

Inundated:

The lessons of recent flooding
for the fire and rescue service



Fire Brigades Union

The professional voice of your firefighters
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Foreword

Matt Wrack, FBU general secretary

If climate is what you expect and weather is what you get, then floods are perhaps the greatest risk facing communities in the coming years from climate change and extreme weather. Firefighters are frontline first responders to major flood events and can expect to be busy in the period ahead.

Around one million people living in over half a million properties in the UK are currently at risk from flooding, either from the sea, from rivers or from surface water flooding during heavy downpours. Around one-in-six homes could be at risk from flooding – and these risks are increasing due to population growth, building on flood plains and climate change.

Recently many parts of the UK have been hit with high winds, heavy rain, snow and other storms, with some places already suffering widespread flooding. The Met Office predicts further powerful weather systems similar to those that brought the disastrous storms and floods in the winter of 2013-14.

Is the UK currently flood resilient? There are many uncertainties with the weather, but on flood planning it is the Westminster government that is failing to manage the risks. The coalition government cut flood defence spending in real terms over this parliament. It has slashed vital public services that deliver flood relief, whether it is emergency responders such as firefighters, or 1,500 Environment Agency staff, or thousands of others in central and local government who are involved in flood risk management.

Official reports reveal that thousands of communities are in danger of flooding. A 'maintenance review' by Environment Agency engineers warned that government cuts to flood defence spending have left many watercourses so blocked by silt and vegetation that prolonged rain could cause flooding along 1,700 stretches of river.

This report assesses recent flooding in the UK, particularly the winter floods 2013-14. The FBU has been fully engaged over the past decade with shaping flood policy. Since the 2007 floods, the union has supported implementing a **statutory duty** on the fire and rescue service to respond to major flooding. Scotland and Northern Ireland already have a duty in place, but England and Wales do not at present. This is part of our campaign for more resources for the fire and rescue service as well as better planning, so that firefighters have the tools to respond professionally to every conceivable emergency.

The public is right to expect that firefighters take a central role in flood work, whether it is building temporary flood defences, evacuating vulnerable people, rescuing those in danger during flooding, as well as checking flooded homes and businesses for carbon monoxide and other hazards to helping make sure the clear-up is carried out safely.

But firefighters also have the right to expect we will have the best equipment, the right resources and crucially, sufficient numbers of our colleagues to tackle these type of events safely. The public do not expect firefighters to wade through sewage to rescue them, only to fall ill because there were too few dry-suits, boats and facilities. Firefighters say to governments of all stripes – give us the resources so we can tackle floods professionally.

Executive summary

- E1.** Firefighters responded magnificently to the winter 2013-14 floods, **the largest deployment** by the fire and rescue services since Second World War. Across the UK over the entire three months from December 2013 to February 2014, firefighters responded to nearly **seven thousand incidents**. Firefighters also effected a large number of rescues recorded by fire and rescue services – almost **two thousand** across the UK. Although these figures are significant, they appear to underestimate the number of incidents and rescues carried out.
- E2.** Flood risk in the UK is increasing, due to a rising population, more building work (including on flood plains) and because of climate change. In the UK today, around **one million people** and over half a million properties are exposed to significant risk of river and tidal flooding. Department for Communities and Local Government (DCLG) and the devolved administrations should incorporate climate change and extreme weather events into their risk management models, clarify the increased risk of flooding, and make appropriate funding available for staff and equipment to meet these challenges.
- E3.** The FBU believes that there should be a statutory duty on fire and rescue services in England and Wales to respond to serious flooding. The reasons are:
- **Public service:** The public rightly expects firefighters, as highly-trained professionals, to respond to flooding. Statutory duty would help make the UK more resilient to flooding
 - **Risks:** The risk of flooding is already significant and is likely to increase in future due to climate change
 - **Cost:** Failure to manage flooding, including emergency response, carries huge financial and individual costs, impacts on productivity and other aspects of the economy
 - **Resources:** Fire and rescue services need secure funding streams to ensure sufficient firefighters and suitable equipment can be deployed to tackle flood emergencies
 - **Law:** The Civil Contingencies Act and Fire and Rescue Services Act cover a range of emergencies, but a specific duty would help ensure the necessary resources would be available to tackle floods going forward
 - **Consistency:** Scotland and Northern Ireland have the duty and given mutual aid arrangements, it makes sense for England and Wales to have it too
 - **Industrial relations:** There are particular industrial issues with regard to flooding that need to be resolved within the fire and rescue service, including funding, Integrated Risk Management Plans (IRMPs), training, Personal Protective Equipment (PPE), equipment, welfare provision, health concerns, pay and other matters
 - **Stakeholders:** The FBU, many chief officers and other stakeholders support statutory duty. It was proposed by the Pitt Review. Defra officials have suggested it as an option. DCLG already has a draft Order.
- E4.** The coalition government has systematically failed to manage the risks of floods. They have cut flood spending by around 20% in real terms compared to the previous spending period, including vital maintenance of flood defences and funding for emergency responders such as the fire and rescue service. With **6,500 fewer firefighters** now than at the time of 2007 floods, the UK today is less flood-resilient than it was just a few years ago, with an over-reliance on volunteers, who for understandable reasons may not always be available.

- E5.** An FBU assessment of **local risk management plans** made by all 50 fire and rescue services across the UK suggests that as a whole, there are serious resilience gaps in flood preparedness. DCLG, the devolved administrations and fire and rescue services should ensure that all water-related incidents, including flooding, are incorporated into Integrated Risk Management Plans, and plans made by local and regional resilience forums.
- E6.** DCLG and the devolved administrations do not adequately account for the number of flood incidents and rescues taking place, and therefore are not able to assess the resilience of the UK as a whole to flood events. A robust system of **recording and reporting** should be developed to reflect the full extent of this work.
- E7.** DCLG and the devolved administrations should ensure that fire and rescue services are not penalised when they mobilise personnel to deal with incidents outside of their locality. They should provide a **funding mechanism** to cover flood relief, either by augmenting the existing Bellwin scheme provision or through an additional fund.
- E8.** DCLG and the devolved administrations should develop **national guidance** for fire and rescue service staff working in major floods. It should cover the health risks of water-related work, explain how risk assessments can be carried out, and detail the kind of prevention and control measures which need to be implemented. It should cover planning, training, equipment, welfare provision, health surveillance, inoculations and liaising with other agencies. The guidance should be drawn up in consultation with fire and rescue services, the FBU and the Health and Safety Executive.
- E9.** All firefighters should be **trained** to understand the risks to themselves and others caused by flooding. This would go beyond basic health and safety and water awareness training to encompass: health risks of working in flood waters, including from long hours without rest; the risks of entry into flood waters; manual handling of victims in flood waters; and the use of equipment made available by mutual aid. This training should be based on minimum **national standards** to ensure consistency across brigades.
- E10.** DCLG, the devolved administrations and fire and rescue services should review existing **personal protective equipment** (PPE) in the light of water-related incidents. This should include the suitability of firefighting kit for water-related incidents, the full range of PPE available for flooding incidents, and the arrangements for dealing with contaminated PPE.
- E11.** Minimum national standards should be drawn up on firefighters' **health and welfare provision** during floods and similar major incidents. Any issues relating to remuneration, hours of work and conditions of service should be negotiated between the FBU and fire and rescue service employers.
- E12.** Fire and rescue services should ensure that the officer in charge has the means to secure suitable welfare and accommodation facilities for crews, including relief crews, for the full duration of the incident. This should include 24-hour access to funds to support and finance welfare provision for crews.

1. Introduction

Floods invade people's homes and workplaces. They brutally disrupt lives – sometimes for prolonged periods – causing both personal distress and economic hardship. Flood damage is extremely costly, unpredictable and sporadic – but can still be planned for. Ultimately, how a society adapts to flooding is a measure of its preparedness, a test of its public services and an examination of its government. In the UK in recent years, flooding has been a barometer of national resilience.

It is these concerns that prompted the **Fire Brigades Union (FBU)**, the professional voice of UK firefighters, to investigate recent major flooding to draw important lessons for flood risk policy.

Floods are technically defined as 'the overflowing of the normal confines of a stream or other body of water or the accumulation of water over areas that are not normally submerged. Floods include river (fluvial) floods, flash floods, urban floods, pluvial [surface water] floods, sewer floods, coastal floods, and glacial lake outburst floods'.¹

The FBU is principally concerned in this report with national **resilience**. There are a variety of definitions of resilience. The Intergovernmental Panel on Climate Change (IPCC) defines resilience as 'the capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganising in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation'.² Flood resilience is a matter for firefighters – our service is built around helping people in need.

1.1 The perspective of fire crews

Firefighters have long responded to flooding and there has been a significant increase in activity in recent years. Firefighters do everything from shoring up flood defences to emergency evacuation and rescue, as well as flood recovery. Politicians have rightly praised firefighters' magnificent response to flooding and the public are understandably highly appreciative of firefighters' efforts. Increased **flood risk** is the greatest threat to the UK from climate change. Firefighters are professionally-trained emergency specialists, well placed to assist with adaptation measures. But the legal framework and resourcing for flood risk management by the fire and rescue service requires political clarity.

After more than a decade of considerable flood intervention, the law regarding flood response by fire and rescue services is now extremely inconsistent across the UK. Similarly, funding streams are ad-hoc, often retrospective and short-term, making strategic flooding risk management more difficult.

1.2 Objectives and methodology

The aim of the report is to explore the 'resilience deficit': between firefighters' actual responses to flood events and governments' policies for managing flood risks. The FBU wanted to ascertain the extent of firefighters' involvement in the winter flooding (December 2013 – February 2014). Official statistics provide only a sketchy picture, while some suggest fewer flood incidents are being attended.

The FBU submitted Freedom of Information requests to all fire and rescue authorities in the UK, asking for information on incidents attended, casualties and rescues carried out during December 2013 – January 2014. These figures were compared to official statistics. FBU officials were surveyed to provide information about firefighters' activity, equipment and conditions during flood activity. Other sources such as debriefs, media reports and conference presentations were also consulted.

The findings of this research are highly relevant to ongoing policy discussions on the role of the fire and rescue service in flood response. They also speak to wider political debates about the role of regulation versus voluntary approaches, and the way known risks from climate change are managed.



2. The fire and rescue service and recent flooding

This chapter summarises the scale of fire and rescue service intervention in the winter floods 2013-14. It registers significant numbers of incidents attended and rescues carried out by firefighters. However official figures underestimate the scale of fire and rescue service involvement.

2.1 Recent flooding

A fully-rounded balance sheet on recent floods has yet to be produced, despite a Cabinet committee investigation. The winter of December 2013 – February 2014 saw significant storms and flooding over a prolonged period. A **tidal surge** and coastal flooding in early December was followed by widespread flooding on Christmas Eve. Further heavy rain at the beginning of 2014 led to extensive flooding, particularly in the south of England. The three months were the **wettest winter** in 250 years, with 8,342 homes and 3,200 commercial properties flooded, 49,000 hectares of agricultural land affected, 155 severe flood warnings, 161,000 calls to Floodline and saw the Thames Barrier closed 42 times.³

These events were the latest in a series of high-profile interventions by the fire and rescue service. The year 2012 was a **record year** for rain and for flooding: 2012 was the second wettest on record in the UK. It was the **wettest year on record** for England and the third wettest for Wales. Flooding from a range of sources (rivers, surface water and groundwater) affected both urban and rural areas.⁴ Around 8,000 properties were flooded, with some of the worst affected areas in the north east and the south west of England. Northern Ireland firefighters went to three times more flood incidents in 2012 than they did in 2011, whilst in Wales the response more than doubled.⁵

There have also been many other significant flood events since the turn of the century. Flooding affected many parts of the UK in the **summer of 2007**. It was 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. Flooding occurred in **Cornwall** in 2010, **Cumbria** in 2005 and 2009, **Northumberland** in 2008 and Cornwall in 2004. The autumn of 2000 was then the wettest since records began in 1766 and saw widespread flooding.⁶

In October-November 2009, unprecedented levels of rainfall hit County Fermanagh in **Northern Ireland**, leading to significant flooding. In Belfast, flooding in June 2012 and the January 2014 also required significant intervention from the fire and rescue service. In November 2012, hundreds of homes were hit when the River Elwy burst its banks in St Asaph, Denbighshire in **Wales**. Flooding has also hit Mold in North Wales, notably in 2012 and in 2000. In November 2014, heavy overnight rain caused some of the worst flooding seen in 30 years in Campbeltown, Argyll and Bute in **Scotland**. In November 2009, Angus and Aberdeenshire were badly hit by flooding, causing transport disruption, burst pipes and the evacuation of hundreds of homes, with Arbroath virtually cut off by severe flooding.

2.2 The role of the fire and rescue service

Firefighters have a proud tradition of responding to floods. The winter 2013-14 floods were **the largest deployment** of firefighters since Second World War, according to the chief fire and rescue advisor in England, Peter Holland.⁷ At the height of the emergency response phase in February 2014, 28 individual fire and rescue services were supplying personnel and assets, particularly to Somerset (21 brigades) and the Thames Valley (16 brigades), while at this peak time all 51 high volume pumps within England and Wales were either actively deployed or engaged in strategic cover moves.⁸ Over one thousand firefighters were mobilised.

At the time of the winter floods, the National Asset Register included around 130 teams: around 95 Type B teams (personnel using a powered boat to operate in flood areas) and 35 Type C teams (swift water rescue technicians, SRTs). These teams are in addition to any locally provided flood response resources provided by individual fire and rescue services to meet their own identified risks. Firefighters helped build flood defences, evacuate people in need, distributed leaflets door-to-door and advised people in distress from control rooms. Firefighters visited every home in the Somerset levels – over 200 in total – by boat, to identify anyone who was vulnerable. As well as pumping out high streets and homes, rescuing victims from their houses and vehicles, firefighters also checked premises as the waters receded and helped with the clear-up.

Firefighters respond to the winter flooding 2013-14

- 28 fire and rescue services supplied personnel and assets
- 21 to Somerset and 16 to Thames Valley
- More than 1,000 firefighters mobilised
- All 51 high volume pumps deployed
- 100 specialist flood rescue teams available

The FBU's investigation found high levels of firefighter activity during the storm surge, Christmas Eve and into the New Year (especially in Surrey, Berkshire and Worcestershire). Firefighters attended a large number of incidents, based on figures provided by all 50 individual fire and rescue service in the UK.⁹ Across the UK over the entire three months nearly **seven thousand incidents** (6,713) were recorded. The vast majority of those were in England, with over a third in just three services (London, Surrey and Kent). Firefighters in Wales dealt with 457 incidents during the three months, with more than half in Mid and West Wales. The Scottish fire and rescue service dealt with 356 incidents during the three months, while there were 27 incidents in Northern Ireland.

Firefighters effected a large number of rescues recorded by fire and rescue services – almost **two-thousand** (1,961) across the UK during those three months.¹⁰ Most of those were in Surrey, Kent and Devon and Somerset. Surrey alone recorded over one thousand rescues during the three months, and told the FBU this may be an underestimate. During December 2013, particularly the storm surge early that month and around Christmas Eve, 450 rescues were carried out, mainly in Kent, Surrey, Devon and Somerset and Humberside.

Although these figures are significant, they appear to underestimate the number of incidents and rescues carried out, when compared with media claims made by fire and rescue services at the time. Oxfordshire fire and rescue service said that in early January 2014, it responded to around 250 calls related to 75 different flooding-related incidents and supported other agencies in tackling flooding. Firefighters assisted with **leaflet drops** to communities under threat of flooding as well as maintaining a presence in those areas to offer help to residents. The Scottish fire and rescue service reported that in late December 2013/early January 2014, it dealt with 140 flooding and water rescue incidents in the Strathclyde and Dumfries and Galloway areas. Before Christmas it had also dealt with flooding in the Scottish borders after a river burst its banks.

Dorset fire and rescue service received more than 300 calls and rescued more than 30 people trapped in their cars on 24 December 2013. Devon and Somerset fire and rescue service reported that on 24 December 2013, 250 calls were taken in relation to flooding and bad weather, with 26 people rescued from vehicles in separate incidents. Gloucestershire fire and rescue service reported that on Christmas Eve, it received more than 70 weather-related calls, and tackled a number of flood incidents. Avon fire and rescue service reported that on 24 December 2013, firefighters **rescued** seven people stranded in a riverside pub, which become surrounded by flood water. Elsewhere in Avon, crews rescued people from their vehicles after they became stranded in flood water, pumped out basements and control firefighters advised and reassured callers over the phone. In total 14 flood incidents were attended in a 16-hour period.

West Sussex fire and rescue service reported more than 600 emergency calls on Christmas Eve. East Sussex fire and rescue service reported that on 24 December 2013, 230 **weather-related calls** were taken and 120 incidents were attended by crews. Hampshire fire and rescue service reported that on the same day, it took 460 adverse weather-related 999 calls and dealt with numerous floodings. The London Fire Brigade received over 850 calls, around five times the normal volume, to deal with flooding and other weather-related incidents.

In early December 2013, an exceptional coastal surge along the east and parts of the west coast of the UK caused flooding to around 1,400 **properties** and damage to infrastructure. **Record tidal surge** levels were experienced in many places, including North Shields, Whitby, Hull, Immingham and Dover. In Wales, Rhyl was badly hit with 250 properties affected. As well as damaging homes, businesses and infrastructure, these storms also resulted in the flooding of **agricultural land** and sites of special scientific interest.¹¹

Humberside fire and rescue service reported that on 5 December 2013, it dealt with 186 flood incidents and lead 181 people to safety during the tidal surge. It said more than 107,000 people viewed its **Facebook** page for updates and 1,000 more became Twitter followers during the flooding. Humberside firefighters also visited the Cash for Kids crisis centre to deliver presents to people not in their homes at Christmas due to flood damage. Lincolnshire fire and rescue service reported that on 5 December 2013, flood water impacted on over 200 properties and firefighters affected 44 rescues.

West Yorkshire fire and rescue service reported it received 186 calls on 5 December 2013, many connected with the adverse weather. Other rescues were reported by fire and rescue service in Berkshire, Buckinghamshire, Cambridgeshire and South Yorkshire, with many, many others mentioned in during media coverage. Greater Manchester, Gloucestershire, Lancashire, Hampshire reported providing **cross-border assistance** to other fire and rescue services in Humberside, Lincolnshire, Norfolk and Suffolk, particularly during the tidal surge.

What counts as an incident?

A central reason for these underestimates seems to be the way in which the fire and rescue service Incident Recording System (IRS) counts major flooding incidents. Crudely, as one chief officer told the FBU, they 'record a basement flood in one property as equivalent to a whole high street flooded out'. Our Freedom of Information request asked specifically how flood events were recorded. Several fire and rescue services wrote that 'no account is taken of the scale or duration of flood incidents', while one baldly stated that 'if we are called to an area and it is flooded it would be one incident regardless of how long we are there or how many properties are affected'. An incident would be recorded as one incident regardless of the duration'. One service said that 'protracted incidents that involve many adjacent properties are frequently merged into one incident, as the crew(s) would not be able to capture all the individual event timings and details necessary to satisfactorily complete individual incident records for IRS. Isolated events are recorded as one incident'. Another service said there was no differentiation – for example – 'flooding due to heavy rainfall or a tap being left on would both be recorded as one flooding incident regardless of duration of incident', while one was candid enough to point out that 'over the border incidents are excluded'. On rescues, one service said that 'if there are a large number of evacuations and people do not stop at the scene then some people involved may not always be counted'.¹²

These remarks were underlined by testimony obtained from leading FBU officials at regional and brigade level. Perhaps the best illustration on the figures came during the flooding in early December 2013, when firefighters in one brigade reported to the FBU that they had assisted over 200 people, including leading 100 coach passengers and 80 others to safety at industrial sites.¹³ However this service had recorded less than 10% of those rescued in their official figures reported to the FBU just a month later.¹⁴

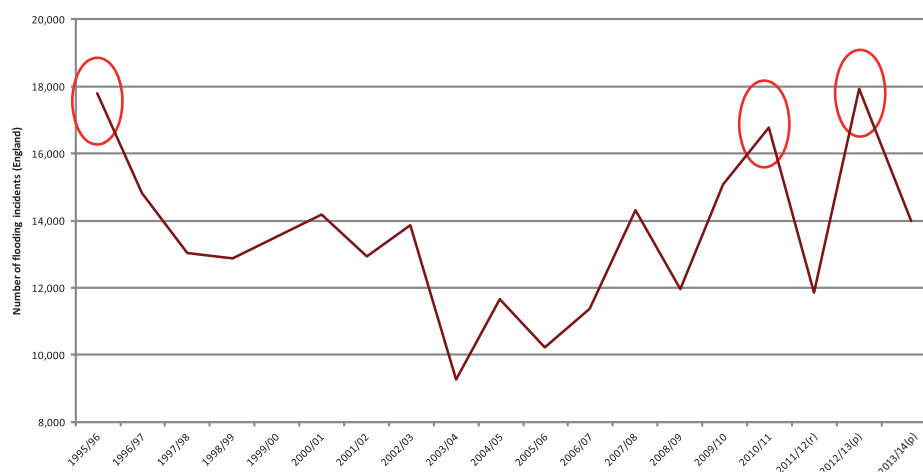


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DCLG figures

DCLG now publishes annual flood figures for England and Wales in *Fire Statistics Monitor*, while similar figures have been published in recent years in *Fire Statistics Scotland* and by the Northern Ireland fire and rescue service. In England, fire and rescue services attended over half a million incidents in 2013-14. Of those, 170,000 were fire incidents, 223,400 were fire false alarms and 130,600 were non-fire incidents. Flooding accounted for 14,400 incidents for the whole year 2013-14, approximately one-in-nine (11%) of non-fire incidents and less than 3% of all incidents attended.¹⁵ Some additional analysis of the historic trend in flood incidents carried out by Greenstreet Berman for the FBU suggests that the full range of incidents are not being recorded (see figure 1).

Figure 1: Flood incidents in England, 1995-96 to 2013-14



This graph suggests that the level of response has not altered much in recent years, compared with peaks in the mid-1990s. Although there has been a broadly upward trend since 2003-04, it is notable that major flooding events such as the **summer 2007 floods** barely seem to register. Yet at the time, both the FBU and the Chief Fire Officers Association (CFOA) estimated that over 3,000 people were rescued by firefighters. The government now estimates that around 7,000 people overall were rescued from the flood waters during that summer and 13 people died.¹⁶

FBU research, based on Freedom of Information requests to all fire and rescue authorities by the Labour Research Department (LRD), found that firefighters turned out to **nearly twice as many flood incidents** in 2012 compared to 2011 – and that these figures probably underestimate the scale of intervention. In 2012, firefighters across England attended just over 19,000 flood incidents, compared with 11,000 in 2011, representing a 73% increase in flood incidents attended by the fire and rescue service in one year. Turnouts were three times higher in the South West of England, Yorkshire, the East Midlands and the North East of England, while they doubled in the South East and the North West of England.¹⁷

The graph does however illustrate the mistake made by Ken Knight in his efficiencies report, in which he stated that flooding was ‘down 8 per cent’.¹⁸ The mistake was taking the one year fall from 2010-11 to 2011-12, rather than a longer view, where the trend is certainly not downwards.

There are some wider figures for water-related fatalities. The National Water Safety Forum (NWSF) identifies around 400 water-related fatalities every year, with the majority taking place in inland waters including rivers, canals, lakes, streams, lochs, ponds and reservoirs.¹⁹

Thanks – but no thanks

Ministers praised firefighters and other workers during the winter floods 2013-14 – but provided no more resources for the fire and rescue to tackle flooding now and in future:

‘The Government are grateful for the excellent response from our front-line emergency services throughout the UK... More than 100 specialist flood rescue teams were on standby across the country as part of the national asset register managed by the Fire and Rescue Service National Co-ordination Centre. I am also grateful to members of Kent and Surrey fire and rescue services for calling off their planned strikes on Christmas Eve, which coincided with peak river levels in those areas.’

Owen Paterson, Environment minister, Flooding, Statement to the House of Commons, 6 January 2014: Hansard 23

‘I would like to thank all of those emergency responders, local authorities and charitable organisations who have worked to protect and support flood affected communities throughout this time.’

Brandon Lewis, Fire minister, Flooding and Severe Weather, Written Statement, 14 January 2014: Hansard 24WS

‘I also want to pay tribute to the hard work of councils, the Environment Agency’s staff on the ground and our emergency services, who have supported communities 24 hours a day, literally going through hell and high water.’

Eric Pickles, DCLG minister, Winter Floods, Statement to the House of Commons, 6 February 2014: Hansard 443

3. The fire and rescue service and extreme weather events

Flood risk in the UK is increasing, due to a rising population, more building work (including on flood plains) and because of climate change.

3.1 Flood risk

Increased flood risk to the UK is widely acknowledged by governments in the UK. The most recent National Risk Register of Civil Emergencies lists flooding as the second highest priority risk facing the UK now and in the foreseeable future.²⁰ Over the past century, nearly 800 notable flood events have taken place in the UK. Although there are no long term trends in flood frequency in the available record, there is some evidence of increased flooding in recent decades.²¹

The UK **Climate Change Risk Assessment** projected flood risk to increase significantly across the UK in the coming century.²² Climate change may result in more flooding, due to higher river flows (caused in particular by an increase in the quantity and intensity of winter precipitation) and rising sea levels. Changes in rainfall patterns may also increase the risk of surface water flooding, although suitable information is not currently available for analysing this in detail.

Defra estimated that around 900,000 people are exposed to significant likelihood of flooding at present. This is expected to increase to between 1.3 million and 3.6 million people by the 2050s. The increase in **deaths** each year due to flooding and storms is between 4 and 17 by the 2020s, between 6 and 34 by the 2050s and between 13 and 69 by the 2080s. The increase in **injuries** each year due to flooding and storms is predicted to be between 80 and 340 by the 2020s, between 120 and 680 by the 2050s and between 270 and 1380 by the 2080s.

In the UK today, around **6 million properties** (or **one in six** of all properties) are exposed to some degree of flood risk, with around 560,000 properties exposed to significant likelihood (an annual chance of flooding to any depth greater than 1 in 75) of river and tidal flooding in England and Wales alone. Annual damage to UK properties due to flooding from rivers and the sea currently totals around £1.3 billion. For England and Wales alone, the figure is projected to rise to between £2.1 billion and £12 billion by the 2080s, based on future population growth and if no adaptive action is taken.

Currently, **average annual insurance** claims for flood-related damage is £200-300 million. It is expected to rise to between £0.5 billion and £1 billion by the 2080s. The **current average annual cost** to businesses of disruption due to flooding is £20 million. It is expected to rise to between £26 million and £72 million by the 2050s and between £34 million and £96 million by the 2080s.

The **energy sector** is vulnerable to extreme weather events. For example, the flooding of infrastructure during the 2005 Carlisle floods resulted in over 63,000 interruptions to electricity supply. Some 46 **substations** in England and Wales have a significant likelihood of flooding at present, rising to between 51 and 73 by the 2050s and between 57 and 79 by the 2080s.

During the 2007 summer floods, 40 of the 204 **sewage** pumping stations and 11 of the 53 sewage treatment works in Gloucestershire sustained damage, including instances of complete inundation, damage to operating equipment and flooding of site roads, which limited access to the treatment works. High-quality horticultural and **arable land** is likely to be flooded at least once every three years: 35,000 hectares by the 2020s, 75,000 hectares by the 2050s and 130,000 hectares by the 2080s.

3.2 Floods and climate change

Some research has begun to link specific floods to climate changes, although much of the scientific assessments are understandably tentative at present. The risks at a regional level – including for Europe – are highlighted by the Intergovernmental Panel on Climate Change's fifth assessment report.²³ The link between climate change and increased flood risk is at least recognised by the Westminster government, which says that climate change means 'increased economic losses and more people affected by flooding in river basins and coasts, as urbanisation continues, sea levels rise and peak river flows increase'.²⁴

According to the UK Climate Change Risk Assessment, **flood risk is projected to increase significantly across the UK**. It stated that climate change may result in more flooding, due to higher **river** flows (caused in particular by an increase in the quantity and intensity of winter rainfall) and rising **sea levels**. Changes in rainfall patterns may also increase the risk of **surface water** flooding, although suitable information is not currently available for analysing this in detail.

Floods are affected by various aspects of the climate system. Crucially they depend on precipitation (intensity, duration, amount, timing, phase – rain or snow), but also temperature patterns (responsible for soil freezing, snow and ice melt and ice jam formation). Floods are also affected by 'drainage basin conditions, such as pre-existing water levels in rivers, the snow and ice cover, the soil character and status (permeability, soil moisture content and its vertical distribution), the rate of urbanisation, and the presence of dikes, dams and reservoirs'. Near sea level, river flooding may take place with storm surges or extreme tide events.²⁵

Although a direct statistical link between anthropogenic climate change and trends in the magnitude/frequency of floods has not been established, some studies show that there is evidence of human influence for extreme rainfall and snow in winter in the UK (see box). There is a perceived increase in flood risk in recent years, although this could be down to improved and expanded reporting of floods, increased exposure of population and assets, as well as a higher frequency and/or intensity of flooding. There is also confirmation that the costs of extreme weather events, including flooding, have risen significantly in recent years.

The 2000 floods and climate change

Climate change made the floods that devastated England and Wales in the autumn of 2000 between two and three times more likely to happen, according to new research published in the prestigious *Nature* journal.²⁶ This is the first time scientists have been able to measure the role of climate change in increasing the risk of a serious flood. The FBU believes it has significant implications for the fire and rescue service.

Between September and November 2000, over 500mm of rain fell in the UK – the wettest autumn since records began in 1766. More than 10,000 homes were flooded and £3.5bn of insurance claims were made. Until now scientists could state that global warming was expected to cause more extreme weather, but not that it was to blame for any specific event. Now they have gone further. This study showed that there is about 50% chance that an anthropogenic influence can be detected for UK extreme precipitation in winter. Myles Allen of Oxford University led the research. He said: 'It shows climate change is acting here and now to load the dice towards more extreme weather.'

4. Government policy on flooding

This chapter examines recent government policy on flood emergency response. In particular it examines the case for placing a statutory duty on the fire and rescue service to respond to flooding in England and Wales, in line with duties in Scotland and Northern Ireland.

4.1 Government flood policy in disarray

The coalition government has systematically failed to manage the risks of floods, from maintaining flood defences to supporting bodies such as the fire and rescue service involved with the emergency response.

Prime minister David Cameron, speaking at a Downing Street press conference after returning from the flood-struck South West on 11 February 2014, said: 'Money is no object in this relief effort. Whatever money is needed, we will spend it... Nothing is more important than dealing with these floods... We are a wealthy country'.²⁷

The government scrambled to deal with a third month of major flooding. Yet weeks earlier Defra, the government department responsible for flooding under Owen Paterson, had removed 'prepare for and manage risk from flood' from its key responsibilities.²⁸ But the neglect of flooding went back to the beginning of the coalition government. Ministers cut funding for flood protection by nearly £100 million – from £670 million in 2010/11 to £573 million in 2011/12. The expert Committee on Climate Change calculated that the coalition's spending plans represented a real terms cut of around 20% compared to the previous spending period.²⁹

This neglect continued up to and after the winter 2013-14 floods. A subsequent report by the Committee on Climate Change warned that current spending levels put the maintenance of existing flood defence systems at risk. It wrote: 'In 2014/15 almost three-quarters of the flood defence systems in England will not be maintained according to their identified needs'. This was 'despite additional maintenance funding being provided by the government after the 2013/14 winter storms' and increased the risk of flooding for 330,000 people.³⁰

Similarly, the Westminster Environment, Food and Rural Affairs Committee reported an Environment Agency assessment of its flood defences following the winter floods, which identified around one thousand sites in need of repair. The winter storms caused an estimated £135 million worth of damage to flood defences. This committee of MPs noted the additional funding announced by the government, but argued that this was 'reallocated' money rather than 'additional' funds.³¹

The PCS and Prospect unions that organise in the Environment Agency said staff were told in October 2013 to expect 1,500 job losses out of 11,400 people, to be made in the space of a year. So on the cusp of the winter floods, the Westminster government was planning to decimate the central agency responsible for flood risk management in England. After an outcry by unions, some 750 jobs were cut.³² But austerity cuts had already reduced the number of Environment Agency flood risk management staff by 800 since 2010, including over 400 in the asset management teams responsible for maintaining flood defences and the response to flood incidents.³³

4.2 The law and responsibility for floods

Until this century, there was no law mandating the fire and rescue service to tackle major flooding. The Fire Services Act 1947 did not mention flooding as a responsibility for the fire and rescue service, despite the terrible floods that afflicted much of England and Wales earlier that year. However firefighters have often responded to flooding. After the 1953 great flood, which killed over 300 people and inundated 20,000 homes, three firefighters were awarded medals for bravery.³⁴

The case for statutory duty

The FBU believes that there should be a statutory duty on fire and rescue services in England and Wales to respond to serious flooding. The reasons are:

- **Public service:** The public rightly expects firefighters, as highly-trained professionals, to respond to flooding. Statutory duty would help make the UK more resilient to flooding
- **Risks:** The risk of flooding is already significant and is likely to increase in future due to climate change
- **Cost:** Failure to manage flooding, including emergency response, carries huge economic and individual costs
- **Resources:** Fire and rescue services need secure funding streams to ensure sufficient firefighters and suitable equipment can be deployed to tackle flood emergencies
- **Law:** The Civil Contingencies Act and Fire and Rescue Services Act cover a range of emergencies, but a specific duty would ensure the necessary resources would be available to tackle floods going forward
- **Consistency:** Scotland and Northern Ireland have the duty and given mutual aid arrangements, it makes sense for England and Wales to have it too
- **Industrial relations:** There are particular industrial issues with regard to flooding that need to be resolved within the fire and rescue service, including funding, IRMPs, training, PPE, equipment, welfare provision, health concerns, pay and other matters
- **Stakeholders:** The FBU, many chief officers and other stakeholders support statutory duty. It was proposed by the Pitt Review. Defra officials have suggested it as an option. DCLG already has a draft Order.

The fire and rescue service is the **only viable body** with the skills and infrastructure to deliver a comprehensive flood and inland water rescue service. The FBU believes that given the significant risks and operational challenges from dealing with flooding events, the safety of firefighters, the safety of communities we serve and the provision of an effective response can only be achieved by formalising existing arrangements by way of a statutory duty. Since the 2007 floods, the FBU has consistently raised the demand for statutory duty at Westminster with MPs and ministers, with the Welsh government, with fire authority and board members and chief fire officers.

The FBU agrees with the position outlined by some chief officers that having a statutory duty would be beneficial on the following grounds:

- **Save lives**, protect property/critical national infrastructure
- Ensure **responder safety**
- Ensure cohesive flooding/water rescue **response** can be made at a local and national level
- Maximise the use and effectiveness of **diverse specialist resources** from the fire and rescue service, military and voluntary sector
- Enhance **public confidence** in government and emergency services by closing an obvious gap in service provision
- Ensure **lowest cost** rescue provision by ensuring most effective cross border use of specialist resources
- Provide a **management framework** within which diverse capabilities can be marshalled and utilised to best effect
- Provide the leadership and **direction** other agencies require to enable them to contribute effectively
- Provide multi-agency partners and the public with **clarity** about the fire and rescue service's role and responsibility during flood events.

A flood statutory duty would contribute towards the protection of critical national infrastructure through the use of High Volume Pumps and similar equipment. It would ensure a **database** of specialist water rescue resources from the fire and rescue service and other suitable agencies or voluntary bodies that own capable resources is maintained. A duty would make sure that a minimum level of specialist water rescue resources

to meet the national **risk assessment model** is kept. It would ensure that those services hosting specialist resources would also make them available for other events through a national mutual aid scheme. Finally, a duty would guarantee **coordination** of land and water borne rescue responses to flooding and other inland water emergencies.³⁵

The law governing the fire and rescue service was altered at the beginning of this century. The Fire and Rescue Services Act 2004, designed to 'modernise' the legislation pertaining to the fire and rescue service, did not mention flooding. Similarly, the Civil Contingencies Act 2004, which sought to cover all emergencies and made fire and rescue authorities 'category 1 responders' did not mention flooding.

The Office for the Deputy Prime Minister (ODPM) instigated a consultation on a draft fire and rescue services emergencies order for England in September 2004, to extend the core functions of the service to wider hazardous, flood and search and rescue incidents.³⁶ The document made the case for a statutory duty on the fire and rescue service to respond to major flooding, along with chemical, biological, radiological and nuclear (CBRN) incidents and search and rescue in landslides and in collapsed buildings, tunnels and other structures. A **draft statutory instrument** was produced, which stated that 'major flooding' meant 'flooding that causes or is likely to cause one or more individuals to die, be seriously injured or become seriously ill and which results from: (a) natural causes; or (b) an escape of water from a large raised reservoir'. The consultation document stated:

Any major flooding incident where there is a serious threat to human health or welfare. For example, firefighters would be needed to assist in the rescue of people trapped by large floods and their transfer to safety. This excludes smaller and more localised flooding events, such as a burst water main to which FRAs may decide to respond using powers under Section 11 of the Act: 'Power to respond to other eventualities'.³⁷

A measure of the direction of travel at the time was legislation along these lines in Scotland. In June 2005, the Scottish government introduced the Fire (Additional Function) (Scotland) Order 2005, which made fire and rescue services authority in Scotland to make provision for '(a) rescuing people trapped, or likely to become trapped, by water; and (b) protecting them from serious harm, in the event of serious flooding in its area'.³⁸ In November, the ODPM responded to the 52 organisations that had contributed to the consultation in England. The response highlighted some concerns with defining 'major' flooding and water 'rescues', how flood calls would be prioritised and how specialist equipment would be funded centrally through the New Dimensions programme – although these issues did not appear insurmountable. It noted the limited costs of imposing a statutory duty – estimated to be around £25m.³⁹

However in March 2007, when the Fire and Rescue Services (Emergencies) (England) Order 2007 was published, flooding was excluded. The circular said that introducing a mandatory duty on every fire and rescue authority in England would be 'premature' at this stage, although it stated that the option 'to make provision for major flooding in some future separate Order is still available'. The government also pledged to provide high volume pumps, with locations determined by risk assessment. At the same time, the government did impose a statutory duty for CBRN and urban search and rescue. It said the aim of the Emergencies Order was 'to improve national resilience to disruptive incidents such as terrorist attacks and serious accidents by giving Fire and Rescue Authorities (FRAs) in England mandatory functions in connection with key types of emergencies'.

The Regulatory Impact Assessment accompanying the Order made a number of strong arguments for statutory duties for specific types of incident. These included sending a '**clear signal**' that such emergencies are 'core activities for fire and rescue services'; reducing 'the number of seriously injured persons or deaths'; and enabling 'all parts of the economy to return to their normal functioning capacity more quickly'. The impact assessment rightly rejects the option of doing nothing in other major emergencies, because 'relying on FRAs' discretionary powers, even where they receive central funding,

means that they could still decline to use the specialist resources to aid other authorities, or in future decide to stop maintaining the capabilities provided by government'. It adds that 'authorities have an incentive due to immediate local pressures to make provision for likely local needs, rather than ensuring that collectively there is provision for very unlikely large-scale incidents. This could, over time, **reduce national resilience** to such disruptive incidents'.⁴⁰

The Pitt Review

The **Pitt Review** investigated the 2007 floods. The FBU made submissions to the review and published a report, *Lessons of the 2007 floods*, which made the case for statutory duty.⁴¹ Pitt found that 'the public and rescuers were put at unnecessary risk by the current lack of clarity over who was responsible for the emergency response to flooding. It established that 'the current provision of boats, PPE and training is predominantly for local rescue, not for the greater scale of response required for multiple rescues in wide-area flooding events'. It concluded that 'in the event of another wide-area flooding emergency, those responding would still not necessarily have the right resources or training to respond safely'.

Pitt's final report recommended that the government 'urgently put in place a fully funded national capability for flood rescue, with Fire and Rescue Authorities playing a leading role, underpinned, as necessary, by a statutory duty... To give clear and unambiguous direction – giving certainty where there is doubt... the Review strongly believes that a statutory duty is the **best means** to achieve these outcomes'. Pitt made a strong proposal:

Recommendation 39: The Government should urgently put in place a fully funded national capability for flood rescue, with Fire and Rescue Authorities playing a leading role, underpinned, as necessary, by a statutory duty.⁴²

The initial government response was to support Recommendation 39. Defra's first progress report stated that the priority was putting in place 'a co-ordinated multi-agency flood rescue capability as soon as possible'. In light of the findings of the project on a national capability for flood rescue, the government said it would 'consider further how the role of the organisations involved might be clarified or enhanced, and whether there is a need for statutory underpinning for the role of any of the agencies involved'. It put in £2 million for these enhancements.⁴³ However statutory duty was not raised in a subsequent progress report, nor was it included in the Flood and Water Management Bill, which became law in 2010.⁴⁴

Knight Opposed

At Westminster, MPs and ministers opposed to placing a statutory duty on the fire and rescue service to respond to flooding rarely explain why. Instead they fall back on the argument from authority, mainly that the DCLG chief fire and rescue advisor for England is opposed to it. The only public document stating reasons for this stance is Ken Knight's *Facing the Challenge* report (March 2008), which reviewed the fire and rescue services operational response to the 2007 floods. This is not an auspicious report – Knight strongly advocates the disastrous FiReControl project as an example of resilience – only months before it collapsed and was scrapped.

Knight does helpfully point out that 'the the Civil Contingencies Act 2004 does not impose a duty upon fire and rescue authorities to provide a rescue response for flood rescue'. The report acknowledges that 'the current capability of the fire and rescue service was inadequate to meet either national planning scenarios or events on the scale of summer 2007' and admits that 'there is likely to be a gap in capability between local provision and national need'. The main argument seems to be **cost**, what he called a 'potentially onerous requirement' arising from a statutory duty.⁴⁵

At the time, Steve McGuirk (then President of CFOA) made the point that chief officers questioned 'how existing FRS response arrangements to flooding emergencies can be strengthened in the future'. He added that 'CFOA colleagues really don't understand how exactly effective public safety is intended to be secured

through a **patchwork quilt of different local arrangements** without one agency holding overall responsibility for the management and co-ordination of national water emergency incidents'.⁴⁶

Knight's view was effectively rebutted by Michael Pitt's report, which strongly recommended statutory duty. At the time, FBU general secretary Matt Wrack said Pitt had 'clearly identified what needs to be done' on statutory duty and his report was 'strongly welcomed across the fire service'. Wrack challenged ministers 'to make clear government will act quickly and decisively on these key issues'.⁴⁷

4.3 Flood policy: mostly going backwards

The Coalition Agreement after the 2010 general election made the commitment to 'take forward the findings of the Pitt Review to improve our flood defences, and prevent unnecessary building in areas of high flood risk'.⁴⁸ The coalition government did publish the *National Flood Emergency Framework* in July 2010 and the *National Flood and Coastal Erosion Risk Management Strategy for England* in July 2011. However in its final progress report on the Pitt Review stated that 'discussions are ongoing concerning a statutory duty for Fire and Rescue Authorities and a decision will be made in Government's response to the Exercise Watermark Report, due March 2012'.⁴⁹

The FBU held a series of meetings with new ministers at Westminster, seeking to implement a statutory duty on flooding. FBU officials made the case for statutory to ministers in the Northern Ireland assembly government. As a result, a duty on major flooding came into force in Northern Ireland on 1 January 2012.

What difference could statutory duty make?

Northern Ireland introduced a statutory duty on the fire and rescue service to respond to serious flooding in January 2012. This was a timely decision in light of subsequent flooding. Almost three years on and the Northern Ireland Fire and Rescue Service announced it had enhanced its Special Rescue Team by adding a dozen extra personnel to establish a team of 28 firefighters providing flood rescue capability alongside urban search and rescue. Specialist rescue incidents more than doubled over the last five years, with flooding a contributor.⁵⁰

Exercise Watermark, the flood exercise suggested by the Pitt review, took place 4-11 March 2011. Firefighters raised a number of concerns with the FBU over the exercise. In particular, on Day 4, during an east coast sea/tidal event affecting Humberside, Lincolnshire, Norfolk, Suffolk, Essex and Kent, there were insufficient appliances and firefighters available to be mobilised. In other cases, crews working very long shifts and other safety concerns were raised during helicopter rescues. An interim report was published in June 2011, though it contained little on statutory duty.⁵¹

Defra's Exercise Watermark final report (October 2011) promised that statutory duty would be considered.⁵² The report found that 'flood rescue assets [were] challenging to track and manage', while participants needed to decide 'whether there is enough resource and to consider how best to coordinate with others'. It stated:

Key recommendation 26 – The review recommends that Defra should work with the Department for Communities and Local Government, the Cabinet Office and the Welsh Government to clarify how local and national flood rescue assets should be coordinated, for example statutory duty, framework, Memorandum of Understanding, etc.

However the FBU was informed at a Defra-TUC Trade Union Sustainable Development Advisory Group (TUSDAC) meeting on 26 July 2012 that the government had decided not to proceed with a statutory duty on the fire and rescue service with regard to flooding.⁵³ Ironically, the announcement had been delayed because on the original date for release, there were storms and flooding, with firefighters once again out in force helping communities to cope. The government's final report on the Pitt Review listed 43 out of 92 recommendations as implemented, while 40 others (including Recommendation 39) were considered 'implemented: ongoing work continuing, six on track for completion and just three not taken forward'.⁵⁴

The coalition government failed to act on the regulatory framework even while the winter flooding in 2013-14 was still taking place. The first sign of the government's position came when fire minister Brandon Lewis was asked on 16 January 2014 about statutory duty. His response was that 'the Civil Contingencies Act 2004 and the Fire and Rescue Services Act 2004 detail the roles and powers of fire and rescue authorities in respect of... flooding' and that 'fire and rescue authorities are expected to produce Integrated Risk Management Plans'.⁵⁵

The message was reinforced by DCLG minister Eric Pickles. He said: 'The hon. Gentleman asks whether we should make responding to flooding a statutory requirement for our fire authorities. I am afraid that that is a rather old-fashioned view. How we respond to emergencies is well set out through local resilience forums... Frankly, those obligations are laid down in legislation and work perfectly well'.⁵⁶ It appeared as if the Pitt review had never taken place.

The FBU welcomed shadow fire minister Lyn Brown's announcement, made at the fire sector summit on 12 November 2014, that if Labour forms a government after the May 2015 general election, it will introduce a **statutory duty** on the fire and rescue service in England and Wales to respond to major flooding.⁵⁷ However the coalition government continued to reject the duty on spurious grounds, with Liberal Democrat floods minister Dan Rogerson failing to address the arguments for it during Westminster Hall debates on winter flooding preparation on 19 November 2014 and 8 January 2015.⁵⁸

Some stakeholders in the fire and rescue service responded to the winter floods in 2013-14 by lurching towards voluntarism. In the case of CFOA, this has meant serious **backtracking** with regarding to regulation around major flooding. After the experience of the 2007 floods, CFOA welcomed the Pitt report and agreed that fire and rescue services should have a statutory duty for dealing with flood events.⁵⁹



GETTY

However in the aftermath of the winter 2013-14 floods, CFA restricted their demands to the proposal that the local fire and rescue service 'acts as the lead agency for the co-ordination of rescue operations during the emergency phase of the response to flooding incidents'.⁶⁰ This retreat from statutory duty appears to have taken place only because of a categorical government rejection of the demand for a statutory duty, not because the risks had changed.

CFA – flip-flopping on statutory duty

'This lack of clarity over the statutory obligation is, however, of concern to the Chief Fire Officers' Association as it exposes communities and responders to unnecessary risks.

CFA, 29 June 2007

'I am pleased that Sir Michael Pitt recognises the importance of a statutory duty for the overall management and coordination of the emergency response to inland flood and water events. It is even more pleasing that Sir Michael sees the fire and rescue service as the most appropriate body to deliver on that statutory duty, co-ordinating the work of partners and stakeholders, to protect our communities from the significant threat to life and public health posed by flooding. We believe that Sir Michael's recommendations will bring clarity to a situation which is presently confused – this can only be good for communities and those who will respond in the event of an emergency.'

Steve McGuirk, CFA President, 25 May 2008

'CFA's position has not changed since 2007, in that we seek clarity over responsibility during a major flood situation; the status quo position of, in effect, muddling on through, is not one we can support. Our preferred route, of a defined responsibility for national flood rescue response coordination, would provide a definitive statement of expectations, which is particularly important in the current financial situation, where every public sector body has to focus on what it must do, before it can give any consideration of what it might, or might not, choose to do. We are not convinced that the public understands that the fire and rescue service has no formal responsibility for flood rescue, and that neither does any other organisation.'

Roy Wilsher, CFA Director of Operations, 1 November 2011

'Looking to the future, we believe that the government needs to put structures in place so that the local fire and rescue service acts as the lead agency for the co-ordination of rescue operations during the emergency phase of the response to flooding incidents.'

Paul Fuller, CFA President, 13 February 2014

'CFA **don't** seek a statutory duty for flood response, but clarity on our responsibilities.'

Paul Fuller, CFA President, LGA fire conference, Cardiff, 11 March 2014

5. Resilience, funding and the floods

This chapter examines whether the fire and rescue service is properly resourced for flooding. It examines vital issues of national and local resilience to flooding, crucially the number of firefighters available for emergencies and the planning that should be taking place to tackle floods. With six and a half thousand fewer firefighters now across the UK than at the time of 2007 floods – and essential plans scarcely or sparsely written in many cases, the UK is now less flood-resilient than it was just a few years ago.

5.1 Central funding and staffing cuts

The fire and rescue service can boast with some pride its ability to put 10,000 firefighters on the streets within minutes of an emergency call. No other service can mobilise teams of professionals this quickly. Sadly, there are now significantly fewer firefighters available to respond to major flooding and other incidents. Aggregating official figures published by DCLG, CIPFA and the Scottish government in 2008 and 2014, it is possible to chart the way resilience has been damaged (see tables 1 and 2).

Table 1: Firefighter jobs in the UK in 2008 and 2014 (31 March)

2008			2014		
Wholetime	Retained	Total	Wholetime	Retained	Total
39,838	20,165	60,003	34,382	18,938	53,320

Table 2: Firefighter jobs in the UK, changes 2008-2014

Change			%		
Wholetime	Retained	Total	Wholetime	Retained	Total
-5,456	-1,227	-6,683	-13.7%	-6.1%	-11.1%

In short, the absolute number of firefighters has fallen by over 6,500 over the period since the last great flooding period, amounting to one-in-nine fewer firefighters (11%). Wholetime firefighters have been hardest hit, losing over five thousand personnel, more than one-in-eight (14%) of the previous total. However retained firefighters have also been reduced – meaning that overall flood cover is seriously diminished across the UK.

These overall cuts make a great deal of difference at local level. As one FBU official explained immediately following the winter 2013-14 floods, their fire and rescue service was ‘facing cuts’, including the merger of two stations and the ‘loss of 12 firefighters’. The deputy chief has admitted that ‘would have a significant impact on ability to mobilise national assets if required’.

Government plans for further cuts over the next five years will further hit resilience to flooding. The 2014 Autumn Statement makes clear that the Westminster government plans more austerity in the next parliament. The Office for Budget Responsibility said **60% of the cuts** are still to come. The Institute for Fiscal Studies predicted that as many as one million public sector jobs could be cut – more than one-in-five.

These cuts could hack another 20% from central government funding to the fire and rescue service – on top of over 20% in the past four years, leading to further firefighter job cuts. A Government Actuary's Department document produced for DCLG's firefighters' pension committee (21 October 2014) estimated **17% firefighter job cuts** between 2012 and 2017 – another 5,000 jobs cut.

5.2 IRMPs and preparation for flooding

The public are right to expect that all levels of government are planning for flood emergencies. Fire and rescue authorities have a statutory duty to produce Integrated Risk Management Plans (IRMPs), weighing up the risks in their areas and explaining how those risks will be managed. Similarly, Local Resilience Forums (which include fire and rescue as well as other emergency services) are meant to plan and prepare for localised incidents and emergencies, particularly flooding.

The FBU has assessed the latest IRMPs – often called corporate plans, strategic plans, community risk management plans or risk reduction plans – from all 50 fire and rescue services across the UK. The results suggest that as a whole, there are serious resilience gaps in flood preparedness.

It is important to register that some IRMPs now take flooding very seriously. The plans produced by Derbyshire, Essex, Gloucestershire, Greater Manchester, Humberside, London, Norfolk, Shropshire, Surrey and the West Midlands stood out as solid examples. Most IRMPs now mention the word ‘flood’, although seven of the latest fire and rescue service plans did not even refer to flooding. Four out of five fire and rescue services refer to the risk of flooding in their IRMPs, although less than half devote a separate section of their report to floods and/or related climate matters. Only two-in-five indicate the kind of equipment they have available to tackle flooding and only a third refer to specific incidents where firefighters have turned out to tackle flooding – even though flood work now accounts increasing numbers of calls and for 6% of incidents, although this measured by numbers of calls (see above) rather than demands on time and resources. Only two brigades actually mention rescues carried out by firefighters and only one had an explicit attendance standard for responding to flood calls, which at 20 minutes is surely too long for the public to have to wait.

Seven of the IRMPs evaluated specifically stated that the fire and rescue service in England and Wales does not have a statutory duty to respond to flooding. In a handful of IRMPs, flooding responsibility was erroneously listed as arising from the Fire and Rescue Services Act. This confusion about the law is symptomatic of the lack of a robust, overarching framework of regulation to underpin guidance and standard operating procedures. FBU reps have confirmed these findings. Among the concerns were insufficient planning, linked to the lack of **funding** for the fire and rescue service in order to tackle ongoing and increasing flooding incidents. As one put it, flooding ‘is not covered in our IRMP or corporate plan as it is termed down here’.

The problems with planning are far wider than the fire and rescue service. A Committee on Climate Change report warns that the number of homes at risk from flooding is set to quadruple. This is because development in the flood plain has increased by 12%; funding for flood defences from both public and private sources is decreasing (12% lower compared with the previous period); and take-up of measures to protect properties from flooding is 20-35 times lower than the rate required.⁶¹

Official reports since the winter floods also point out resilience issues. A recent Committee on Climate Change adaptation report states that current underinvestment in flood prevention increases the potential for avoidable flood damage, with three-quarters of existing flood defences are not being sufficiently maintained. It found that statutory local flood risk management strategies are only just being produced in many areas and ‘there is little evidence that local oversight and scrutiny committees are holding public bodies and their partners to account for the actions being taken’.⁶² Similarly, a National Audit Office report into flood risk management found that only 4 of 24 lead local flood authorities had strategic plans in place, just 16% of those heavily responsible for flood preparedness.⁶³

5.3 Funding the costs of the floods

Fire and rescue services largely have to fund provision for flood work from existing budgets. This is particularly important because around 80% of fire and rescue service expenditure pays for firefighters. Therefore cuts to budgets translates very swiftly into fewer firefighters available at times of local, regional or national emergency.

After the 2001 attack on the twin towers in the US, the Westminster government provided funding for New Dimensions assets, including high volume pumps, search and rescue vehicles and other resources. These assets were partly provided to tackle flood emergencies. In 2009, DCLG decided that these assets should be transferred to individual fire and rescue authorities.

Concerns were raised at the time about how the costs of maintenance, and in the event of damage beyond repair, the replacement of these assets, would be covered. With contracts extending into the 2020s, some fire and rescue authorities argued that with uncertainty about future funding levels, this commitment might become a burden.

Although at the time DCLG gave some assurances about future funding through the grant system, the cuts in recent years have already had an impact. Some FBU officials have reported local discussions raised around these questions. One said after the winter 2013-14 flooding: 'The funding for the current response has been at the expense of development in other areas. This latest weather event has proven that further assets/specialists are needed within the service but funding is the obstacle. The cost of these events, through overtime payments, retained firefighters' wages, etc., has not been calculated.'

Bellwin funding

The Bellwin scheme provides emergency financial assistance to local authorities (including fire and rescue authorities) under the Local Government and Housing Act 1989. Bellwin funding is designed to compensate authorities for the costs of emergency measures undertaken to safeguard life or property or to prevent further suffering and inconvenience locally, during exceptional circumstances. The scheme commits the government to reimburse local authorities for 85% of eligible costs above a threshold (set at 0.2% of their annual revenue budget). Since 2000-01, the Bellwin scheme has paid out approximately £81m, including an estimated £25m arising from the 2013-14 floods.

Eligible costs under the Bellwin scheme have included:

- costs of providing sandbags, evacuating people from dangerous structures and works to make them safe; evacuation centres
- temporary re-housing, and
- initial repairs to and the clearing of debris from highways, pavements and footpaths.

The following costs are generally excluded:

- costs which are normally insurable
- capital expenditure
- the normal wages and salaries of the authority's regular employees, whether diverted from their normal work or otherwise, and the standing costs of the authority's plant and equipment, and
- the costs of longer-term recovery from the effects of the flooding.

For the 2013-14 winter floods, the government reduced the thresholds of all county councils and unitary authorities by excluding education budgets from the calculation and paying 100% of costs above this. The other recent change was to treat upper tier authorities with responsibility for fire on an equal basis to local authorities with stand alone fire authorities.

DCLG is currently consulting on whether to continue with this arrangement – leaving thresholds where they are, but paying 100% of costs.⁶⁴ The government wants to restrict the scheme to emergency response and is proposing to shorten the time period for eligible spending to one month from when a particular incident is agreed to have moved from response to recovery. The government also intends to widen the type of costs that can be claimed, such as to repair flood defences. The Bellwin Scheme will continue to cover some of the costs of military assistance.

Fire and rescue authorities have very different thresholds, which do not appear to relate to the possible risks of flooding or other emergencies. The new proposed thresholds include:

Table 3: Selected DCLG Thresholds

Fire and Rescue Authority	£
Devon and Somerset	151,590
Essex	146,550
Hampshire	131,756
Kent	141,042
South Yorkshire	106,322
Tyne and Wear	103,230

The FBU believes that the government's proposals give with one hand, while taking with the other. With less eligibility, even paying a 100% of a small sum (instead of 85%) still leaves a hefty bill. But the principal criticism is that rather than just relying on retrospective payments for flooding, central government should be planning ahead and funding strategically to meet the emerging risk landscape.

Fire and rescue authorities should provide the right numbers of trained firefighters, equipment and facilities ahead of actual flood events – which requires consistent ongoing funding. This is particularly important for the fire and rescue service, where cross border mutual aid is essential for maintaining resilience. If firefighters assist from brigades where there is no flooding, then staff on duty elsewhere will need to be covered and this may come out of existing budgets. Of course there may be a need for additional payments, but basic planning and preparedness cannot wait until a flood has occurred.



PAUL BOX

6. Fire crews' training and equipment

Firefighters need to be well trained and equipped to tackle major flooding, because flood water presents a wide range of hazards for the public as well as for responders. This chapter looks at the types of training and equipment – including personal protective equipment provided for firefighters. Although the situation has improved since the 2007 floods, there are still significant deficiencies, which put both the public and firefighters at risk.

6.1 Training

Defra guidance recommends that all fire and rescue services should adopt nationally-recognised categories of teams who can respond to specific types of incidents. A variety of trained personnel and teams exist across the fire and rescue service. These are:

- **Type B Water Rescue Team:** This is a team of swift-water rescue technicians (SRTs) and a motorised boat that is capable of travelling against the flow of water up to 10 mph. The team includes a welfare officer or team manager. The boats used vary, but these teams are registered with Defra and can be used to support incidents locally, regionally and nationally
- **Type C team:** This 'swift water rescue team' do not use a powered boat, but may use inflatable rafts or pathways. These firefighters are trained to enter the water to affect rescues either by swimming or by use of rescue lines, ropes and wading
- **Water First Responders (WFRs):** Firefighters who are trained for wading rescues, self-rescue and defensive swimming techniques
- **Water Incident Managers (WIMs):** Officers who have completed a course on water incident management and are equipped with the skills to carry out incident appraisal, management and resource allocation
- **Subject Matter Advisors (SMAs):** Tactical advisors for use at operational, tactical and strategic level for flooding incidents, high volume pumping and flood rescue. These firefighters provide detailed information about personnel capabilities and types of equipment suitable for use at incidents. They can also be used to help plan and run communications and operations at wide scale flooding events and other large incidents.

FBU officials reported problems with training before and during recent flooding. One said: 'There have been a number of **serious injuries** to firefighters on water first responder training, culminating in a firefighter breaking their leg in three places and dislocating their ankle'. It follows a culture of non-reporting and a claim by trainers that 'minor injuries such as bumps and bruises were part of the training due to the nature of water-related work'. There have been a number of near misses not reported and FBU officials have highlighted this culture to management, although it has often been ignored. The FBU are still waiting on management to act on 'the near drowning of one of the instructors in a weir, which was witnessed by a number of personnel, but not reported'.

Another brigade official said that 'concerns have been raised with me regarding the level of training received by some of the boat crew members who have been mobilised'. A number of these 'are not from a boat station but part of the newly formed technical rescue team. I understand that these individuals have only undergone basic water course training'. Others said that 'most firefighters have had no specific training' or that 'training has been reduced to lack of funding and priority'. Perhaps the most serious incident involved a 15 man inflatable raft, where the only training was how to inflate and deflate it. FBU reps reported that, 'because of this, we have issued the brigade with a **safety notice**'.

6.2 Personal protective equipment (PPE)

FBU officials acknowledge that the personal protective equipment (PPE) provided for firefighters has improved. One of the lessons from the 2007 floods was that some **fire kit** became so heavy when worn in water that it can create significant safety concerns. However the picture seems to vary even within the same brigade, depending on the level of training received. In one brigade, FBU officials said that SRT teams are fully equipped and trained, with dry suits, rubber fire boots, lifejackets and a yellow helmet. However wading teams, known as water rescue first responders 'do not have the correct PPE as laid down by Defra'.

Some firefighters did not have the right personal protective equipment to work safely in flood water during the winter 2013-14 floods. One FBU rep reported that 'the majority had their standard fire kit, only the stations with a boat had better kit'. They added that there was 'not enough dedicated equipment to go round. Most stations had nothing specific to flooding'. Another rep reported that their brigade received a request to send all dry suits to Berkshire for the army to utilise!

Another brigade official said problems arose for those wearing fire kit when 'crews leave the scene as fire kit is wet, and although second spare kit is available, this gets wet at the next incident and the possibility of having dry kit is impossible'. For example, 'crews are attending some incidents on a rolling basis (every four hours), following the second visit in a 15 hour night shift, both sets are wet'. The rep said: 'This can be hazardous if they then need to attend a fire in wet kit.'



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6.3 Other equipment

While there has been some investment in boats and high volume pumps, fire and rescue services do not have sufficient **equipment** to tackle floods. One FBU rep said that ‘boats are too old and do not have suitable outboards available – it is the lack of funding and priority previously that has let it deteriorate so much’. Some boat operators ‘did not conform to the Defra concept of operations Type B Water Rescue Boat Team’.

In another brigade, ‘the use of standard radio comms was shown to be inadequate at the flooding incidents’. At least one fire station was flooded and reps reported pumping appliances becoming ‘submerged in floodwater due to water ingress via exhaust, highlighting the possible need for exhaust extensions’. Some appliances were used from stations that were under imminent threat of losing their second pump, a source of much anger. One rep summed up the problem tersely: ‘Not enough dedicated equipment to go round.’

These concerns highlight the lack of consultation with stakeholders, particularly with the FBU, in establishing consistent guidance and standard operating procedures across the UK. These would enable firefighters from different brigades to work efficiently together at flood incidents.

Lessons from Cornwall 2010

Firefighters in Cornwall responded to major flooding in November 2010. FBU officials in Cornwall reported problems in the absence of a statutory duty:

- There was a lack of coordinated command and control at silver/gold level. It was felt that if a statutory duty for flood incidents existed then this would improve.
- There was a lack of equipment/PPE for all the staff required to deal with the incident. There were only two dry suits per appliance so personnel had been wading through the flood water in their fire kit. Also the dry suits are not personal issue. Therefore staff may have to wear kit that is too big/small for them. This also applies to the technicians as well.
- There was a lack of resources. Cornwall only has two specialist appliances to deal with water rescue. The incident was spread over three separate areas, so this was not enough. The way Cornwall staffs appliances by jump crewing means the water rescue technicians were being mobilised on the first and second appliances, which left non-technician qualified personnel to staff the specialist appliances. Although Cornwall FRS are looking to acquire an additional two water rescue appliances, there were also concerns raised that it does not have the correct levels of equipment needed which should include lighting, stretchers etc.
- An action point from the HSE inspection was to provide training to officers to deal with specialist incidents. This was done and a number of officers attended a water rescue incident command course. However, during this flooding incident the officer in charge was not one of the specialist officers.

7. Health and welfare of firefighters during the floods

Firefighters are used to working in tough conditions – but expect that precautions are taken to protect their health, safety and welfare. Sick, fatigued and exhausted firefighters are not able to serve their communities effectively – so once again, it is in the public interest that firefighters are well catered for during flood incidents.

7.1 Health concerns

Flooding has extensive and significant impacts on health – on both those residents whose homes or workplaces are affected and on the professionals charged with flood response. Public Health England⁶⁵ found that in the last decade, there have been 1,000 reported deaths due to drowning, physical trauma, heart attacks, electrocution, carbon monoxide poisoning and fire during flooding in Europe. Flooding can have acute and long term effects on mental health and well being. Floods may also cause injuries, infections and chemical hazards.

Direct: effects on people exposed to flood water

- Drowning
- Physical trauma from concealed or displaced objects
- Water shortages and contamination due to loss of water treatment works
- Chemical contamination of flood waters
- Heart attacks, electrocution, fire and
- Infectious diseases from contaminated flood water as well as vector-borne and rodent borne diseases.

Indirect: effects of flood water on other health determinants

- Carbon monoxide poisoning from generators used for pumping or dehumidifying
- Effects on mental health and wellbeing, both acute and long-term, including the impacts of displacement, destruction of property, lengthy insurance claims, fear of recurrence
- Illness associated with disruption and reduced access to healthcare services and
- Disruption of livelihoods and income.

Recent guidance from the World Health Organisation argues that rescuers and relief workers should be considered for routine vaccination, including for Hepatitis A and/or B for those involved in cleaning operations, sewage, waste or drinking-water management; and tetanus toxoid with or without tetanus immunoglobulin, with any wound treatment.⁶⁶

Although no firefighter cases were reported to the FBU in the immediate aftermath of the winter 2013-14 flooding, the union has represented a number of firefighters who have been made very ill after work in flood water. During the winter floods, FBU reps in one brigade said that they had raised two issues with their occupational health advisors: first, exposure to carbon monoxide when checking premises to make them safe for the return of residents; and wider sickness concerns.

7.2 Welfare provision

Firefighters' **welfare** is a serious matter during protracted flood incidents, which sometimes involve mobilising for days a long way from their home or the normal fire station. During the winter 2013-14 floods, one rep reported 'severe problems over providing relief crews at protracted incidents', while another said 'crews are attending some incidents on a rolling basis (every four hours), following the second visit in a 15 hour night shift, both sets are wet'. Other reps reported that 'we had recall to duty implemented to go out of

county, several crew members attended the rendezvous point and then came back home when they found out that the **welfare provisions** could not be guaranteed’.

Welfare issues particularly affect firefighters providing cross border mutual aid during flooding, as they are often required to attend incidents a considerable distance from home. In general, provisions were better in 2013-14 than during the 2007 floods, although some issues remain. Crews deployed with high volume pumps faced particular challenges, with those initially deployed replaced by other watches. One FBU rep reported that members ‘had recall to duty implemented to go out of county’, but ‘found out that the welfare provisions could not be guaranteed’. Another said ‘the service continues to dodge the issue of hygiene facilities, especially around the needs of female firefighters with very slow developments to address the issue’.

7.3 The floods and control rooms

There were insufficient operational **firefighters** and control room staff during many flood incidents during the winter 2013-14 floods. Fire control staff received ‘massive amounts of calls, [and] became inundated’, according one FBU rep. Due to the large volume of telephone calls ‘they were sometimes unable to respond to main scheme radios from pumps at incidents’. At its peak, even some smaller services received 300 calls in a 24 hour period.

This was compounded by the chaotic closure and merger of control rooms since the 2007 floods. Then, politicians and principal managers were talking up the FiReControl project as addressing control issues. Since then control rooms have closed in Suffolk, the Isle of Wight, Cumbria, Cheshire, Greater Manchester and Lancashire. Control rooms are under threat elsewhere, including five in Scotland. Control staff are the first point of contact for the public in distress during flooding. Control firefighters do not want to manage a system of automatic messages, but require the right resources to deal with spate conditions during flood emergencies.

7.4 Working hours and payments

Another industrial issue in some brigades was ‘the payment terms that our members would receive’, because of ‘a refusal to **pay staff** any extra for the deployment to coastal flooding in [another brigade]. As the rep put it: ‘We did have to give them a shove with regard to ensuring they paid at recall to duty rate!’

The issues of payments and working hours are not trivial matters. Firefighters always go the extra mile in an emergency, but flood emergencies can last for weeks. One FBU rep reported that ‘there were enough firefighters originally, but because of the protracted nature of the floods crews quickly became fatigued’. Another said that ‘some personnel were used for up to **18 hours without relief**’ and the lack of rotation of crews and personnel ‘resulted in some crews working long hours and others not being utilised’. In other cases, ‘crews did not get adequate reliefs and worked up to 15 hours at incidents’.

This had knock on effects for other work. An FBU official spelt out the issues: ‘Severe problems over providing relief crews at protracted incidents. Firefighters detailed at incidents for up to nine hours. Changes to mobilising arrangements to cater for lack of appliances, e.g. firefighters being taken to incidents in mini-buses, and pumping appliances being used to ferry firefighters to neighbouring stations for mobilisation on a special appliance.’ They added: ‘All of this has culminated in huge pressure on brigade resources, such that normal protocols have gone out of the window. Crews are being detained at incidents for up to eight or nine hours, well above the stipulated three hours.’

7.5 Creeping privatisation

Another concern is the use of private contractors to carry out work firefighters should be doing during floods. In two fire and rescue services heavily affected by the winter floods in 2013-14, these arrangements were used instead of normal firefighter shifts. In one case, personnel from a trading arm – consisting of off duty firefighters who work under Green book terms and conditions were utilised. In the other case, a private firm already used for contingencies was drafted in to do flood work.

Firefighters deliver a public service based on the needs of all the communities served. The public are right to expect properly-trained fire crews tackling these emergencies. Firefighters are opposed to profiting from people's misery – flooding should not become a means whereby a few contractors make money out of misfortune.

Lessons from Cumbria 2009

Firefighters in Cumbria contacted their FBU representatives with a number of issues they believed had compromised safety or the response to these major floods. Some of the issues raised:

- Firefighters working in still and moving water in full firefighting kit
- Firefighters wearing fire helmets with lifejackets in water
- Downstream back ups and boom not implemented at earliest opportunity
- 25+ firefighters trained to Rescue 3 Swift Water Technician level 4 standard at one fire station were not utilised. Even though this station's personnel were trained, no dry suits were provided for them. Crew were mobilised to pick up dry suits from another fire station, then redirected to a further station to pick up dry suits. On arrival no equipment was available for their use. As a result, this station's personnel were never utilised during the safety critical rescue phase
- Station to the south of the county with Rescue 3 Swift Water 3 Technician level 4 standard under utilised
- Available SRT equipment was utilised by personnel in moving water who had not received training to use and carry out these tasks
- Firefighters communicating their availability for recall to duty not utilised, while there were crews working over an extended period to the point of exhaustion
- High Volume Pump personnel working not provided with waders. Crew Members getting wet from the outset of operations and remaining so for their full duration.

As one firefighter put it: 'We have not got it yet! Do we have to lose another man in water for us to have the right PPE. Retained guys committed for 14 to 15 hours – stupid. Kit soaking wet, no proper drying room for the amount of kit, tumble dryer for items other than fire kit. Food – same old thing. No manager will take the plunge and use 24 hour supermarkets for hot food, instead of cold cans of dog food.'

8. Recommendations: The case for statutory duty

- 8.1.** The FBU's research suggests that firefighters' activity during flooding, while welcomed by the public, is undervalued at government level – particularly at Westminster. Although there have been some improvements in recent years, many of the FBU recommendations today are similar to those we drew up after the 2007 floods.
- 8.2.** The main policy conclusion drawn by the FBU continues to be the demand for a **statutory duty** to be placed on all fire and rescue services to respond to major flooding. This has been recognised in Scotland and Northern Ireland. It should be recognised in England and Wales.
- 8.3.** The question is often posed: why does the fire and rescue service need a statutory duty when firefighters will turn out anyway? Without a statutory duty, flood **risks** may not be fully assessed and the necessary **resources** made available to tackling major flooding. Without a change in the law, **responsibilities** for emergency response will not be clear and transparent. Without a specific duty, there is no right of **authorised entry**. Without a duty, there is no ring-fencing for essential **equipment** such as boats, poles, kit, welfare facilities etc, so that firefighters can intervene for as long as it takes to tackle major floods. There may not be **sufficient firefighters** available to tackle these and other emergencies, especially as these incidents often require cross-border support.
- 8.4.** A statutory duty on fire and rescue services would best be introduced as an Order under Section 9 of the Fire and Rescue Services Act 2004. It would not require primary legislation. The Fire and Rescue Services Act 2004 gave fire and rescue authorities the power to respond to 'other eventualities' – those other than fires and road traffic accidents (Section 11). However major flooding is not specified as a 'core' function of fire and rescue authorities.
- 8.5.** DCLG should ensure that fire and rescue services receive **continuous funding streams** necessary to meet the increased risks of water-related events. Fire and rescue services should ensure that staffing levels are sufficient to meet the growing demand for rescue in water-related incidents without compromising provision for other emergencies.
- 8.6.** The Westminster government should **listen** to views of fire crews and their representatives in its evaluation of the winter 2013-14 floods. DCLG and the devolved administrations should engage the FBU, fire service employers and other significant stakeholders in negotiating national agreements in the light of lessons learned. Fire and rescue services should consult fully with the FBU on implementing improvements to flood provision.
- 8.7.** DCLG and the devolved administrations should incorporate climate change and extreme weather events into their risk management models, clarify the increased risk of flooding, and make appropriate funding available for staff and equipment to meet these challenges.
- 8.8.** DCLG, the devolved administrations and fire and rescue services should ensure that all water-related incidents, including flooding, are incorporated into **Integrated Risk Management Plans**, and plans made by local and regional resilience forums.
- 8.9.** DCLG and the devolved administrations do not adequately account for the number of flood incidents and rescues taking place, and therefore is not able to assess the resilience of the UK as a whole to flood events. A robust system of **recording** and reporting should be developed to reflect the full extent of this work.
- 8.10.** DCLG and the devolved administrations should ensure that fire and rescue services are not penalised when they mobilise personnel to deal with incidents outside of their locality. It should

provide a **funding mechanism** to cover flood relief, either by augmenting the existing Bellwin scheme provision or through an additional fund.

- 8.11.** DCLG and the devolved administrations should develop **national guidance** for fire and rescue service staff working in major floods. It should cover the health risks of water-related work, explain how risk assessments can be carried out, and detail the kind of prevention and control measures which need to be implemented. It should cover equipment, welfare provision, health surveillance and inoculations. The guidance should be drawn up in consultation with the FBU and the Health and Safety Executive.
- 8.12.** All firefighters should be **trained** to understand the risks to themselves and others caused by flooding. This would go beyond basic safety, health and water awareness training to encompass: health risks of working in flood waters, including from long hours without rest; the risks of entry into flood waters; manual handling of victims in flood waters; and the use of equipment made available by mutual aid. This training should be based on minimum national standards to ensure consistency across brigades.
- 8.13.** DCLG, the devolved administrations and fire and rescue services should review existing **personal protective equipment** (PPE) in the light of water-related incidents. This should include the suitability of firefighting kit for water-related incidents, the full range of PPE available for flooding incidents, and the arrangements for dealing with contaminated PPE.
- 8.14.** Minimum national standards should be drawn up on firefighters' **health and welfare provision** during floods and similar major incidents. Any issues relating to remuneration, hours of work and conditions of service should be negotiated between the FBU and fire and rescue service employers.
- 8.15.** Fire and rescue services should ensure that the officer in charge has the means to secure suitable welfare and accommodation facilities for crews, including relief crews, for the full duration of the incident. This should include 24-hour access to funds to support and finance welfare provision for crews.

References

- 1** Field, C. et al. (eds) (2012) *Managing the risks of extreme events and disasters to advance climate change adaptation. Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC)*. Cambridge: Cambridge University Press.
- 2** Field, C. et al (eds) (2014) *Climate Change 2014: Impacts, adaptation, and vulnerability. Part A: Global and sectoral aspects. Contribution of working group II to the fifth assessment report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press.
- 3** Met Office (2014) *The Recent Storms and Floods in the UK*. Exeter: Met Office; National Audit Office (NAO) (2014) Strategic Flood Risk Management, 4 November 2014. London: NAO; Truss, E. (2014) Defra: Winter Preparedness for Flooding, HC Deb 27 November 2014, vol 588, col 40WW
- 4** Met Office (2013) 'Statistics for December and 2012 – is the UK getting wetter?' Press release, 21 January 2013
- 5** Labour Research Department (2013) 'Freedom of Information requests to individual fire and rescue services', January-February 2013.
- 6** Defra (2013) *The National Flood Emergency Framework For England*, 2013. London: Defra.
- 7** ITV (2014) 'Largest deployment of fire & rescue since WWII', 13 February 2014 at 4:46pm
- 8** Stephens, D. (2014) 'Flooding – the fire and rescue service response', *Fire Times*, April-May
- 9** FBU (2014a) 'Freedom of Information requests to individual fire and rescue services', January-March 2014
- 10** *ibid* (2014a).
- 11** Paterson, O. (2013) *Coastal Flooding, Written Ministerial Statement*, HC Deb 10 December 2013, vol 572, col 25-26WS
- 12** FBU (2014a)
- 13** FBU (2014b) Flooding: Comments from officials, unpublished paper, March 2014
- 14** FBU (2014a)
- 15** DCLG (2014a) *Fire Statistics Monitor: England April 2013 to March 2014*, 2 July 2014. London: DCLG, p.4, 13.
- 16** Defra (2013).
- 17** LRD (2013).
- 18** Knight, K. (2013) *Facing the Future: Findings from the review of efficiencies and operations in fire and rescue authorities in England*. London: DCLG, p.12).
- 19** Walker, D. (2014) 'New UK Figures Reveal 381 Drowning and Other Water-Related Deaths in 2013', *National Water Safety Forum (NWSF)*, 4 July 2014
- 20** Cabinet Office, (2012) *National Risk Register of Civil Emergencies 2012 edition*, February. London: Cabinet Office.
- 21** Stevens, A., Clarke, D. and Nicholls, R. (2014) 'Trends in reported flooding in the UK: 1884-2013', *Hydrological Sciences Journal*, posted online 7 August 2014.
- 22** Defra (2012a) *UK Climate Change Risk Assessment (CCRA)*, 25 January 2012. London: Defra.
- 23** IPCC (2014).
- 24** DECC (2014).
- 25** Kundzewicz, Z. et al. (2013) 'Flood risk and climate change: global and regional perspectives', *Hydrological Sciences Journal*, 59, 1, 1-28.
- 26** Pall, P. et al (2011) 'Anthropogenic greenhouse gas contribution to flood risk in England and Wales in autumn 2000', *Nature*, 470, 382-385

- 27** Cameron, D. (2014) 'Downing St press conference', 11 February 2014
- 28** Environment, Food and Rural Affairs Committee (EFRA), (2014a) *Departmental responsibilities, Ninth Report Departmental Annual Report 2012-13* (January 2014). London: The Stationary Office.
- 29** Committee on Climate Change (CCC), (2012) *Climate change – is the UK preparing for flooding and water scarcity? Adaptation Sub-Committee Progress Report, July 2012*. London: CCC, p.39
- 30** Committee on Climate Change (CCC), (2014) *Managing climate risks to well-being and the economy: Adaptation Sub-Committee. Progress Report 2014*. London: CCC, p.27.
- 31** Environment, Food and Rural Affairs Committee (EFRA), (2014b) *Winter Floods 2013-14, First Report of Session 2014-15* (June 2014). London: The Stationary Office, p.15.
- 32** *ibid* (2014b p.18).
- 33** CCC (2014 p.27).
- 34** Lockyear, A. (2011) *Warriors in Fireboots*. Huddersfield: Jeremy Mills Publishing, p.239.
- 35** CFA (2008a) *Water/Flood Rescue Briefing*, 3 January 2008
- 36** ODPM (2004) *Emergencies for Fire and Rescue Authorities: A Consultation Document*, September. London: ODPM.
- 37** *ibid* (2004: 7).
- 38** Scottish Executive (2005) *Fire (Additional Function) (Scotland) Order 2005, No.342*, June. Edinburgh: Scottish Executive.
- 39** ODPM (2005) *Emergencies for Fire and Rescue Authorities*, November. London: ODPM.
- 40** DCLG (2007) 'The Fire and Rescue Services (Emergencies) (England) Order 2007 – 'the Emergencies Order'', *Fire and Rescue Service Circular* 13/2007, 13 March. London: DCLG, 11, 15).
- 41** FBU (2008a) *Lessons of the 2007 floods*. Kingston: FBU.
- 42** Pitt, M. (2008) *Learning lessons from the 2007 floods – Full Report*. London: Cabinet Office, pp.181, 185, 190).
- 43** Defra (2008) *The Government's Response to Sir Michael Pitt's Review of the Summer 2007 Floods*, 19 December 2008. London: Defra, p.73.
- 44** Defra (2009) *The Government's Response to Sir Michael Pitt's Review of the summer 2007 Floods: Progress Report*, December 2009. London: Defra, p.65-66.
- 45** Knight, K. (2008) *Facing the Challenge: Flood Review, March*. London: DCLG, pp.3-4, 49, 51)
- 46** CFA (2008b) 'CFA seeks clarity on arrangements for flood rescue', *Press Release*, 18 February 2008
- 47** FBU (2008b) 'Pitt Review – Firefighters Urge Government To Act Quickly', *Press Release*, 18 February 2008
- 48** Cabinet Office, (2010) *The Coalition: Our Programme for Government*. London: Cabinet Office.
- 49** Defra (2012b) *The Government's Response to Sir Michael Pitt's Review of the summer 2007 Floods: Final Progress Report*, 27 January 2012. London: Defra: 31.
- 50** Statutory duty for specialist rescue and flooding, *Fire magazine*, October 2014
- 51** Defra (2011a) *Exercise Watermark: Interim Report*, July 2011. London: Defra.
- 52** Defra (2011b) *Exercise Watermark: Final Report*, October 2011. London: Defra.
- 53** TUSDAC (2012) 'Minutes of the Policy Group meeting', 26 July 2012
- 54** Defra (2012b).
- 55** Lewis, B. (2014) HC Deb 16 January 2014, vol 573, col 611W

56 Pickles, E. (2014) HC Deb 6 February 2014, vol 575, col 450

57 Lyn's Speech to the Fire Sector Summit 2014

58 Rogerson, D. (2014) HC Deb 19 November 2014, vol 588, col 100WH; (2015) HC Deb 8 January 2015, vol 590, col 188WH

59 CFOA (2008c) 'Pitt Recommends FRS Statutory Responsibility for Managing Floods', *Press Release*, 25 May 2008

60 CFOA (2014a) 'CFOA President visits flood-hit Somerset', *Press Release*, 13 February 2014; CFOA (2014b) *Fire and Rescue Service: National Flood Debrief Report*. May 2014.

61 CCC (2012).

62 CCC (2014).

63 NAO (2014).

64 DCLG (2014b) *Bellwin Scheme of Emergency Financial Assistance to Local Authorities: Consultation*, November. London: DCLG.

65 Public Health England, (2014) *Guidance on Recovery from Flooding Essential information for frontline responders*. 1 February. London: Public Health England; Defra (2013)

66 World Health Organisation (2014) *Floods and health: Fact sheets for health professionals*. Copenhagen: World Health Organisation.



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