

AUTUMN 2008



Floodnews

News about managing flood risk and coastal erosion

A photograph of a residential street completely flooded with murky water. In the background, a large red brick building with three dormer windows stands. A red car is partially submerged in the water. Two people are standing in the water on the left side of the frame. A sign on the left wall reads "BEAR'S DEN".

Surface water management

The way forward

Welcome to Floodnews

Welcome to Floodnews, the quarterly business briefing from the Environment Agency. If your work is affected by flood and coastal erosion issues, Floodnews is for you. We aim to keep you up to date with what we're doing to manage the risk of flooding and coastal erosion in England and Wales.

Please pass Floodnews on to any of your colleagues who have not received their own copy.

To subscribe, email us at floodnews@environment-agency.gov.uk and we will add you to our electronic mailing list.

We hope you benefit from reading Floodnews, and we welcome your comments.

David Rooke
Head of Flood Risk Management
Environment Agency

New steps in surface water management

Last summer provided an extreme example of the cost and misery that surface water flooding causes. Government has estimated that the intense summer rainfall of 2007 led to 48,000 homes and 7,000 businesses flooding. Two-thirds of these properties were damaged either by surface water flooding, or a mixture of surface water and river flooding.

Examples of the surface water flooding that took place were when rainwater collected at surface level when drainage systems became overwhelmed, or when water ran off fields and paved areas into properties. This resulted in minor watercourses and ditches not being able to cope with the extreme volumes of water. Some properties were also flooded from groundwater springs.

Even on a local scale, such flooding can and does happen often. Strategic design has not always been a consideration in our drainage systems, with much of the network growing piecemeal with development. Some parts of the country now have difficulty coping with a high influx of water during periods of intense rainfall.

The UK *Foresight Future Flooding* report stated that flood risk in urban areas could increase two to 20-fold over the next 100 years, with worsening impacts. The threat of more frequent extreme weather in a



Surface water often contributes to urban flooding. Above: Oxford, 2007. Next page: Carlisle, 2005

changing climate means organisations and the public need to take action now. Better management of surface water will help reduce flood risk and improve water quality. This is an important theme of Government's *Future Water* plan, published in February 2008.

Sir Michael Pitt's report on last year's floods also stressed the risks of surface water flooding, and the need to improve the way we prepare for and manage extreme rainfall events. As part of his recommendations, and following the government's announcement in June of this year, we are now preparing to take on an overview role for all flooding in England and Wales, whatever its source.

Our present duties restrict us to managing flood risk from rivers and the sea, and supervising the response to coastal erosion. New statutory powers would allow us to lead and coordinate approaches to flood risk assessment and management in England in a comprehensive way. Local authorities would carry out surface water flood risk management work with our guidance and support. They should also have powers to ensure landowners fulfil their duties to keep drainage in good order, helping to reduce the risk of surface water flooding. Key parties such as water companies and the Highways Agency will also be required to provide information on flood risk to aid local authority surface water flood risk and management.



To support our work, we want local authorities to produce Surface Water Management Plans (SWMPs) in partnership with water companies and other relevant organisations. We expect well-prepared SWMPs will help address our long-standing concern about fragmented responsibility for surface water drainage. SWMPs will pinpoint vulnerable locations, propose action to

Info

The *Foresight Future Flooding* report, referred to in this article, is part of the UK government's Foresight programme. More information can be found at www.foresight.gov.uk

Government's water strategy for England, *Future Water*, can be downloaded from www.defra.gov.uk

reduce risk, and detail the steps that infrastructure operators and landowners need to take for better local flood management.

Naturally, our priority is to first see plans where the risk of surface water flooding is greatest. We are awaiting decisions from Government on who leads SWMPs, and their status in law. We believe that this is a clear local authority role and that preparing plans should be a statutory, not voluntary, requirement in locations identified as having a high risk of surface water flooding.

We can expect to see further changes to legislation that will improve surface water flood management. There will be a Government review of Section 106 of the Water Industry Act 1991. At the moment this gives developers and property owners the automatic right to connect surface water drains to the public sewerage system. Changes to household

permission may also allow homeowners to pave front gardens without consent, providing the materials used are permeable.

Greater encouragement of new and better ways to cope with surface water will be important over the next 20 years. Sustainable Drainage Systems (SUDS) will increase the capture and reuse of water above ground. Housing development and refurbishment will incorporate more storage for greywater and rainwater, or ways for run-off to absorb into the ground rather than, for example, collecting in gutters and going direct to sewers.

These steps will make us all less dependent on the wholesale upgrade of the sewer system, which is costly and still limited by a finite capacity. A greater uptake of SUDS will help reduce flood risk and improve water supply and water quality, offering a longer term approach to surface water management.

The final Pitt Review

Recommendations that we lead on

The final report of the Pitt Review, examining the lessons learned from the floods of 2007, makes 92 recommendations for action. Every organisation involved in flood management has work to do. Government will be responding to the Pitt Review in the autumn with a prioritised and costed action plan.

Here we list the recommendations that the Environment Agency leads or jointly leads on. We identified some of these recommendations in our own review of the summer floods, and we are already working on them.

Recommendation 2

The Environment Agency should be [given] a national overview of all flood risk, including surface water and groundwater flood risk, with immediate effect.

Recommendation 4

The Environment Agency should further develop its tools and techniques for predicting and modelling river flooding, taking account of extreme and multiple events and depths and velocity of water.

Recommendation 5

The Environment Agency should work with partners to urgently take forward work to develop tools and techniques to model surface water flooding.

Recommendation 25

The Environment Agency should maintain its existing risk-based approach to levels of maintenance and this should be supported by published schedules of works for each local authority area.



Environment Agency staff pumping floodwater in Oxford last summer

Recommendation 33

The Environment Agency should provide a specialised site-specific flood warning service for infrastructure operators, offering longer lead times and greater levels of detail about the velocity and depth of flooding.

Recommendation 36

The Environment Agency should make relevant flood visualisation data, held in electronic map format, available online to Gold and Silver Commands.

Recommendation 37

The Environment Agency should work with its partners to progressively develop and bring into use flood visualisation tools that are designed to meet the needs of flood risk managers, emergency planners and responders.



The Environment Agency was part of the emergency response during last summer's floods

Recommendation 61

The Environment Agency should work with local responders to raise awareness in flood risk areas and identify a range of mechanisms to warn the public, particularly the vulnerable, in response to flooding.

Recommendation 62

The Environment Agency should work urgently with telecommunications companies to facilitate the roll-out of opt-out telephone flood warning schemes to all homes and businesses liable to flooding, including those with ex-directory numbers.

Recommendations that we jointly lead on



The electricity sub-station at Walham during last summer's floods. Emergency responders successfully worked together to keep the floodwater at bay and the sub-station operational.

Recommendation 6

The Environment Agency and the Met Office should work together, through a joint centre, to improve their technical capability to forecast, model and warn against all sources of flooding.

Recommendation 27

Defra, the Environment Agency and Natural England should work with partners to establish a programme through Catchment Flood Management Plans and Shoreline Management Plans to achieve greater working with natural processes.

Recommendation 34

The Met Office and the Environment Agency should issue warnings against a lower threshold of probability to increase preparation lead times for emergency responders.



Flood defences in operation in Bewdley last summer

Recommendation 35

The Met Office and Environment Agency should issue joint warnings and impact information on severe weather and flooding emergencies to responder organisations and the public.

Recommendation 51

Relevant government departments and the Environment Agency should work with infrastructure operators to identify the vulnerability and risk of assets to flooding and a summary of the analysis should be published in Sector Resilience Plans.

Recommendation 60

The Government should implement a public information campaign which draws on a single definitive set of flood prevention and mitigation advice for householders and businesses, and which can be used by media and the authorities locally and nationally.



The Environment Agency ran 'flood surgeries' in many locations after last summer's floods, allowing people to share their experiences and learn more about flooding

Recommendation 65

The Met Office and the Environment Agency should urgently complete the production of a sliding scale of options for greater personalisation of public warning information, including costs, benefits and feasibility.

Source: The Pitt Review – Learning lessons from the 2007 floods. Published by the Cabinet Office, June 2008

The full report can be downloaded from www.cabinetoffice.gov.uk/thepittreview

Local Resilience Forums

Who's in charge?

During major emergency incidents such as flooding, we need the knowledge and skills of many organisations to help with the impacts on people and property. To prepare for these events locally, senior representatives from each agency meet regularly as a group, called a Local Resilience Forum (LRF).

Across England and Wales there are 48 LRFs. The geographical boundaries for each group follow police force areas, except for London. Here there are six LRFs, each incorporating five or six of the capital's boroughs.

The police lead many LRFs, with representation from every organisation that is a category 1 or 2 responder. Meetings take place at least every six months, or more often if there is urgent business. Between times sub-groups made up of LRF members, or emergency planners from main response organisations, work on issues including specific risks and threats, progress to complete agreed actions, and improvements to planning arrangements.

Under the Civil Contingencies Act, response organisations have a duty to work together. Every LRF member must understand their role and how their response to an emergency fits with the actions of other organisations.

'LRFs are at the centre of emergency planning'

'LRFs are at the centre of local emergency planning,' says David Owens, head of contingency planning for South Yorkshire Police and secretariat to the South Yorkshire LRF. 'They ensure all the agencies responding to emergencies have an involvement, with planning that is open, not insular. The Government is placing



An incident control room in action last summer

increasing reliance on LRFs to develop plans for major incidents that are genuinely multi-agency, including preparations for pandemic flu and flooding.'

Mark Wilkinson, Senior Emergency Planning Officer at Leeds City Council, agrees. 'The duties arising from the Civil Contingencies Act 2004 really helps our working arrangements in West Yorkshire's LRF, which is lead by West Yorkshire Police,' he says. 'Having senior management representatives from both category 1 and 2 responders gives us stronger, broader and more unified cooperation at local level, a real asset in developing emergency flood plans.

'Our LRF has already carried out several multi-agency flood exercises, helping us agree roles, responsibilities and protocols for warning the public and responding in an efficient way.'



Emergency response is a team effort

Mike Powell, Emergency Planning Manager at the City of Bradford Metropolitan District Council, says:

'Last year's flooding in various parts of the UK clearly showed that emergencies often affect more than one local authority. Therefore the preparation and planning work of LRFs is an important part of the emergency response. It helps share and exchange knowledge, skills and resources across a wider area.

'For example, at Bradford Council we are working closely with the Environment Agency to improve the way we communicate flood awareness and warning messages to community members whose first language is not English. We will share the results of this work with other LRF members. In this way other organisations and people can benefit too.'

Principal duties



Temporary barriers in place at Upton-upon-Severn last summer

Local Resilience Forums' main duties are to:

- Agree plans for the preparation and response to emergencies
- Ensure the availability of equipment and staff
- Keep a community register of risks
- Carry out training exercises to test emergency and contingency plans
- Identify and resolve gaps between services
- Make changes to working practices when Government or Regional Resilience Forums announce new laws or policy



Emergency responders work together during major incidents, both on the ground and behind the scenes

Main terms

- **Civil Contingencies Act 2004**

Law setting out the roles, responsibilities and emergency powers of people and organisations with a duty to help the public during an incident with widespread safety risks.

- **Civil protection**

Steps taken by appointed people or organisations to help people withstand the effects of any large incident, such as flooding, health pandemic or terrorist attack.

- **Local Resilience Forums**

Groups of category 1 and 2 responders that work locally to fulfil their duties under the Civil Contingencies Act.

- **Civil Risk Register**

Details the risks present in each LRF area, including the likelihood of the incident occurring and its impact.



Responding to flooding in Oxford last summer

- **Category 1 responder**

The main agencies that lead an emergency response. Includes police, fire, ambulance and coastguard services, local authorities, NHS and Environment Agency.

- **Category 2 responder**

People and organisations with a duty to respond to an emergency, but less likely to be at the heart of incident leadership. Includes power, water and transport companies.

- **Local Responder**

A Category 1 or 2 responder in an LRF.

- **Regional Resilience Forums**

Groups at Government Office level, examining risk regionally, and forming a communication link between local and national emergency preparations.

A view of the coast

Our supervisory role on the English coast

In April this year the Environment Agency became the lead organisation responsible for all flood and erosion risk management around the coastline of England.

This new role is a 'first', giving us a unique opportunity to lead the country in developing a coastal management plan that works at local, regional and national level. Our partner organisations, including local authorities, will put agreed plans into practical action. We will support them by giving Grant-in-Aid (GiA) funding and overseeing the work carried out.

Planning for good management

Shoreline Management Plans (SMPs) are the backbone of our coastal management work. SMPs cover the entire coastline of



The view from Brancaster Beach on the Norfolk coast

England and Wales, providing the latest information on coastal changes, including social, economic and environmental data. They also contain flood and coastal erosion risk management policies for 20, 50 and 100 years into the future.

The first set of 31 SMPS are under revision. On completion we will work with local authorities to combine them into a second generation of 19 plans by 2010. In Wales, five SMPs will be completed by 2011.

Estuary plans are at varying stages of consultation and completion. As with SMPs, these take account of the physical condition of an estuary as well as the social and economic impacts different policies for coastal defence management may have.



Recent landslip close to the Portland coast. See page 9 for story. Photograph courtesy of Weymouth & Portland Borough Council

Helping communities adapt to change

In partnership with Defra and Communities for Local Government, we are preparing a toolkit that considers financial aid, planning choices, community self-help and social justice issues. All of these are important in supporting people severely affected by coastal flooding or erosion.

Clear, direct communication

Getting communities and organisations involved at the earliest stages of decision-making is important. We want them to understand how we arrive at our views, and to invite them to contribute their opinion. Where there are difficult decisions to make, we will explain the risk to local people, setting out the advantages and disadvantages implicit in each course of action. Decisions will follow full and open debate, with good opportunity for the communities at risk to take part in consultation.

Legal tools for the job

Planning Policy Statement 25 (PPS25) guides local planning authorities in England on development and flood risk, dissuading consents for non-essential development on land prone to flooding from rivers and the sea. The Environment Agency is a statutory consultee, with the power to call in an application to the Secretary of State and planning inquiry.

Planning Policy Guidance 20 (PPG20) on coastal planning is under revision. We expect the new version will similarly limit development, but specifically in erosion-prone areas. Again we expect to have statutory consultee status.

What our English coastal role means

Our job is as much to bring organisations and people together to resolve coastal flood and erosion difficulties as it is to take responsibility for final courses of action. We all have a part to play in the nation's plans for coastal management, but responsibility for good stewardship and the successful direction of coastal flood and erosion plans rests unquestionably with the Environment Agency.

What our English coastal role means for our staff:

Neil Watson, acting Flood Risk Manager, Wessex area

For an example of the way Neil's job has changed since last April, just consider his increased duties at Weymouth and Portland in Dorset. Previously his main concern in this council was three locations that between them have four kilometres of coastal flood defences. Now, with an overview role, Neil supervises flood risk and erosion plans for more than 38 kilometres of busy shoreline, with its mix of private and public



Neil Watson, acting Flood Risk Manager for Wessex Area

defence ownership, businesses and environmental concerns. Priorities range from areas of the coast eroding at the rate of one metre every year, to economic developments that will add to regional prosperity. New projects on this stretch of the coast include the £400m Portland Gas installation, two marinas and the site for the 2012 Olympics sailing events.

Yet this is just one small part of a 260 kilometre long coastline for which Neil has responsibility. His job includes inland flooding management too, so he dedicates a third of his time to tackling coastal flood risk and erosion issues. Working closely with him are six Dorset maritime local authorities and their experienced coastal management staff. As two SMPs cover the area, there are a wide range of organisations to consult in planning the long-term needs of the coast and its communities. Besides ensuring flood defences are in good order, Neil supports the local

authority with grant application submissions and oversees their planned works.

Some difficult decisions lay ahead for Neil. For example, at Portland Harbour, local people face losing 73 houses, a road, an ancient castle monument, and utility services through erosion and landslips. Balanced against this is the area's World Heritage site status, depending on a constantly refreshed geological face for its accreditation.

To help flood risk managers like Neil we are recruiting extra staff, including coastal technical specialists. They will bring further expertise to coastal issues, increasing the support we give to our partners, especially local authorities.

What our English coastal role means for local people:

Managing coastal change in Essex

A new project run by the Country Land and Business Association, the Farming and Wildlife Advisory Group and the National Farmers Union is helping land managers research business opportunities that can improve the economic outlook for the coast.

As in any county, there are many and varied owners of coastal land in Essex, with wide-ranging business and ecological interests. The project works with groups of landowners, helping them to consider the choices and actions they can take that will best provide a future for farming, local people and wildlife.

In the short-term many groups have decided the positive benefits from food production justify keeping, at their own expense, the existing flood defences. The project members take advice from us and our partners on the feasibility of such ideas. Other groups are exploring opportunities in recreation and tourism – possibly including marina development and local seafood production. There is some early work in progress with the local authorities to turn parts of the rural Essex coast into an 'eco' visitor attraction.

Karen Thomas, one of the Environment Agency's coastal specialists said: 'Many coastal landowners face some tough challenges ahead. Working in groups gives them the best chance of finding new business opportunities from what at first glance may appear weak prospects. We, with Defra and our partners, are supporting the groups in developing business opportunities that can work for them while meeting wider SMP objectives.'

For more information, go to www.managingcoastalchange.co.uk

A view of the coast

The view from Wales



Windsurfing is a popular pastime on the Welsh coast

In Wales, local authorities manage coastal erosion, and both they and the Environment Agency have powers to provide coastal flood defences.

Overall policy responsibility for flood and coastal erosion risk management rests with the Welsh Assembly Government (WAG). It aims to achieve similar outcomes to England, but without making any changes to existing arrangements for managing the coast. WAG provides all the funding for managing flooding and grant aids capital works for coastal erosion.

Local planning authorities are guided by Technical Advice Note 15: Development and Flood Risk (TAN15), which supports Planning Policy Wales. This aims to avoid inappropriate development in floodplains and, where development is allowed, to ensure that the consequences of flooding are reduced to acceptable levels. Environment Agency Wales provides advice as a non-statutory consultee.



Defences in operation at Dale

What our Welsh coastal role means for local people:

Dale, Milford Haven, Wales

Our analysis of the potential costs of flood damage at this coastal village was more than £540,000, set against new protection measures of £150,000. So the benefits greatly outweighed the costs.

Part of the proposed defence scheme included a demountable barrier, for installation when weather forecasts and our warning service predicted high tides and flood risk. For this to be successful, we needed the support and agreement of the community, and their willingness to manage the equipment.

We met with local residents in December 2006 to discuss the options available. The community responded positively to the idea of a volunteer team and pledged their support. The coastal



Dale harbour with the defences demounted

flood defence improvements went ahead, carried out by Pembrokeshire County Council and completed in June 2007.

Community volunteers successfully carried out a trial run to install the flood barrier in September last year, and now have responsibility for its use and installation.

‘Community volunteers successfully carried out a trial run to install the flood barrier in September last year’

A view of the coast

Marine Bill update

The Marine Bill is a first step towards better care of our seas and coastal waters. It sets out a new and positive future for managing the marine environment, with a strategic planning system not unlike the way we plan for development on land.

‘The Marine Bill is a first step towards better care of our seas and coastal waters. It sets out a new and positive future for managing the marine environment’

If the Bill becomes law, a new Marine Management Organisation (MMO) will become a ‘one-stop shop’ in England for granting licences for any development in coastal waters. In Wales, the Welsh Assembly Government will manage the same requirements of the legislation in-house.

The 12 Sea Fisheries Committees, currently regulating inshore fishing, will also modernise, and become Inshore Fisheries and Conservation Authorities. They will receive greater powers of enforcement and more clearly defined duties to conserve parts of the seabed, including important spawning grounds. Threatened or vulnerable species will also benefit from new Marine Conservation Zones.

The three-month public consultation period for the draft Bill closed at the end of June. Working with the Local Government Association, we presented both written and oral evidence. A parliamentary joint committee report, published at the end of



Wildlife will benefit from new marine conservation arrangements



Saunton Sands, north Devon

July, supports the Bill, while advising that it needs more detail and prescribed actions. Taking these comments into account, a final version of the Bill will be prepared for Parliament’s consideration this autumn, with the expectation that it will become law in spring 2009.

We support the Marine Bill and its broad aims. In some areas we would like organisations to have stronger controls. This includes the MMO having Water Framework Directive duties and a greater responsibility for conservation work. We also feel that proposals in the Bill to increase access to the English coastline must address clearly any adverse impacts on managing flood risk and coastal erosion.

In addition, the different administrative arrangements between England and Wales for putting the terms of the Marine Bill into practice mean that a clear understanding of responsibilities is important, especially where national boundaries cross coastal waters and shorelines.

For more information go to www.defra.gov.uk/marine/legislation or www.environment-agency.gov.uk/marine

‘We support the Marine Bill and its broad aims. In some areas we would like organisations to have stronger controls’

News in brief

- Insurers agree flood cover deal
- New climate change scenarios
- Floodnews is going green

Insurers agree flood cover deal

The Association of British Insurers and the government have agreed terms for keeping flood insurance widely available.

Under the new 'Statement of Principles', cover will continue for properties where the yearly flood risk is no higher than one in 75. Existing customers with homes or businesses at greater threat will continue to get cover, providing the risk reduces to an acceptable level within five years. The guarantees extend only to properties built before January 2009.

The agreement rests on the government's long-term plans to tackle flooding. This includes increasing public information and awareness, more investment in defences and a halt to building in the floodplain.

For more information, go to www.abi.org.uk

Floodnews is going green

From Spring 2009, all subscribers to Floodnews will receive their copy by e-mail. We want to minimise our impact on the environment, so we will no longer be mailing printed copies. However, if receiving a copy by email is not suitable for you, please contact us at floodnews@environment-agency.gov.uk and we will try to accommodate your needs

New climate change scenarios

The UK Climate Impacts Programme (UKCIP) is to publish new climate change scenarios in November this year. Called UKCIP 08, they will improve on the previous data published in 2002, with projections based on a finer scale, and containing more information about the impact of climate change on the marine environment.

UKCIP forecasts of climate change play an important role in our flood forecasting and risk management work.



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