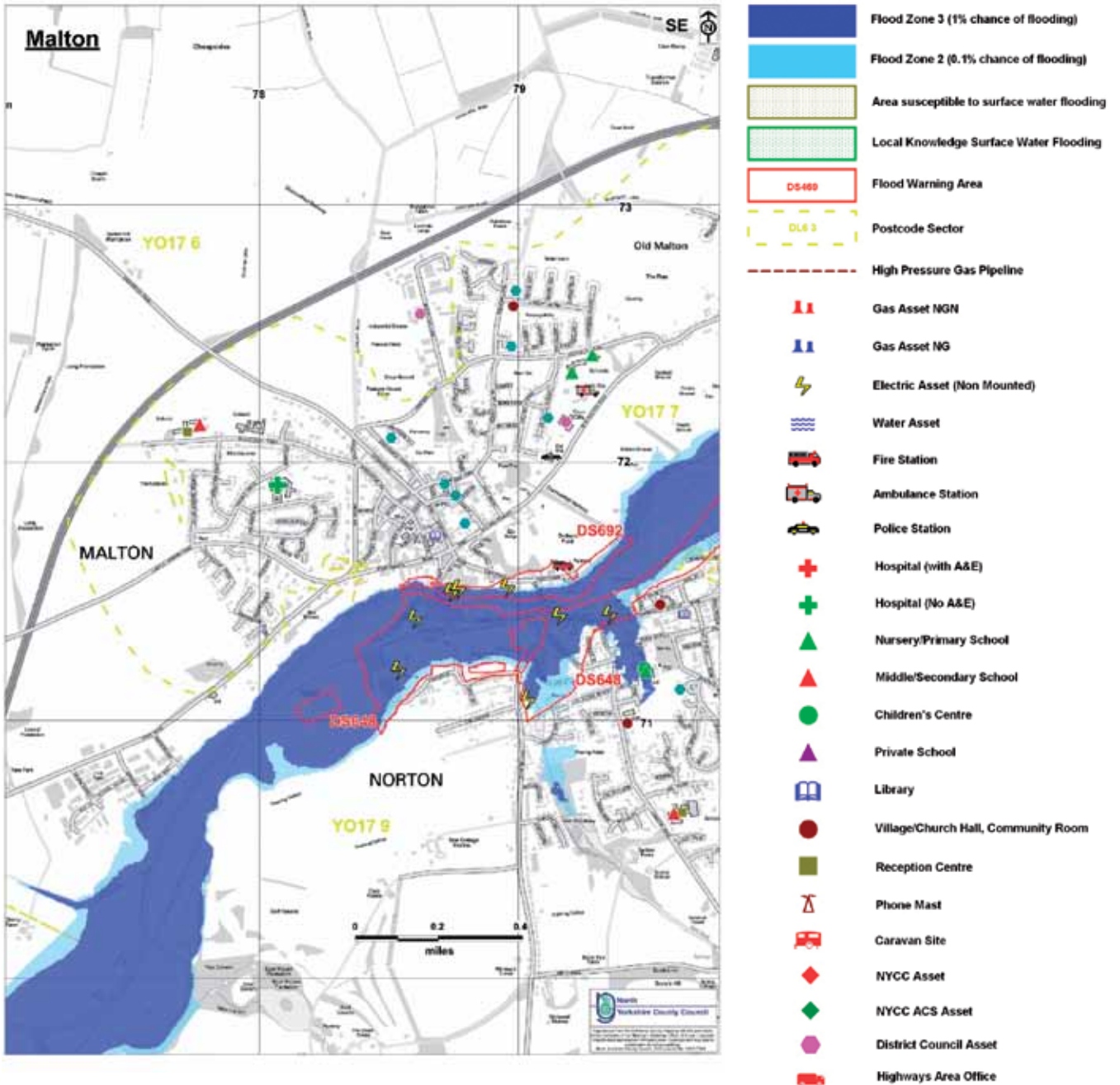
### Flood Warning Status Area(s) at risk (refer to map)

Flood Watch	NA
Flood Warning	NA
Severe Flood Warning	121FWFNS078

### Risk Assessment: (Refer to Emergency Preparedness, Annex 4D)

Likelihood	2		Final Risk Rating (Low – Very High) 4 Low
Impact - Health	3	Mean Impact Score 2	
- Social	3		
- Economic	1		
- Environmental	1		

Figure 12.8: Example map from Ryedale’s draft Multi-Agency Flood Response Plan (2007)



## Constructing your Multi-Agency Flood Plan (MAFP) - communication planning

Good communications are essential and they need to be planned.

### Communication arrangements

Your planning should include communication arrangements between all agencies responding to a flood (where these are not covered in another LRF plan) and warning and informing the public (a key requirement of the Civil Contingencies Act).

A separate Communication Plan, or a Generic Emergency Plan, may contain arrangements to communicate with the public, media and each other. But, if this is not the case, it is recommended that this section of your MAFP should include:

- arrangements for internal communications;
- a documented procedure for managing cross boundary mutual aid;
- a multi-agency strategic media co-ordinating role and Joint Media Strategy;
- points of contact at Strategic/Tactical/Operational (Bronze, Silver and Gold) levels;
- pre-prepared announcements/media releases;
- triggers for communicating with others; and
- contact details (see figures 12.25 and 12.26) and arrangements to set up and operate a helpline or information line.

This section should also cross-refer to LRF telecommunication plans where they exist. Where they don't exist, a section should be inserted in the MAFP on how communications between responding organisations would work in the case of any of the public networks failing (i.e. contingency arrangements).

The MAFP should not contain the arrangements for issuing flood warnings, as this would duplicate the Environment Agency Local Flood Warning Plans.

### Communicating with the public about the risk

This section of your MAFP should include ways of raising the public's awareness about the risk of flooding, the arrangements in the MAFP and how they may be affected by floods. If an LRF telecommunications plan does not exist, this section should include plans to communicate with vulnerable people who are dependent on their telephone in the event of network failure.

In specific flood risk areas, the Environment Agency issues flood warnings for river and coastal flood risk to those registered on the Floodline Warnings Direct system. There is also an online

service that shows the current flood warning situation in England and Wales - the **website** is updated every fifteen minutes. The Environment Agency also organise public awareness campaigns, arrange for the broadcasting of warning messages on local radio and provide advice on what do before during and after a flood event.

There is a lot of flooding information on the **Environment Agency’s website** including a search facility on postcodes allowing a check on whether a property is in a flood risk area.

**Warning the public: loudhailer announcement in case of evacuation**

Here is an example of a loudhailer announcement, should evacuation become necessary:

*“Flooding of (insert area) is possible within the next few hours. The authorities are considering evacuating residents from properties in (specify roads / etc).  
If you occupy property in any of these locations you should make preparations now for a possible evacuation.”*

(Adapted from the City of York Flood Defence Emergency Response Plan (2002) and from the London Flood Response Strategic Plan (March 2007))

**Sirens**

If sirens are used within your area during a flood incident, it may be useful to include some information on them, for example;

**Figure 12.9:** Siren details

Sirens	
Location	
Ownership	
Trigger for activation	
Who approves the activation	
What does it mean	
What action is required and by whom	

## General public advice

Your plan should also include the need to reinforce the Environment Agency's public messages on what to do in the event of possible or actual flooding, which is reproduced below.

**Figure 12.10:** What to do in the event of possible or actual flooding

### Before a flood

#### Prepare a Flood kit and include the following:

Pack a small bag with essential belongings and include warm clothes, torch (check batteries), radio (wind up or battery powered), food, water, other drink, mobile phone (pre input useful numbers), any medicines that you might need to take, any important documents that you have and a first aid kit. Keep this bag easily accessible.

- Collect personal belongings, including insurance and bank details, and essential telephone numbers together, and keep them in a waterproof bag.
- Move people, pets, valuables and sentimental items upstairs or in a high place downstairs.
- Keep a separate list of useful telephone numbers to hand (this should include your local Council, your insurance company and **Floodline – 0845 988 188**).
- Find out where and how to turn off your Gas and Electricity. Ensure that you switch it off if flooding is imminent before evacuating.
- If possible, move electrical equipment and furniture upstairs.
- Any furniture that you cannot move upstairs, try to raise well off the floor.
- Alert neighbours and assist the elderly, infirm and those with small children.
- Block doorways and air bricks
- Avoid walking and driving through floodwater, there could be hidden hazards.
- Keep up to date with local radio for further information and announcements and via **Floodline 0845 988 1188**.

#### During a flood

- Continue to listen to situation updates on your local radio and via **Floodline 0845 988 1188**.
- Keep dry and out of floodwater if possible

- Stay in your property, if safe to do so, until advised otherwise by the emergency services or the floodwater has receded.
- Do not walk or drive through flowing floodwater.
- If it is necessary to walk through shallow floodwater, take care for hidden holes, obstacles or other hazards
- Do not walk on river banks, sea defences or cross bridges over torrential rivers.
- Avoid contact with floodwater and wash any exposed parts before handling food or attending to wounds.
- If possible, move electrical equipment and furniture upstairs.

### **If evacuation becomes necessary**

- Stay calm and do not panic.
- Police officers and / or other officials will try to visit all properties at risk to advise on the requirement to evacuate.
- If road conditions permit, move vehicles to unaffected areas and ask friends / family if you can share their parking facilities.
- You will hear about your evacuation point for transport and the location of the reception centre either verbally or by a leaflet.
- Try to check that any elderly / vulnerable family members or neighbours know about the evacuation.
- Try to inform family members / friends as to where you are evacuating.
- Listen to the advice of the authorities and follow any instructions to leave a property.

### **After a flood / returning home**

- Contact your insurers as soon as possible and follow their advice. Most insurers have a 24hr helpline. Do not throw away damaged goods until your insurer has authorised you to do so. It is a good idea to take photographs of the damage.
- Check the safety of electricity and gas before use. A qualified electrician needs to check any electrical equipment and circuits that have been exposed to floodwater.
- Avoid contact with any remaining floodwater or items having had contact with floodwater unless wearing protective gloves / clothing.

- Boil all tap water until it is declared safe by the water supply company
- Wash yours and your children's hands frequently with bottled water if your supply has not been declared fit for use. Disinfect any children's toys.
- Dispose of any contaminated food, including tinned food, defrosted food, and packaged food that have been exposed to floodwater.
- Seek medical assistance if any health issues appear, especially flu like symptoms.
- Ventilate your property whilst taking care for security.
- Do not throw rubbish and furniture outdoors; wait for an organised collection.
- During these hard times, bogus / cowboy builders / traders are frequently offering their services. Make sure that you get a written quotation that is on letter headed paper with a landline contact number and address.

## Plan activation – thresholds and triggers

This section is vital to the success of your plan. It should set out as precisely as possible the triggers or thresholds for activating your flood emergency arrangements. This may be easiest to map out as a flow diagram or a table. It should cover agreed activation triggers for both Tactical (Silver) and Strategic (Gold) commands and other response arrangements. The aim is to ensure all partners in the LRF are clear on the point at which the plan is activated, and at what points during an incident decisions are likely to be made and action taken. Your Environment Agency representative on your LRF will be able to explain what the different triggers might mean in terms of the likelihood and scale of any flooding.

Activation arrangements should take account of the recommendations in the Pitt Review that Gold Commands should be established at an early stage on a precautionary basis where there is a risk of serious flooding (Pitt recommendation 43) and that upper tier local authorities should be the lead responder for triggering multi-agency arrangements in response to severe weather warnings and local impact assessments (recommendation 41).

### The range of triggers

The following are example triggers and actions that your MAFP could include:

- Flood Guidance Statements issued by the Flood Forecasting Centre (FFC);
- heavy rainfall alerts issued by the FFC;
- extreme rainfall alerts issued by the FFC;



- flash severe warnings issued by the Met Office;
- early severe warnings issued by the Met Office;
- Environment Agency flood warnings;
- reports of flooding from the public; and
- River levels on the Internet (near real-time river levels data published on the Environment Agency website) - not a trigger but useful supporting information.

For more information on these triggers and how they could be of use, please refer to section 5: Tools for flood emergency planners and responders. Information about the Flood Forecasting Centre and its services can be found in sections 4 and 5 of this Framework.

Triggers need to be linked to specific actions. In the context of your MAFP, these may include:

- alert and standby procedures;
- people to notify / inform;
- instructions for the opening of control centres; and
- other generic actions, depending on the scale of the incident.

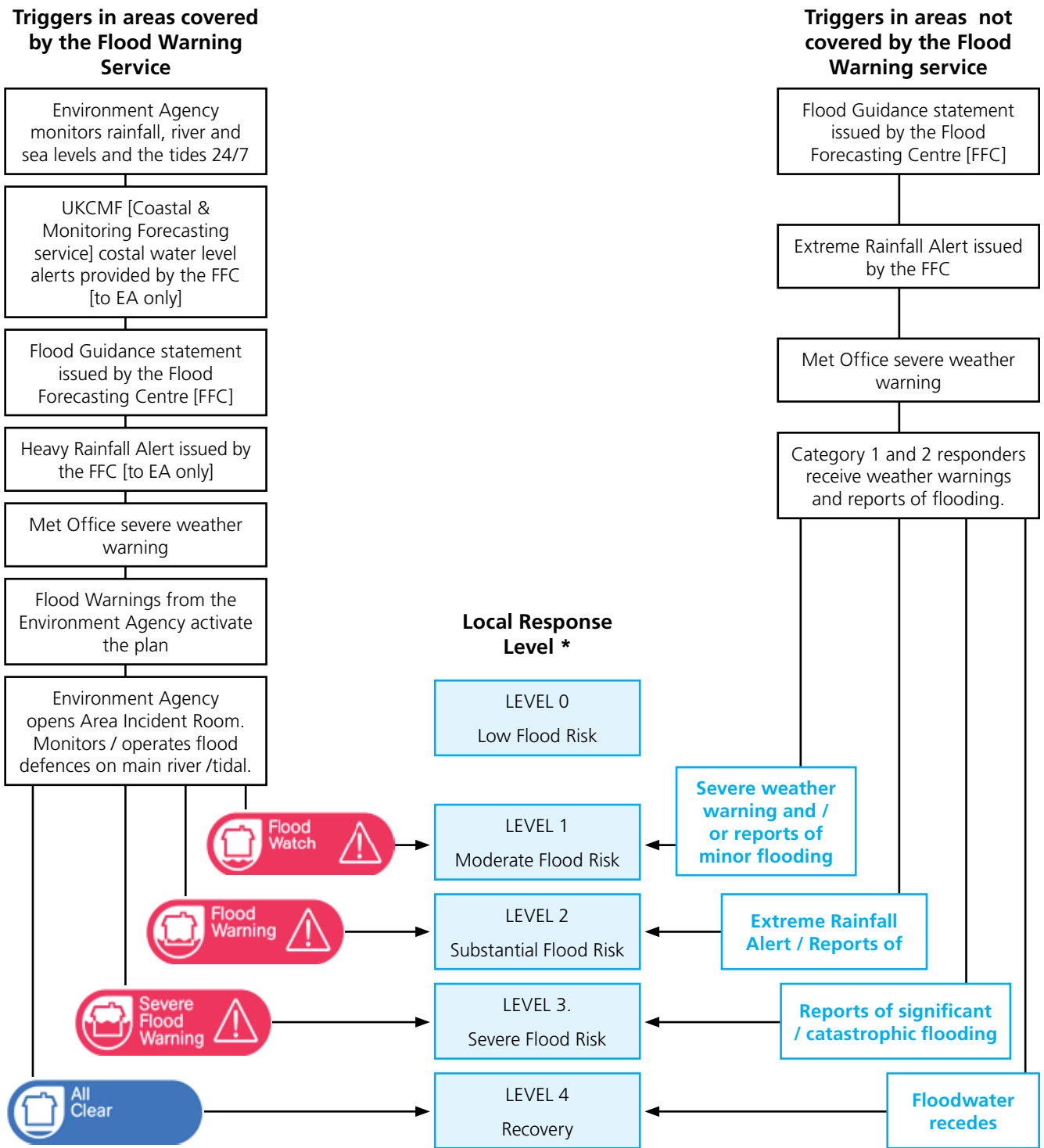
Figure 12.11 is an example of qualitative triggers and generic actions for flood warning service areas and other areas. It is important to specify different response levels and the associated generic actions so that everybody is aware of the scale of response expected, proportionate to the severity of the incident. Suggested Local Response level definitions are given in Figure 12.12.

### **What do flood warnings mean and what do responders do?**

The Environment Agency operates a flood warning service in most areas at risk of flooding from rivers and the sea (see section 4 - What you can expect from the Environment Agency). If flooding is forecast, warnings are issued using a set of four easily recognisable codes. In coastal zones there is an assumed 8 hour lead time for overtopping of coastal defences from storm tides.

Comprehensive details are contained in the Local Flood Warning Plan maintained by the Environment Agency with the support of the members of the Flood Warning Planning Groups. That plan is intended to assist wider dissemination and understanding of flood warning arrangements and systems and is the prime reference document in this respect.

**Figure 12.11:** Example plan triggers and generic actions using qualitative impact measures



\* please refer to Figure 12.12 on next page "local Response Level Definitions"

**Figure 12.12:** Local Response Level Definitions Example taken from Barnet 2010 MAFP

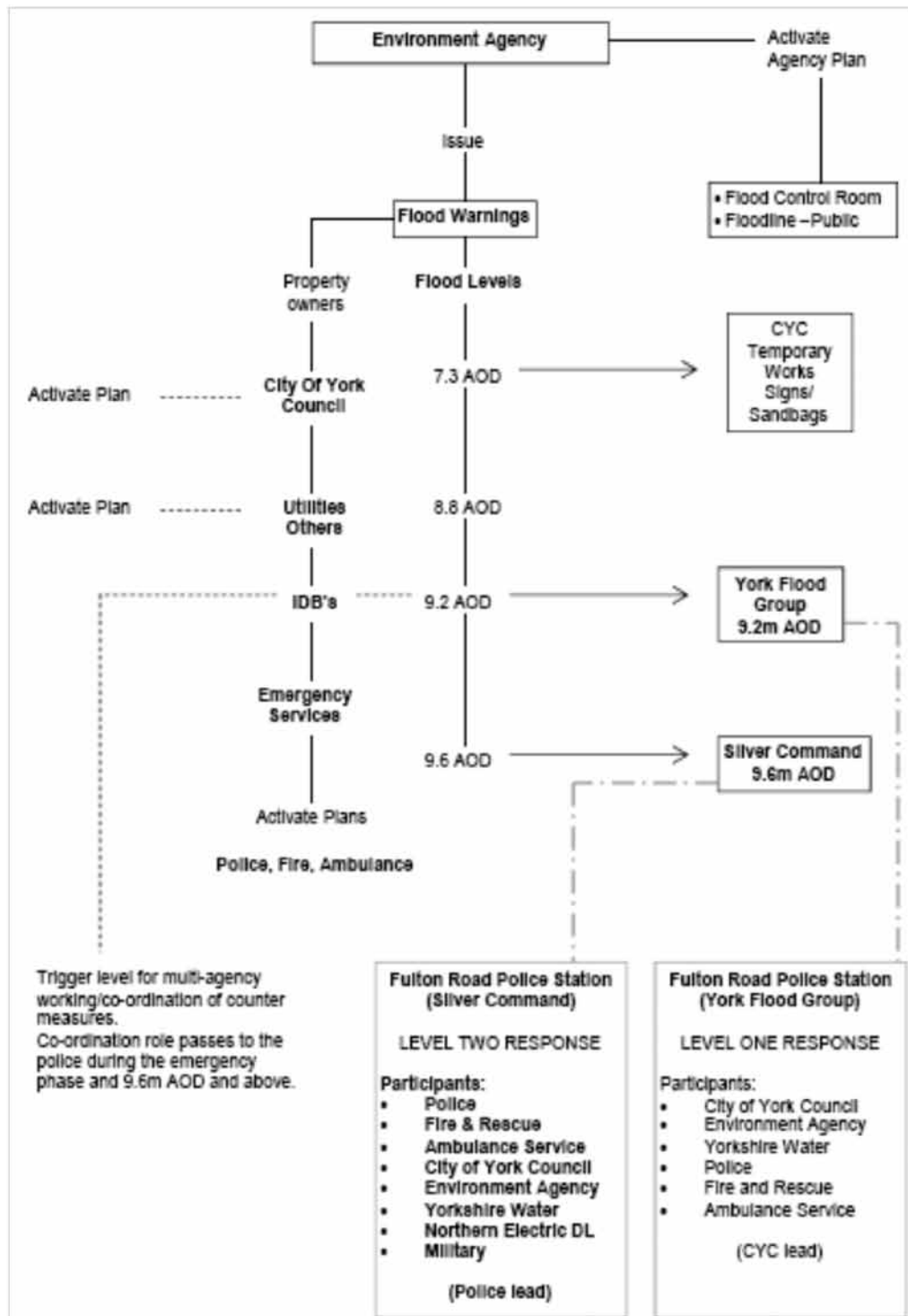
An alert level describes the expected scale of response to a flood incident. These could be defined as:

Local Response Level	Trigger	Actual or forecast Impact	Response
<b>Level 0</b> (Low flood risk)	No flood warning / watches and / or no warnings of severe weather in force that may result in flooding	No flooding occurring	No specific response, normal awareness of possible flood risk
<b>Level 1</b> (Moderate flood risk)	Flood warnings in force, And / or Warnings of severe weather in force that may result in flooding And / or Reports of minor impact flooding.	Low impact flooding of fields, gardens and minor roads.	<ul style="list-style-type: none"> <li>■ Individual responders of flood plans and procedures may be activated</li> <li>■ Some routine or preparatory responses may be underway, e.g. diversion of minor roads, duty officers put on standby, resources mobilised</li> <li>■ Heighten awareness if flood risk</li> </ul>
<b>Level 2</b> (Substantial flood risk)	Flood warnings in force, And / or Warnings of severe weather in force that are likely to result in flooding And / or Reports of property flooding.	As level 1, plus High impact flooding which may result in risk to life, homes and businesses.	As for level 1, plus: <ul style="list-style-type: none"> <li>■ Multi Agency Flood Plan (MAFP) activated</li> <li>■ Responders undertake actions continued in MAFP</li> <li>■ Consider the need for police led Multi-agency co-ordination.</li> </ul>

<p><b>Level 3</b> (Severe flood risk)</p>	<p>Severe flood warnings in force, And / or Warnings of severe weather in force that are highly likely to result in flooding And / or Reports of significant, catastrophic flooding.</p>	<p>As level 2, plus: Very high impact flooding which may result in extreme danger to life and property.</p>	<p>As for level 2, plus:</p> <ul style="list-style-type: none"> <li>■ Police co-ordinate multi-agency response</li> <li>■ Multi-agency control centre open.</li> <li>■ Consider the need to set up a recovery working group alongside the SCG (Gold).</li> </ul>
<p><b>Level 4</b> (Recovery)</p>	<p>Flood warnings / severe flood warnings downgraded And / or All clears issued And / or No warnings of severe weather in force that may result in flooding.</p>	<p>Flood water receding.</p>	<p>Local authority to facilitate rehabilitation of the community and restoration of the community.</p>

Figure 12.13 is an example taken from the City of York Flood Defence Emergency Response Plan (2010) of quantitative measures that can replace qualitative descriptions to reflect local impacts and circumstances, such as, river levels, number of properties or specific infrastructure at risk (the AOD (Above Ordnance Datum) levels relate to gauge board readings on a bridge over the Ouse in the centre of York). This is appropriate in this location as the river has a slow rate of rise. Therefore, the multi-agency group has time to implement a detailed response strategy. In rapid response catchments – examples are Boscastle and Carlisle, where rapid flooding occurred in 2004 and 2005 respectively - a quantitative measure diagram would not be suitable due to the speed at which river levels increase. Responders need to be very sure that certain levels would trigger a particular action.

**Figure 12.13:** Example of triggers and generic actions using quantitative impact measures  
 (Extracted from the City of York Flood Defence Emergency Response Plan (January 2010))



## Planning roles and responsibilities

This section follows directly on from plan activation triggers and should set out the actions, roles and responsibilities of responding agencies in relation to these triggers - for each community at risk from flooding.

### Actions, roles and responsibilities

The level of detail included in this section is a matter for you and your LRF. Non-flood specific or generic roles and responsibilities should be as set out in other strategic or generic emergency plans and not repeated here - relevant references or hyperlinks should be added.

You should focus on providing a summary of the flood specific roles and responsibilities of Category One and Two Responders at the planning stage and during the event. Consider circumstances where there may be a need for changes in role. For example, the Environment Agency has primary responsibility for flooding from rivers, whereas the local authority and/or Water Company has primary responsibility for flooding from drains and sewers.

Figure 12.14 provides an example format for presenting flood specific roles and responsibilities. All LRFs are strongly advised to include tables, similar to those in Figures 12.14 through to 12.17 in their Multi-Agency Flood Plan. For most, this will form the backbone of the response plan to flooding in a given area.

Your plan will need to describe as far as possible the expected scale of response and associated actions to be taken in the event of flooding (if not included in other generic plans). This should include the:

- specific actions that organisations and responding agencies will take at different stages of a flooding incident;
- activation of plans and procedures;
- opening of incident rooms, command and control centres;
- lines of communication;
- criteria for making decisions to prioritise and allocate resources;
- availability of relevant resources and skills; and
- environmental responsibilities.

## Environmental considerations

It is important to identify and list in the 'consequence' column of your version of Figure 12.16 any anticipated environmental impacts directly resulting from the flood, for example:

- disposal of animal carcasses if farmland is flooded (see section 11 for more on this);
- disposal of flood damaged personal property;
- disposal of silt, gravel and other flood debris;
- disposal of contaminated sand bags;
- saline intrusion of fresh water Sites of Special Scientific Interest; and
- pollution if sewage / industrial sites are flooded or pollution from flooded vehicles, stored fertilisers etc.

All of the above aspects should be linked back to recovery plans where more detail on the actions needed should be set out.

## Health and Safety considerations

All organisations need to ensure that they have appropriate and adequate resources that can be sustained over a protracted period if required - in particular, staff resource, personal protective equipment and accommodation. This needs to be clearly set out in your plan, or a cross reference made to the related plan.

All responding organisations, including voluntary agencies should be aware of the risks associated with working in or nearby to floodwater, such as:

- the health issues when contact is made with contaminated floodwater;
- the risk of electrocution;
- hidden objects or trip hazards beneath the water;
- the power of water and how easy it is to become unbalanced; and
- drowning or hypothermia.

When preparing your MAFP, LRF members should consider the specific health and safety issues relating to flood risk in the area that should be included in the plan. In all cases, individuals and teams that are expected to play a role in flood response and recovery should receive appropriate training in relevant health and safety policies and procedures. The MAFP is not expected to set out such policies and procedures, but you may wish to include some or all of them depending on your local area.

**Figure 12.14:** Examples of Roles and Responsibilities Specific to Type of Flooding. Adapted from Barnet MAFP, 2010

Organisation	Risk	Preplanning	Minor Flood (medium Consequence)	Major Flood (high Consequence)	Notes	Recovery
Environment Agency	Fluvial, Coastal, tidal	Prepare and maintain London Local Flood Plan; Advise and Development proposals; update food risk maps; support LRF food risk assessments; maintain watercourse capacity; maintain flood management structures.  Convene a Flood Advisory Service teleconference	Issue warnings; monitor catchments; operate defences; support LA's and emergency services.	(As for minor flood)		Support LA's and community as resources allow; Repair any damaged defences.
Fire Brigade (LFB)	Fluvial flooding.	Standard operational response to a special service. Responsibilities under the Fire and Rescue Services Act 2004 LESLP guidance LFB business continuity plans.	Liaise with other agencies and prioritise response and resources. Give assistance with pumping. Give priority to flooding involving a risk of life, fire or explosion. Environment issues e.g. chemicals, hospitals & homes and the elderly, public utilities and food storage, heritage sites.	As with Minor flood. Inform relevant officers. Assess resources. Follow LESLP procedures. Attend Gold and other co-ordinated response meetings.  Request assistance from the RNLI for search & rescue where there is a potential risk to life.		Assist other agencies to minimise the impact on the community.



**Figure 12.15:** Response Actions, Roles and Responsibilities. Example adapted from the Barnet MAFF, 2010

For a more comprehensive example see the Templates, Figures and Tables Document

Response Actions, Roles and Responsibilities			
<p><b>Emergency Response</b></p> <p>The different agencies responding to a flood event will carry out their duties as stated in the LESLP Procedure Manual (with focus on Annex E of the Recovery Plan). The following pages state the different responding agencies responsibilities with regards to a flood event.</p>			
<p><b>Metropolitan Police Service (MPS)</b></p>	<p>LESLP guidance states the MPS have the following responsibilities;</p> <ul style="list-style-type: none"> <li>■ Saving of Life</li> <li>■ co-ordination of the emergency services, local authorities and other organisations</li> <li>■ Secure, protect and preserve the scene and control sightseers and traffic the use of cordons.</li> <li>■ Investigation of the incident and obtaining and securing of evidence</li> <li>■ Collection and distribution of casualty information</li> <li>■ Identification of the dead on behalf of HM Coroner</li> <li>■ Prevention of crime</li> <li>■ Family liaison</li> <li>■ Short term measures to restore normality</li> <li>■ In the event of warning and informing communities at risk of flooding not being effective, where practicable, assistance will be given.</li> </ul>	<p>Major incident declaration to be made by Blue light or local authority personnel.</p> <p>Major incident procedure – command and control-provision of Gold co-ordination chair and location.</p> <p>Consideration as to Casualty bureau etc.</p> <p>Use of Gold media cell.</p>	<p>Recovery cell built into command and control protocols.</p>

<p><b>London Fire Brigade (LFB)</b></p>	<p>LESLP guidance states the LFB have the following responsibilities:</p> <ul style="list-style-type: none"> <li>■ Life saving through response and rescue</li> <li>■ Fire fighting and fire prevention</li> <li>■ Rendering humanitarian services</li> <li>■ Detection, identification, monitoring and management of hazardous materials and protecting the environment</li> <li>■ Provision of qualified scientific advice in relation to HAZMAT incidents</li> <li>■ Salvage and damage control</li> <li>■ Safety management within the inner cordon</li> <li>■ To maintain emergency service cover throughout the LFB area and return to a state of normality at the earliest time</li> <li>■ In a flood event assistance will be given to relevant agencies, particularly the local authority, to minimise the effects of major flooding on the community</li> <li>■ In a flood event assistance may be given with pumping operations, depending on the situation, with priority being given to calls where flooding involves a risk to life, or fire or explosion and to calls from hospitals, residential homes for the elderly, public utilities and food storage depots.</li> </ul>	<p>When the Multi-agency Flood Plan is activated, and it is a major incident, the LFB will attend meetings and liaise with other agencies to prioritise their response.</p>	<p>Assist other agencies to minimise the impact on the community.</p> <p>Access to boats through the Fire &amp; Rescue service.</p>
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<p><b>National Grid. Gas – Electric Distribution/transmission</b></p>	<ul style="list-style-type: none"> <li>■ Set up Gold/Silver/Bronze command as appropriate, on site</li> <li>■ Co-operate with responding agencies to isolate supplies and make safe as necessary.</li> </ul> <p>Where possible reconfiguration of supplies</p> <p>Possible lock-out of regulators to maintain pressures in gas mains.</p> <p>Wait for water to recede, re-establish supplies</p>	<p>Prepare for recovery</p> <p>Invoke mutual aid and resource plans</p>	<p>Return to service</p>
<p><b>Environment Agency (EA)</b></p>	<p>EA have the lead role for monitoring catchments and providing flood warnings where practical and possible, to protect people and property at risk.</p> <p>Operate defences</p> <p>When possible the EA will attend command centres to provide face- to -face support and information on where a flood is happening and what can be expected to happen during the course of the flood event.</p> <p>Where resources are available the EA will help local authorities and the emergency services in dealing with the effects of flooding, such as evacuation and distributing flood protection</p>		<p>Support LA's and community as resources allow</p> <p>Repair and damages defences.</p>

**Figure 12.16:** Example of a Multi-Agency Flood Risk Matrix (example adapted from Barnet MAFP, 2010)

Barnet – Multi-Agency Flood Risk Matrix

Scenario	Risk Rating	Response Level			Trigger			Action by						
		Likelihood	Impact	Rating	Level	Trigger	Consequence	EA	LA	FRS	Police	PCT	Other	
<b>Silkstream/ Deansbrook Mill Hill to Brent Reservoir</b>	Flood Warnings 269 properties 1707 NW9	4	4	Very High	1	Met – severe weather warning EA – Flood Watch/ Warning Notification by Resident	Floodwater to extend indicated on EA local flood map. Flooding of Edgware Community Hospital, Merrivale Care Home, Burnt Oak station, Library & GP Surgeries.	Work with partners, emergency services; assist with evacuation warning & informing, issue media advice.	Loudhailer Door knocking leaflet drop to public Suitable Rest Centre highlighted	Place crews on stand-by Locate boats, & dinghies and other equipment for evacuation.	Borough Watch warning, PCSOs to work with other agencies in assisting public with evacuation.	Consider relocating services from the surgeries & clinics. Assist with evacuation of hospital. Identify vulnerable people		
<b>River Brent &amp; Mutton Brook East Finchley to Brent Reservoir</b>	Flood Warnings 114 Properties 387 N2 & NW11	4	3	High	2	Met – severe weather warning EA – Flood Watch / Warning	Floodwater to extend to indicated areas on EA map, Brent Cross Shopping Centre, Kerem School & Nursery GP Surgery, Hampstead Garden Synagogue.	Issue flood Warnings, inspect & monitor area.	Work with Highway /Police / transport services to keep traffic flowing, sandbags to protect council property	Work from the nearest local LFB station.	Disseminated flooding information, keep transport routes clear	Inform home visiting services, GP surgeries relocate at risk properties		
<b>Dollis Brook Barnet to Hendon</b>	Flood Warning 138 Properties 193 N12 NW7 & NW4	4	2	High	3	Met – severe weather warning EA – Flood Watch/ Warning	Historical floodwater area as EA local flood water map, private properties, no infrastructure	Issue Flood Warnings, patrol and monitor area.	Lalo & other support team to assist with evacuation transport, provide catering, blankets etc.					

**Figure 12.17:** Flood Warning Actions. Example taken from the Barnet 2010 MAFP

(An example of actions taken by various organisations when a specified flood warning level is in force.)

<b>Flood Watch</b>			
<b>Who</b>	<b>What</b>	<b>When</b>	<b>Comments</b>
<b>Environment Agency (EA)</b>	Issue Alert	Combination of water levels and forecast suggest flooding likely. Property flooding not expected.	Precautionary: may not result in flooding.
<b>Met Police (MPS)</b>	Communication of EA message to patrolling officers.	Upon receipt of EA message by BOCU control room	Additional tasks undertaken as requested by EA.
<b>London Fire Brigade (LFB)</b>	Fire Brigade mobilising control promulgates warning within the LFB. Prepare for possible batch mobilising. Assess Resources	On receipt of information from the EA.	
<b>NHS/PCT</b>	Alert relevant organisations (acute/mh/GPs) to be aware	As soon as possible	Information re. flood warning should be reported to NHS London emergency planning.
<b>London Ambulance Service (LAS)</b>	Monitor known high risk areas with reference to EA flood maps.	Issue of Flood Watch	

## Flood Watch

Who	What	When	Comments
<b>Thames Water</b> <b>Three Valleys</b> <b>BT</b>	Note risks Set up a flood watch team Convene Threat Assessment Response group		Situation monitored Ongoing monitoring ■ Impact of customer service Assessed * Review of impact to other service provider customers- develop a single industry view- People and operations at risk identified following risk assessment
<b>TFL - HA</b> <b>Transport Networks</b>	Monitor situation but no specific actions		

## Vulnerable People

This section should set out the mechanism for sharing information about vulnerable people in various facilities (not individuals' details) who may need specific assistance during a flood incident. Figure 12.18 is included to help identify specific facilities.

The Cabinet Office **Guidance on Identifying People who are Vulnerable in a Crisis** (Cabinet Office 2008) should be referred to for more detail, including guidance on identifying who is vulnerable. The Emergency Preparedness Guidance to Part 1 of the Civil Contingencies Act (Section 2.2) defines vulnerable people as "those that are less able to help themselves in the circumstances of an emergency".

Information on the location and needs of vulnerable individuals is held and maintained by various agencies/organisations and it is not necessary, or sensible, to catalogue or duplicate this information in the MAFP. The contact details of such agencies/organisations should be included in the table for which figure 12.25 is a model. A mechanism for sharing this information during an emergency should be agreed within the LRF.

A key issue that needs to be considered is the approach to warning and informing vulnerable people. Such warnings must be accessible which may require a number of tailored communications approaches.

It is recommended that an appropriate map showing the likely whereabouts of vulnerable groups (e.g. schools, nurseries, care homes) is included in your MAFP. And it is advisable to contact the operators of those sites to see if they have any existing arrangements in place, including evacuation plans. If so, these should be recorded. It is also important to record the contact details of certain key people, such as key holders, flood wardens and community groups.

**Figure 12.18:** Example Log sheet of Vulnerable People in various facilities.

Facilities	Address	Useful Contact number(s)#	Support needed in Emergency	Communication Issues	Comments	Grid Ref ##
Newcastle Primary School <b>&lt;do the same for all groups&gt; e.g.</b> Schools Nurseries Care homes Surgeries / clinics Areas with high concentrations of elderly Caravan parks & campsites	Newcastle Street, Newcastle NE1 1AA	Mr S Smith (key holder) (daytime) 0191 111 1111 (m) 07877 345 862	Evacuation for pupils with special needs	(e.g. Sensory impaired)	300 Children No evacuation plan	xxx yyy

## Critical infrastructure

The UK's critical national infrastructure comprises nine sectors: water, energy, transport, telecommunications, health, food, financial services, emergency services and government. The loss of some infrastructure assets as a result of flooding may have a significant impact and it is vital that this is assessed.

So this section of your MAFP should identify all infrastructure at risk from flooding that is critical to the local population, or to other parts of the country. Figure 12.19 provides a model for capturing locations. Include maps as far as possible. But bear in mind that the details on the sites you include is likely to determine the protective marking which should be applied to the document.

When planning for potential flooding on or near a site, LRFs should work with infrastructure owners and operators to identify the at risk locations; their business continuity management plans; the potential consequences of loss of the asset; and the key dependencies and interdependencies with other sectors (water supply relies on the availability of electricity for example). Local knowledge is important.

It is recommended that you prioritise the criticality of key infrastructure as part of your planning. For some infrastructure sectors there may be sufficient resilience at local level to manage likely disruption caused by flooding (supermarkets are unlikely to be quickly exhausted of food for example), in which case you do not need to focus on them in your MAFP.

Where LRF telecommunication plans exist, these should be referred to as part of the MAFP. The MAFP should cross reference to other emergency plans as needed and then set out the specific actions falling to responding agencies in relation to each of the related risks.

MAFPs should be shared with neighbouring LRFs in view of the fact that cross boundary issues need to be carefully considered. Disruption to infrastructure can affect a number of adjacent communities, and beyond.

Guidance on understanding and improving the resilience of infrastructure to natural hazards will be made available on the National Resilience Extranet (NRE).



**Figure 12.19:** Example of Critical Infrastructure Log sheet

Key Infrastructure	Address	Useful Contact number(s)#	Details	Grid Reference ##
e.g. Newcastle Sub-Station	Main Street, Newcastle, NE1 1BB	Mrs P Smith (key holder) (daytime) 0191 111 1111 (m) 07877 345 862	Owned by NEDL - Supplies 500 properties in south Hull	XXX YYY

# All contact details should also be included in an appendix.

Complete the Log Sheet for all key sites and infrastructure, including for example:

- electricity sub-stations;
- telephone exchanges;
- police stations;
- fire stations;
- hospitals / A&Es;
- ambulance stations;
- local authority offices/depots;
- shopping centres;
- COMAH sites;
- prisons;
- water treatment works;
- sewage treatment works; and
- transport hubs.

## Being rescued and cared for in an emergency

In this section you should record the arrangements for evacuating and sheltering people at risk from flooding. In doing so, you need to differentiate between 'Rescue' and 'Evacuation and Sheltering' (although the latter may be adequately covered by a Generic Evacuation and Sheltering Plan).

It is recommended that the Environment Agency is consulted for advice on flood depth information which could be useful for planning evacuation routes.

If a Generic Evacuation and Sheltering Plan exists, it should not be replicated in the MAFP. But if not, the MAFP should identify:

- vehicles and resources available for evacuation;
- safe evacuation routes and rendezvous points, preferably marked on a map;
- traffic management arrangements for known flood prone roads;
- shelters/reception centres to accommodate displaced victims (plus any valuables they may bring, including essential medication and pets);
- details of evacuation plans operated by others;
- issues regarding the longer-term recovery of people, supplies and services;
- issues regarding the evacuation and sheltering of pets, welfare of livestock and zoos;
- a method of tracking displaced people, distribution of supplies and services; and
- the needs of faith, religious, cultural and minority ethnic groups and communities and foreign nationals.

The relevant local authority team would identify the most appropriate rest centres. Reception/rest centres should be marked on the appropriate map in your plan.

For further guidance on evacuation planning, refer to the **Evacuation and Shelter Guidance** (2006) on the UK Resilience Website.

Figure 12.20 is an example of basic evacuation and sheltering arrangements.

**Figure 12.20:** Example Evacuation and Sheltering Arrangements (adapt to suit local arrangements)

Reception / rest centres / shelter	Community being evacuated	Potential no. of evacuees (i.e. those at flood risk)	Routes and distance from evacuee rendezvous point	Resources available at facility	Facility contact number / key holder	O/S Grid Reference
Hexham School	Rivers Estate Main Street	134 213	River Road 0.5 miles  Main Street 1 mile	Shelter, catering, food & blankets for 200, 12 toilets, Telephones, 25 car spaces 2 kennels, 2 mini-buses on site  (Bus Co A: 0191 111 1111)	077770 777777 (Jo Bloggs)	Refer to map (add cross reference)
Blyth Sports Centre	Upper Blyth Lower Blyth	39 122	Blyth Street 1 mile  North Street 1.5 miles	Shelter, catering, food & blankets for 500, 32 toilets, Telephones, 45 car spaces 0 kennels, 3 buses on site  (Bus Co. B: 0191 222 2222)	077770 777777 (John Smith)	Refer to map (add cross reference).

Planning assumptions for evacuation need to be agreed within your LRF, on the basis of national guidance, and included within the MAFP. For example:

Evacuation and emergency sheltering and accommodation: As little as one hour warning given to emergency services for evacuation. Assumes X% of people leave the area spontaneously and stay with relatives/friends (includes holidaymakers leaving the affected area to return home); Y% use available hotels in safe areas (tourists are vacated to give rooms to local residents); Z% need assisted sheltering for up to 6 months.

In the event of evacuation being necessary, you will also want to ensure there are processes for marking those premises as having been checked. In doing so, it's important to bear in mind that: (a) you shouldn't damage the property – as well as the potential legal implications, some owners will take exception to the use of paint markings on their premises; and (b) any markings which are used should be designed to limit the risk of looting.

Examples of records that you might want to keep are set out below.

**Figure 12.21:** Premises marking (extracted from the London Flood Response Strategic Plan)

<b>Premises Marking Aide Memoir</b>	
S	Premises secure and no answer
E	Premises entered and checked
O	Occupants have not been traced
T	Occupants have been traced elsewhere
X	Occupants refuse to leave
M	Occupants awaiting medical evacuation
✓	Occupants have been evacuated
>	Premises have been re-occupied
<p><b>Markings should be:</b></p> <ul style="list-style-type: none"> <li>■ As large as possible (to assist quick observation / identification from the street)</li> <li>■ Displayed on the left side of the door</li> <li>■ In chronological order – top to bottom</li> <li>■ As close as possible to eye level</li> <li>■ Clearly visible to a person observing the premises from the front or normal side of approach</li> <li>■ By wax crayons or similar waterproof marking</li> </ul>	

**Figure 12.22:** Example of a Checked Record

FLOODING INCIDENT – PREMISES CHECKED RECORD				
<b>LOCATION</b>		<b>Use rear of form for any additional information like babies/infants, pets, guide/hearing dogs, walking aids, non English speaking etc.</b>		
<b>Town/Sector (Area of search):</b>		Tom Town TT1 2AB		
<b>Street of Multi-occupancy Premises Checked:</b>		Sam Street		
<b>Date/Time Checked:</b>		10/10/10 / 18.30		
<b>Team Ref./Officer Completing:</b>		A Team / Mr T		
Property No. or Name	Last Marking Symbol on Premises or 'None'	OCCUPANTS		
		Number in premises	Names	Vulnerable Status Y/N
Gransden	None	2	Mr Harry Brown Mrs Lilly Brown	N Y - blind
44	S	3	Mr David Jones Mrs Tina Jones Miss Laura Jones	N N N

## Recovery

This section should describe how the recovery from a flood incident is to be managed.

**National Recovery Guidance** (including a Recovery Plan Guidance Template, detailed Topic Sheets, and Case Studies) has been published on the UK Resilience website, and it is recommended that this guidance is used to help complete the recovery part of your MAFP. If there is no existing generic recovery plan, then the flood plan should outline the arrangements for managing the recovery, both short and long term.

The National Recovery Guidance provides advice on how the recovery phase can be co-ordinated (including the handover from response to recovery). It also includes a draft Terms of Reference for a Recovery Co-ordinating Group and suggestions on sub-group structures.

The Recovery Co-ordinating Group will need to prioritise the various needs identified by each sub-group and allocate resources appropriately so that the community returns to normality as soon as possible. Common issues following flooding include:

- clean up and waste disposal;
- repairs to public assets/infrastructure – schools, buildings, roads, bridges;
- restoration of power, communications and water;
- domestic and business insurance issues;
- displaced businesses; and
- humanitarian assistance needs including homeless/displaced residents and psychological impacts

Detailed Topic Sheets on all these issues can be found in the National Recovery Guidance.

## Training and exercising

This section should include the training needs and a schedule of training for all organisations involved in the operation of your MAFP. Figure 12.23 is a model table for this.

It is essential to train responding officers in their roles and responsibilities before they need to use the plan during an exercise or an actual event. Exercises aim to validate the plans, train staff and test procedures. Such exercises may be internal, or tied into other multi-agency exercises organised by the Local Resilience Forum. They should confirm the roles and responsibilities of responding agencies, as well as the adequacy of communications, resources and equipment. It may be helpful to invite non-technical observers and/or community groups to attend these exercises.

It is recommended that exercising this plan at operational and strategic levels is undertaken whenever there is a major revision, or at least every three years.

Please refer to the **Exercise Planners Guide** for further information on exercising your plans.

**Figure 12.23:** Example Training and Exercise Schedule

Organiser	Title of exercise	Type	Date	Relevant lessons or link
S Smith Emergency Planning Unit	Waterworks	Table top	01/07/2006	Require better communication between responding agencies – refer to new multi-agency plan
P Evans Environment Agency	Waterside	Discussion	09/09/2007	
N Jenkins Fire & Rescue	Waterwheel	Live	06/10/2008	
J Jones Police	Watercress	Control Post	14/02/2009	

### Plan Sign Off and Revision

All organisations / departments that contribute to the plan should approve the MAFP and final sign off should be agreed by the LRF as a multi-agency group. The same organisations that have contributed to the plan should also commit to reviewing and updating the plan - as and when necessary and, ideally, at least annually - to make sure everything is still up to date and relevant.

Constructing and maintaining your MAFP is a collective responsibility. Responsibility for updating the plan, however, often sits with the local authority or Police Emergency Planning Unit. The LRF should ensure there is clarity – and, where necessary a mandate – so that individuals or organisations know that they have primary responsibility to maintain and update the plan.

### Important records to maintain

There are some key records that need to be maintained in order for your MAFP to remain up-to-date and usable.

## Contact details of key personnel

Where a separate contacts database or directory is not available, your MAFP should include a list of key internal and external contacts. Job titles, as opposed to individuals' names, will make it easier to keep the plan up-to-date.

Figure 12.24 shows an example contact list with a relatively small amount of detail. Figure 12.25 shows a more comprehensive example adapted from the Multi-Agency Response Plan for Flooding in Cumbria (2006).

**Figure 12.24:** Example Contact Details of Key Personnel (place Dept/Organisation in alphabetical order)

Department / Organisation	Post title	Contact number	Secondary contact (name / number)
<b>Electricity</b>			
<b>Environment Agency</b>	Flood Incident Management Team Leader	444 5689	Incident room 569 7856
<b>Gas</b>			
<b>Highways</b>	Highways Manager	236 4578 0777 777 7777	Deputy 236 4577 0777 777 7778
<b>IDB</b>			
<b>Police</b>	Duty Inspector	478 5623	Incident Room 395 1687
<b>Social Services</b>	Duty Officer	236 8989 0777 666 6666	Duty Officer 236 8989 0777 667 6677
<b>Telephone</b>			
<b>Water</b>			



**Figure 12.25:** Example of contact details, adapted from the Multi-Agency Response Plan for Flooding in Cumbria (2006)

<b>Organisation Name</b>	Naydon Council	<b>Date &amp; Issue No.</b>	21/07/07 No.1
Address	Naydon House, Naydon, NA4 5TG		
Event Contact Details	Duty Officer contacted on 07777 777 777		
Non event contact details	Emergency Planning Department 0191 222 555		
Event Role	In accordance with role defined in this plan		
Event Responsibility	As above		
Major Incident Plan invoked when:	Properties are affected and / or danger to public		
PR handling	Refer to Generic Communication Plan		
<b>Response</b>			
Flood Watch	Situation noted, operational staff advised		
Flood Warning	Trigger levels inspected. Contractor call out as necessary		
Severe Flood Warning	Action as appropriate		
All Clear	Action as appropriate		
Actions deployed post event	Community clean up team responsible for post event		
<b>Available resources</b>			
Sandbags	200 filled, 2000 unfilled in Naydon Depot		
Staff	2 initially, increasing to 8		
Other	2 cars, 2 vans		
Availability to provide cross boundary support	Have provided sandbags to other Councils in the past		
Person responsible for maintaining form	Mr F Smith – Emergency Planning Department		

## Location of control centres

We suggest that the flood plan should identify the triggers for opening control centres, and their locations including:

- Environment Agency incident rooms;
- local authority control centres;
- multi-agency operational (Bronze) rendezvous points;
- multi-agency tactical (Silver) commands; and
- multi-agency strategic (Gold) commands.

It's obvious that control centres should not be located in flood risk areas, but mistakes have been made in the past. And you should consider whether the proposed building receives power from utilities within the flood plain, or relies on telecommunications hubs that may be vulnerable. You may want to identify a contingency (back-up) facility in case the primary location is not fit for use during a flood.

Your MAFP should include all the necessary information to find and gain entry into the control centres, for example:

- address (include the post code for ease of use with satellite navigation systems);
- telephone number;
- key holder information;
- access details;
- security information (i.e. fobs / security codes); and
- parking arrangements.

It may also be useful to have a grab bag containing resources that will be needed by officers attending the command / control centres.

## Resource availability

The following is an example list of a record of the sort of resources which may be available from organisations / agencies included within the MAFP. It is not intended to record specific numbers or volumes, but provides a record of where to go if specific resources are needed.

**Figure 12.26:** Resources

Resource	Who / Where	Contact Number
Sandbags	Local authority, Environment Agency	
Boats	Fire and Rescue Service, Local Authority, Coast Guard, Environment Agency	
Pumps	Fire, Local Authority, Environment Agency	
Transport	Environment Agency, Local Authority, Police, Fire, Ambulance	