

# Sustainability Committee

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## Inquiry into Flooding in Wales

### Introduction

This paper provides an overview of Flood and Coastal Erosion Risk Management in Wales and associated issues. The following areas are covered:

#### 1. The risk and change to flood risk management approach

- 1.1 The Risk
- 1.2 Flooding in Wales Report
- 1.3 Change to Flood Risk Management (The Pitt Review, Flood and Water Management Bill, EU Flood Directive)

#### 2. Understanding the risk and consequences

- 2.1 Improving our strategic planning
- 2.2 Improving our understanding of surface water flooding
- 2.3 TAN15

#### 3. Reduce and manage the risk

- 3.1 Flood Defence
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#### 4. Ensure that everyone is aware of the risks

- 4.1 Clarifying roles and responsibilities
- 4.2 Raising Awareness and Community Engagement
- 4.3 Sharing information on flood risk

#### 5. Plan our responses and recovery from flood events

- 5.1 Improving flood warnings
- 5.2 Improving emergency response
- 5.3 Improving recovery from flooding

#### 1. The risk and change to flood risk management approach

##### 1.1 The Risk

In all, around 357,000 properties in Wales, or about one in six buildings, are at risk of flooding. More than 357,000 people live in 220,000 properties that are at risk of flooding from rivers or the sea, 97,000 of which are also at risk of surface water flooding. A further 137,000 properties are susceptible to surface water flooding alone. The floods experienced in recent times have highlighted this increasing threat and, while Wales has been fortunate to have escaped the worst of the severe weather, we are just as vulnerable to such events.

Climate change is happening and one of the unavoidable consequences is an increased risk in flood and coastal erosion. The UK Climate Projections 2009 (UKCP09), set out the impacts that we can expect as a result of climate change. They show that in the coming years we will experience hotter, drier summers, milder wetter winters, with an increase in storminess and the intensity of rainfall events and an increased risk of flooding and sea level rise.

There is therefore a greater chance that the capacity of flood defences and drainage systems are going to be exceeded. Past events have shown the consequences when this occurs. It must be accepted that we can alleviate those risks by improving defences, but never eliminate them. We need to ensure our future systems operate effectively when they are required to and also have made preparations for the occasions when those systems are beaten.

Flood Risk Management (FRM) is a move towards managing the risks in ways that balance the diverse requirements of communities, the environment and the economy. FRM aims to:

- understand the risks and consequences of flooding;
- plan to reduce/manage those risks and consequences

- ensure that everyone is aware of the risks to them by community engagement and raising awareness
- plan our responses to and recovery from flood events and ensure appropriate and timely warnings are issued.

### **1.2. Flooding in Wales: A National Assessment of Flood Risk**

On 10 July 2009 the Environment Agency Wales published their report "Flooding in Wales: A National Assessment of Flood Risk". This report offers a snapshot of the position and the risks as they are now. It offers information on the strategy and policy framework for flood and coastal erosion risk management, the risks we face and the steps that can be taken to manage them better in the future. This information provides a useful benchmark against which the effectiveness of future flood risk management services can be judged.

We are building on the results of that assessment by working with the Environment Agency to explore different scenarios for long term investment in flood and coastal defences and, over time, compare these investment choices with the full range of flood risk management options.

### **1.3. The Change to Flood Risk Management Approach**

Flood defences will continue to play an important role but the type of measures that we adopt will continue to broaden. This includes working with the natural environment to manage water flows, including promoting sustainable drainage systems that keep rainwater out of sewers and land management techniques that help manage run-off. Many of these approaches will bring other benefits beyond helping to manage flood risk including for water quality, biodiversity and improving local environment quality.

This will be complemented by measures to address other aspects of flood risk management such as improved flood warning and emergency response arrangements, comprehensive flood risk management plans that address all sources of flood risk, raising awareness initiatives and providing the clarity of roles and responsibilities for operating authorities.

All of this will be brought together in our National Flood Risk Management Strategy and be informed by the lessons of previous floods and the Pitt Review recommendations. New legislation (including the draft Flood and Water Management Bill and EU Flood Directive) will enable us to develop a flood risk management system suitable for Wales.

### **The Pitt Review**

While Wales escaped the worst of the summer 2007 floods, we are equally vulnerable to extreme events. The Pitt Review was commissioned by the UK Government in response to the 2007 floods in England. I committed to draw on the lessons of the Pitt Review for Wales and mainstream the lessons learnt into our move to a risk management approach.

The key findings of the Pitt Review were the need for:

- greater community engagement and raising awareness;
- clarity of roles and responsibilities;
- more attention to be paid to the threat of surface water flooding to our urban communities
- partnership working and sharing information
- a greater focus on addressing the vulnerability of our infrastructure to flooding.

These findings largely reflect the priorities which were informing the development of a flood risk management system in Wales.

### **Flood and Water Management Bill**

A key recommendation of Sir Michael Pitt's Review was the need to modernise existing legislation and bring relevant provisions together in a single, unified Act. The draft Flood and Water Management Bill was published for consultation on 21 April 2009. Consultation closed on 24 July 2009, with over 600 responses received from across England and Wales. These include comments on both "Annex A: the policy position in Wales" and on the various sections within the main body of the consultation paper that applied to Wales.

Defra have received permission to draft a final Bill, planned for inclusion within the fifth session of Parliament. The Draft Legislative Programme published in June 2009 indicates that the Flood and Water Management Bill will include provisions on:

- roles and responsibilities for flood and coastal erosion risk management;
- reservoir safety; and
- flood and coastal erosion risk management assets owned by third parties;
- sustainable drainage;
- water administration; and
- drought measures.

The Draft legislative programme is available online and can be accessed at:

<http://www.hmg.gov.uk/buildingbritainsfuture.aspx>

The Flood and Water Management Bill is scheduled for introduction in the next session of Parliament, at which time it will be made publicly available. The remaining matters included with the draft Flood and Water Management Bill and not scheduled for inclusion within the Flood and Water Management Bill will be taken forward at a later date.

### **EU Flood Directive**

The provisions relating to the transposition of the EU Flood Directive will be taken forward via regulations under Section 2(2) of the European Communities Act 1972. These will cover both England and Wales and we are working with Defra to ensure timely and appropriate transposition.

## **2. Understand the risks and consequences of flooding**

### **2.1. Improving our strategic Planning**

We are improving our understanding of flood risks now and in the future through the development of strategic plans. The Assembly Government funds the preparation of a programme of Catchment Flood management Plans (CFMP) and Shoreline Management Plans (SMP) across Wales. These plans will set the direction of how risks from main rivers and coastal flooding and erosion respectively should be managed in the long term.

We also intend to fund the development of Local Flood Risk Management Plans that will enable effective mapping and planning of surface water flood risks for the first time.

#### **- Catchment Flood Management Plans**

The Environment Agency is responsible for producing CFMPs. They are high level strategic plans using a scientific approach to understand and describe how a river catchment behaves and what the most sustainable flood risk management policies may be over the next 50 to 100 years. The Plans will assess the risks and consider the factors which influence flood risk management, including the impacts of climate change, to identify sustainable flood risk management policies for the long term.

The CFMPs were consulted on earlier this year and will be finalised by the end of the year.

#### **- Shoreline Management Plans**

Welsh Assembly Government has encouraged maritime local authorities, the Environment Agency and other bodies with coastal interests to form coastal groups and prepare SMPs for the Welsh coast.

SMPs are key strategic documents which aim to identify sustainable coastal risk management policies for Wales.

The revised SMPs are currently in preparation and will be complete by 2011.

### **2.2. Improving our understanding of surface water flooding**

The summer 2007 floods highlighted the vulnerability of our urban centres to surface water flooding including the major flooding in Hull and more localised events in Barry and Prestatyn. This type of flooding will become more frequent as the climate changes. Dealing with such flooding is often not the responsibility of one body but is shared between a number of bodies including local authorities, highways authorities, water companies and the internal drainage bodies.

Responding to a key recommendation from the Pitt Review, the new legislation will clarify responsibilities in this area, with local authorities identified to take the lead.

The pilot studies commissioned following the 2007 floods aimed at improving our understanding of surface water flooding issues and developing a framework for addressing such issues in the future.

We are also working to map significant, known surface water flooding problem areas and identifying those areas susceptible to surface water flooding across Wales.

This work is being coordinated by the Wales Integrated Surface Water Management Group (ISWMG which includes all relevant organisations) and will feed directly into the Local Flood Risk Management Plans. This work is progressing well and supports the other flood risk strategic plans, that is the Shoreline Management Plans and Catchment Flood Management Plans, which are currently being prepared.

### **2.3. TAN 15**

TAN15 was published in July 2004 and reflects the Welsh Assembly Government's sustainable development agenda and increasing concerns about climate change. The overall aim of the TAN is to ensure new development, and in particular highly vulnerable development, is directed away from the floodplain wherever possible. TAN 15 has increased awareness of the risks and consequences of flooding. All local planning authorities and developers in Wales are aware of the need to take account of these issues.

TAN 15 and the associated development advice maps make it clear how local authorities should make decisions about development on flood plains, providing clear tests for justification and acceptability of flooding consequences, and enabling the consideration of risks over the lifetime of the new development. It also provides an appropriate role for the expert input of the Environment Agency and a clear process for developers to follow.

When the TAN was published in 2004, it was envisaged that over time knowledge and information about flood risk would improve and therefore a commitment to review the maps to take account of new information was included in the TAN.

New updated Development Advice Maps (DAMs) became operational on the 21 September 2009. These maps and associated

Geographic Information System (GIS) data supersede the 2004 DAMs

### **3. Reduce and manage the risk and consequences**

#### **3.1. Flood Defence**

The Welsh Assembly Government currently invests almost £40million directly in flood and coastal erosion risk management each year, split between capital and revenue projects. Funding has more than trebled since 1999.

#### **- Flood and Coastal Risk Management Improvement Programme**

The Environment Agency's current capital programme is c£13million. The significant Conwy Valley Flood Alleviation Scheme is ongoing and New Tredegar FAS has recently been completed. There are also proposals for improvement works at Glynneath, Resolven, the Newport Gwent coast and Tregaron.

Catchment Flood Management Plans and Asset Management Plans are in preparation. These plans will direct future investment needs.

#### **- Local Authority**

Since 2001 when the Assembly Government introduced its pre-feasibility study initiative which with the support of 100% grant invited local authorities to investigate all known flooding problems there has been a steady increase in development and construction of flood defence schemes. In the past, the grant budget was underspent but in recent years the improved delivery of schemes through a more robust programme developed by close partnership working with local authorities has meant that the budget is now being fully spent and a strong pipeline of projects is well developed.

Significant Schemes at Llanrwst, Amroth, Trearddur Bay Anglesey have been completed while the £5.3m Aberaeron Coastal Defence scheme is due for completion shortly.

#### **- Individual Grant Scheme**

The Assembly Government has been piloting a grant scheme aimed at supporting appropriate flood protection measures to individual properties. The grant is not payable directly to homeowners but is made to local authorities under the provisions of Section 20 of the Land Drainage Act 1991 whereby property owners can request their local authority to undertake flood protection work on their behalf at the property owner's expense

If a local authority agrees to undertake such work the local authority can apply to the Assembly Government for grant support. If the local authority is successful in securing the grant then the property owner would benefit from local protection works to their property and would contribute 15% of the cost of the works, with 85% coming from the Assembly Government.

We will be evaluating the effectiveness of this pilot shortly.

#### **3.2. Additional Funding**

In December 2008 I announced the Assembly Government had secured £30 million of EU Convergence Funding for flood and coastal erosion risk management in Wales. Since then we have successfully bid for £6 million from the Competitiveness fund to promote flood and coastal risk management schemes in the east of Wales. This funding will be matched with a further £7.3 million from the Assembly Government and other operating authorities giving us a total programme of £13.3 million. The funding is available for the period 2009 - 2013, and during this period we will promote the construction of five schemes with associated works to promote flood awareness and increased community resilience to flooding.

An additional £8 million has also been allocated from the Strategic Capital Investment Fund and will be spent in 2009/10 and 2010/11.

This additional money will increase investment in flood and coastal erosion risk management in Wales from approximately £100m over the next five years to C£138m; an increase of 38%.

The release of this additional funding is administered by the Assembly Government, with scheme delivery by local authorities, the Environment Agency and other organisations such as Dŵr Cymru Welsh Water. The management of the programme is supported by a strong partnership approach which has enabled effective assessment and prioritisation of projects. Developing this effective and mature partnership approach and prompting project sponsors to ensure that potential schemes are well developed so that we have a long term strategic programme of projects for investment have both been important additional benefits of the funding.

One of the conditions of support for both programmes requires lead scheme promoters to adopt a partnership approach with improved public engagement to raise awareness of the risk of flooding and to promote resilience within vulnerable communities.

### **4. Ensure that everyone is aware of the risks**

#### **4.1. Clarity of roles and responsibilities**

The Pitt Review highlighted that there was confusion regarding roles and responsibilities of the operating authorities for flood and coastal erosion risk management. The Flood and Water Management Bill provides the opportunity to clarify responsibilities in

legislation.

In the meantime, Sir Michael Pitt, in his evidence to the EFRA Committee as part of the pre-legislative scrutiny of the draft Flood and Water Management Bill made it clear that much can be achieved in terms of clarifying responsibilities through administrative and informal action and the Assembly Government is actively promoting this approach. We are doing so through the pilot studies we commissioned following the flood events in 2007, through the requirements for partnership working as part of the criteria for accessing European funding and it will inform the way in which we use the money available to develop Local Flood Risks Management Plans in Wales.

The Assembly Government's detailed plans for changes to the flood risk management system through legislative were set out in the Flood and Water Management Bill consultation document: "Annex A: the policy position in Wales. "

We have completed the analysis of the consultation response and, given the broad support for the proposals set out in "Annex A: the policy position in Wales", we will be taking them forward subject to some slight alterations. These will be included in the proposed Flood and Water Management Bill that was included in the UK Governments Draft legislative programme.

## **4.2. Community Engagement and Raising Awareness**

### **- Raising Awareness Initiatives**

A key outcome of the Assembly Government's Environment Strategy is to increase public awareness of the flood risk that they are subject to. We are therefore developing a public awareness programme that will encourage communities to be more resilient to flood and coastal risk, linked to wider activity to promote behaviour change in response to climate change.

In my 2009 remit letter, I commissioned the Environment Agency Wales to increase engagement at community level to raise awareness of flooding in communities at risk. The Environment Agency Wales together with my officials are in the process of scoping raising awareness initiatives which will be included in a programme. The Wales Flood Group will capture, support and monitor the programme on my behalf.

The programme will be used to develop a 'tool kit' of raising awareness measures for operating authorities across, public private and voluntary sectors to use. For example, I am supporting an initiative at the DangerPoint centre in North Wales which will teach primary school children about the dangers associated with flooding. I have also agreed to explore initiatives to raise awareness of flood risk within the secondary school curriculum. These initiatives will run alongside the Environment Agency's Floodwise campaign which delivers flood awareness and their work in promoting the take up of the Floodline Warnings Direct Service.

### **- Pilot Studies**

Following the 2007 floods the Assembly Government funded pilot studies into the flooding which occurred in Barry and Prestatyn. The pilots were led by the local authority and the key outcome of the studies is a product which clarifies the flood risk management plan in place for the particular catchment unit.

The aim of the pilots was to encourage operating authorities to adopt a risk management approach to address actual flooding problems and provide a framework to enable the development of a risk management plan for communities.

One of the key objectives of the studies is to test models for public engagement and ownership of flooding problems affecting their communities. These pilot schemes have considered the risk management themes of raising awareness and community engagement.

The Welsh Assembly Government proposes to use the lessons learnt from the pilots and other work to develop guidance on the flood risk management approach for operating authorities.

### **- National Flood Forum**

Building on the work of the pilot studies we have engaged with National Flood Forum (NFF) since its formation and see the organisation as having an important role in future communication and engagement of communities on flood and coastal risk management issues.

They are able to provide independent, support and advice to communities at risk and can offer advice to the Assembly Government and operating authorities on flooding and its consequences to individuals and communities generally. NFF have supported various groups in Wales over the past few years and there are many other local groups, formed by communities, that are addressing flood risk issues in a particular locality.

## **4.3. Sharing understanding on flood risk**

Information on significant, known surface water flooding problem areas and identifying those areas susceptible to surface water flooding across Wales is being shared with partners at Local Resilience Fora.

Defra, in partnership with the Environment Agency and the Civil Contingencies Secretariat, is engaged in a programme to produce reservoir inundation maps for all reservoirs under the Reservoirs Act as well as guidance and templates for the production reservoir flood plans. This project covers the 4 Local Resilience Fora in Wales who will be provided with the maps by the end of December 2009,

Significant progress has been made in improving the understanding of the vulnerability of critical national infrastructure to flood risk. The Wales Utilities Group, a sub group of the Wales Resilience Forum, is a key forum that provides the robust partnership between

utility providers and the Welsh Assembly Government and ensures the co-ordinated and consistent development of resilience at key sites.

## **5. Plan our response to and recovery from flood events**

### **5.1. Flood Warnings**

The Pitt Review recommended that flood warnings need to be improved to stimulate a more effective response from both the public and emergency responders. I committed additional funding to ensure that the Environment Agency initiatives to improve flood warnings being introduced in response to the Pitt Review were also introduced in Wales. This includes the establishment of a joint Environment Agency and Met Office Flood Forecasting Centre which provides improved warnings for emergency responders and infrastructure operators and the extension of the Floodline Warnings Direct Service in Wales which has now 47,000 people registered in Wales.

### **5.2. Improving Emergency Planning and Response**

Emergency planning is a key area for managing flood risk identified as part of the Assembly Government's move to a risk management approach.

I have tasked the Wales Flood Group to support a programme of work aimed at improving our emergency plans. This includes the development of a Wales Flood Response Framework which will set out the existing local, regional and national structures and arrangements to deal with flooding incidents. Ensuring an effective predetermined response was a key message of the Pitt Review and the Framework will ensure that our response to flooding events is joined up.

We are also working with Defra on their Flood Rescue National Enhancement Project. The project's aim is to improve flood rescue capability across the UK so that a comprehensive emergency response can be deployed and coordinated between all flood rescue service providers, including public, private and voluntary organisations. The Wales Flood Group will assess the appropriateness of the project outputs for Wales.

Alongside this the Wales Flood Group will also consider the recommendations of Wales' Fire Rescue Services' project on an All Wales Water Strategy which is looking at water rescue capability across Wales.

### **5.3. Improving Recovery from Flooding**

Through the Wales Flood and Wales Recovery Groups we are assessing the existing flood recovery arrangements in Wales to identify where improvements can be made. We are also working with the Association of British Insurers (ABI) to explore initiatives aimed at improving recovery from flooding. To take this forward, the ABI have recently agreed to be members of the Wales Flood Group.

On 10 July 2008 I announced a new Statement of Principles between the Welsh Assembly Government and the ABI. This is an agreement for insurers to continue to provide flood cover to the majority of households and businesses at risk and the Assembly Government to undertake actions to manage flood risk. These actions include improving flood risk assessment information for insurers, reducing flood risk and the development of planning policy to prevent inappropriate development in flood risk areas.

Action in promoting general insurance to low level income households is also being taken forward by the Welsh Assembly Government through Community Housing Cymru (CHC), the Chartered Institute of Housing and through its own financial inclusion team.