



Llywodraeth Cymru
Welsh Government

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Local Flood Risk Management Strategies

Local Strategy

November 2011



Summary

Our climate is changing. In the coming years we will experience hotter drier summers and warmer wetter winters. Forecasts suggest that we will see higher sea levels, increases in the intensity of rainfall and more frequent flooding. More of us will experience flooding, the consequences of that flooding will be greater and the risk to life, the economy and the environment will increase. In addition to this, rates of coastal erosion will increase, with more coastal communities facing the risk of loss of land and resources.

It is not possible to prevent flooding or stop coastal erosion; both are natural processes that happen regardless of the actions of humanity. However, we can take steps to manage the risks they present and reduce both their frequency and consequences.

The Flood and Water Management Act 2010 places a responsibility upon Local Authorities, (as Lead Local Flood Authorities (LLFAs)), to develop, maintain, apply and monitor a strategy for local flood risk management (Local Strategy). In the development of a Local Strategy, LLFAs should balance the needs of communities, the economy and the environment. The Local Strategy will form the framework within which communities have a greater say in local risk management decisions. In combination with the National Strategy, the Local Strategies will encourage more effective risk management by enabling people, communities, business and the public sector to work together to:

- ensure a clear understanding of the risks of flooding and erosion, nationally and locally, so that investment in risk management can be prioritised more effectively;
- set out clear and consistent plans for risk management so that communities and businesses can make informed decisions about the management of the residual risk;
- encourage innovative management of flood and coastal erosion risks, taking account of the needs of communities and the environment;
- form links between the local flood risk management strategy and local spatial planning;
- ensure that emergency plans and responses to flood incidents are effective and that communities are able to respond properly to flood warnings; and
- help communities to recover more quickly and effectively after incidents.

It will do this by acting as the evidence base for the decisions and actions required for managing flood risk. Each Local Strategy will need to be developed with communities to ensure a better understanding of local risk management, co-ordinated planning and sustainability. It will also emphasise the need to balance national and local activities and funding.

This guidance has been produced by the Welsh Government to assist LLFAs in Wales in the preparation of their Local Flood Risk Management Strategies and should be read in conjunction with the National Strategy.

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1. Introduction

- 1.1 This guidance has been produced for Lead Local Flood Authorities (LLFA) as defined in the Flood and Water Management Act 2010¹ (the Act). It is non-statutory guidance, which has been prepared to assist each LLFA to meet the requirements of Section 10 of the Act.
- 1.2 It has been structured to inform LLFA of key local flood risk management issues that should be considered in the development of their own strategy for local flood risk management.
- 1.3 Appreciating the differing social, economic, political and geographical factors that affect decision-making in Local Authorities, this guidance is therefore not intended to be prescriptive or directive; it is intended to raise key issues for consideration and application to the specific conditions that exist within Local Authority areas.
- 1.4 In summary, the objectives of this guidance are:
 - to provide information and advice to support all LLFAs in Wales in developing a Local Strategy consistent with Section 10 of the Act;
 - to ensure consistency in determining the detail and objectives for each LLFA in managing their identified flood risk;
 - to link to the National Strategy and comment upon how Local Strategies will inform ongoing development;
 - to provide a link to the work being completed under the Flood Risk Regulations 2009²;
 - to consider data and information sharing and management, and co-operation;
 - to provide guidance on how to communicate with the public, raise awareness and encourage local leadership;
 - to provide advice on the scale of the Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) needed; and
 - to provide advice on partnerships and governance arrangements.

¹ Section 6(9) of the Flood and Water Management Act 2010: <http://www.legislation.gov.uk/ukpga/2010/29/contents>

² Flood Risk Regulations 2009, available from: <http://www.legislation.gov.uk/uksi/2009/3042/contents/made>

2. Key Requirements

- 2.1 The Welsh Government is required to develop a National Strategy for Flood and Coastal Erosion Risk Management (National Strategy) (Please refer to Annex A for further information).
- 2.2 All LLFA in Wales are required to develop, maintain (which includes updating and reviewing), apply, and monitor the application of a strategy for local flood risk management in their area (Local Strategy). They must also prepare and publish a summary of the Local Strategy, including guidance about the availability of relevant information. The Act also provides that each LLFA may issue guidance about the application of the Local Strategy in its area.
- 2.2.1 A “local flood risk” is defined within the Act as being a flood risk from:
- surface runoff;
 - groundwater; and
 - ordinary watercourses.
- 2.2.2 The reference to ordinary watercourses, above, includes a reference to a lake, pond or other area of water which flows into an ordinary watercourse³.
- 2.3 Following the publication of the National Strategy, it is anticipated that all LLFA will have their completed Local Strategies in place by 31 March 2013. This reflects the end of the 2012 / 2013 financial year and the Welsh Government grant funding period. Each LLFA will still receive revenue funding from the Welsh Government, but not on the basis of the current allocation or via the grant system. For the 2013 / 2014 financial year onwards funding to support each LLFA will be provided through the Revenue Support Grant (RSG) system.
- 2.4 LLFA should also be aware of the requirement for them to submit a signed-off draft of their Local Strategy and any associated guidance to the Welsh Ministers for review⁴. To accomplish this LLFA will be expected to submit a signed-off draft of the Local Strategy and any associated guidance to the Welsh Government using one of the media provided overleaf, allowing for at least two months for a response.

³ Section 10(3) of the Flood and Water Management Act 2010:

⁴ Section 10(9) of the Flood and Water Management Act 2010:

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- 2.5 In practical terms, this will mean that a signed-off draft of the Local Strategy would need to be submitted to the Welsh Government by the end of January 2013. Upon receipt, the Welsh Ministers may approve the draft strategy and any associated guidance, with or without modification, or reject it.
- 2.6 All LLFA will also be expected to provide updates to the Environment Agency in relation to the progress of the development of their Local Strategies at the following key stages;
- 2.6.1 consultation stage; and
- 2.6.2 sign off from the LLFA cabinet.

Consistency between National and Local Strategies

- 2.7 In preparing Local Strategies, each LLFA must ensure that they are consistent with the National Strategy produced by the Welsh Government⁵ and that they consult with the public and any Risk Management Authorities affected by the Local Strategy.
- 2.8 Each LLFA will be expected to develop their Local Strategies in keeping with the four overarching objectives for flood and coastal erosion risk management in Wales as set out in the National Strategy. This consistency will ensure that the objectives set out within the National Strategy are delivered through the work of the Risk Management Authorities in Wales.
- 2.9 To ensure that this consistent approach is carried forward and continued in practice the Act also provides that all Risk Management Authorities, in exercising their flood and coastal erosion risk management functions must;
- act in a manner, which is consistent with the National Strategy and guidance, and
 - except in the case of water companies, act in a manner which is consistent with the Local Strategies and guidance.

⁵ Section 10(6) of the Flood and Water Management Act 2010:

- 2.10 In exercising a flood and coastal erosion risk management function in relation to an area in Wales, a water company must have regard to the relevant Local Strategies and guidance.
- 2.11 The Act also provides an opportunity for the Welsh Ministers to, by Order, require a specified person to have regard to the National and Local Strategies and any associated guidance in exercising a statutory function⁶ which may affect a flood or coastal erosion risk in Wales.

⁶ Section 12(6) of the Flood and Water Management Act 2010.

3. What should be included within a local flood risk management strategy?

LLFAs will need to ensure that their Local Strategy is proportionate to the risks identified; where the risks are low the strategy should be simple and concise.

Section 10(4) of the Act, specifies what must be included within a Local Strategy and this is listed below. Each element has been expanded upon with the intention of providing guidance on how to interpret and apply the Act.

- 3.1 the Risk Management Authorities in the Local Authority's area;
- 3.2 the flood and coastal erosion risk management functions that may be exercised by those Authorities in relation to the area;
- 3.3 the objectives for managing local flood risk (including, when available, any objectives included in an LLFA flood risk management plan prepared in accordance with the Flood Risk Regulations 2009);
- 3.4 the measures proposed to achieve those objectives;
- 3.5 how and when the measures are expected to be implemented;
- 3.6 the costs and benefits of those measures, and how they are to be paid for;
- 3.7 the assessment of local flood risk for the purpose of the strategy;
- 3.8 how and when the strategy is to be reviewed; and
- 3.9 how the strategy contributes to the achievement of wider environmental objectives.

3.1 The Risk Management Authorities in the authority's area

3.1.1 Managing local flood risk is the responsibility of each LLFA. The Local Strategy must set out who the Risk Management Authorities are in the area and their relevant functions. In developing Local Strategies a LLFA **must** consult with the public and the other Risk Management Authorities who are affected by the strategy.

3.1.2 Section 6(15) of the Act makes specific reference to the Welsh Risk Management Authorities and lists them as follows:

- the Environment Agency;
- a Lead Local Flood Authority;
- a Highway Authority;
- a District Council for an area for which there is no unitary authority for an area that is wholly or mainly in Wales;
- an Internal Drainage Board for an internal drainage district that is wholly or mainly in Wales; and
- a Water Company that exercises functions in relation to an area of Wales;

3.1.3 For Wales, this means that there are 31 Risk Management Authorities, as listed below. Their contact details, together with a brief definition and an explanation of their activities, have been provided at Annex B.

Welsh Risk Management Authorities

- the Environment Agency;
- the 22 Lead Local Flood Authorities;
- the three Internal Drainage Boards that are wholly or mainly in Wales⁷;
- the one water and sewerage company⁸ which serves Wales and the borders;
- the one water and sewerage company⁹ that serves parts of mid Wales;
- the one water and sewerage company¹⁰ wholly in Wales;
- the one water supply only company¹¹ wholly in Wales; and
- the one water supply only company¹², which serves Wales and the borders.

⁷ Powysland, Lower Wye and the Caldicot & Wentlooge Levels IDBs - The Environment Agency Wales administers a further 11 Internal Drainage Districts in North West Wales.

⁸ Dwr Cymru Welsh Water provides water supply and sewage services to over 3 million people in Wales and some of its adjoining areas.

⁹ Severn Trent Water Plc

¹⁰ Scottish & Southern Water provide water supply and sewage services for the Valleywood site, Llanillid, Bridgend.

¹¹ Albion Water delivers a bulk supply of potable and non-potable water to Shotton Paper Mill in Flintshire.

¹² Dee Valley Water plc is a water only supply company. The area of supply covers 831 square kilometres in North East Wales and the North West of England.

- 3.1.4 When exercising their flood or coastal erosion risk management functions, all Risk Management Authorities (except water companies), are required to act in a manner consistent with both the Local and National Strategies.
- 3.1.5 Water companies, when exercising their flood or coastal erosion risk management functions in relation to an area within Wales, must have regard to the relevant Local Strategies and any associated guidance.
- 3.1.6 In exercising any other function in a manner which may affect a flood risk or coastal erosion risk, a Welsh Risk Management Authority must have regard to both the National and Local Strategies and any associated guidance¹³.
- 3.1.7 Effective joint working between Risk Management Authorities is fundamental to the effective delivery of the obligations under the Act. This is appreciated within the Act itself by imposing a duty to co-operate on all the Risk Management Authorities to facilitate partnership working, the sharing of information and enhanced communications¹⁴.
- 3.1.8 Whilst Risk Management Authorities are specifically referred to in the Act, it is also essential to recognise the key contribution of other internal and external organisations and stakeholders that have a key responsibility for flood risk management in their own areas of discipline. A list of these additional risk management partners has been provided at Annex C.
- 3.2 The flood and coastal erosion risk management functions that may be exercised by those authorities in relation to the area**
- 3.2.1 In addition to the requirement for a Local Strategy to set out who the Risk Management Authorities are in the area it must also record their functions that may be exercised in the area.
- 3.2.2 This is intended to clarify where the flood and coastal risk management roles and responsibilities sit within an area. In recognition of the different Local Authority administrative boundaries, it is not possible within this framework to be prescriptive on how this might be achieved and each LLFA will need to take its own view on this dependent on local circumstances.
- 3.2.3 It is imperative as part of the governance and successful delivery of services that all Risk Management Authorities are aware and take leadership of the functions that they exercise.

¹³ Section 12(1) of the Flood and Water Management Act 2010:

¹⁴ Section 13(1) of the Flood and Water Management Act 2010:

3.2.4 The National Strategy includes further information on this providing:

- A definition of risk management;
- Details of the Welsh Risk Management Authorities; and
- Information on the roles and responsibilities of those Risk Management Authorities.

3.2.5 The National Strategy sets out the responsibilities for all of the Risk Management Authorities as follows;

Environment Agency

3.2.6 Historically the Environment Agency has led on the management of the risks of flooding from main rivers and the sea. However, as a consequence of the Flood and Water Management Act 2010 certain changes have been made to the role and remit of the Environment Agency. In addition to flooding from rivers and the sea, the Environment Agency has new operational responsibilities in relation to coastal erosion and a wider oversight role for all flood and coastal erosion risk management in Wales¹⁵.

3.2.7 This change means that the Environment Agency has a dual role:

- operational responsibilities for flooding from main rivers, the sea and coastal erosion;
- oversight responsibilities in relation to all flood and coastal erosion risk management in Wales.

3.2.8 The operational change has been undertaken in recognition of the links between coastal flooding and coastal erosion, particularly in terms of consequences.

3.2.9 Furthermore, as the Welsh Government moves to introduce a national policy in relation to coastal change, including erosion, accretion, squeeze¹⁶ and managed realignment, allocating operational responsibility to the Environment Agency is intended to enhance existing partnership arrangements such as those seen in our coastal groups and through the establishment of the Shoreline Management Plans.

3.2.10 The oversight change is integral to the delivery of national policy on flooding and coastal erosion risk management and has been taken forward to ensure that the Environment Agency has the remit to support the Welsh Government across the full range of flood and coastal erosion risks affecting Wales.

¹⁵ Section 18(1) of the Flood and Water Management Act 2010.

¹⁶ Please refer to Annex G – Glossary of terms for a definition of “Squeeze”.

3.2.11 As part of their oversight role the Environment Agency will lead on the provision of technical advice and support to the other Risk Management Authorities. They will also lead on national initiatives such as Flood Awareness Wales, the national raising awareness programme, and the single point of contact for enquiries and information on flood risk, currently being piloted via their Floodline Warning Service.

3.2.12 The Flood and Water Management Act 2010 places a number of statutory duties on the Environment Agency including:

- co-operating with other authorities, including sharing data;
- reporting to the Minister on flood and coastal erosion risk in Wales including the application of the National Strategy; and
- the establishment of Regional Flood and Coastal Committees.

3.2.13 The Environment Agency will be the sole Risk Management Authority charged with monitoring and reporting on the National Strategy's implementation. In undertaking this role they will:

- collect data on progress from Risk Management Authorities using existing avenues wherever possible;
- report factual information to Welsh Government; and
- as requested, provide interpretive advice to the Welsh Government.

3.2.14 It will be for the Welsh Government to determine what, if any, action should be taken if the reports from the Environment Agency suggest the National Strategy is not being implemented or that actions being taken are increasing levels of risk.

3.2.15 In addition to their statutory duties, the Environment Agency has a number of what are called permissive powers. These are powers that allow them to do something, but do not compel them to and include:

- powers to request information¹⁷;
- the ability to raise levies for local flood risk management works, via the Regional Flood and Coastal Committees¹⁸;
- powers to designate certain structures or features that affect flood or coastal erosion risk¹⁹;
- the expansion of powers to undertake works to include broader risk management actions; and
- the ability to cause flooding or coastal erosion under certain conditions²⁰.

¹⁷ Section 14(1) of the Flood and Water Management Act 2010.

¹⁸ Section 17(1) of the Flood and Water Management Act 2010.

¹⁹ Schedule 1 of the Flood and Water Management Act 2010.

²⁰ Section 38(1) of the Flood and Water Management Act 2010.

- 3.2.16 This new allocation of responsibilities is also consistent with the Environment Agency's role in relation to the Flood Risk Regulations 2009, which allocates specific responsibility for conducting assessments in relation to mapping and planning the risks of flooding from main rivers, the sea and reservoirs to the Environment Agency, as well as providing guidance to Local Authorities on these matters for flooding from other sources.
- 3.2.17 Under the Regulations the Environment Agency also take on an assessment and coordination role at a national level, ensuring the correct information is passed back to the European Commission.

Single Environment Body for Wales

- 3.2.18 The Welsh Government is currently reviewing the role of the environmental public bodies operating in Wales; primarily the Environment Agency, the Countryside Council for Wales and the Forestry Commission. One of the options under consideration is the merger of these bodies insofar as they operate in Wales and the establishment of a Single Environment Body for Wales.
- 3.2.19 If established, a Single Environment Body for Wales would take on the functions of these three organisations insofar as they operate in Wales. This new body would take on all of the responsibilities of the Environment Agency in relation to flood and coastal erosion risk management in Wales and would undertake all of the functions described within the National Strategy.
- 3.2.20 No final decision in relation to the review of the environmental public bodies has been taken at the time of publication. Ministers are expected to make a decision in late 2011 and any proposals will be consulted upon.

Lead Local Flood Authorities

- 3.2.21 Under the terms of the Flood and Water Management Act 2010, LLFA are responsible for what are termed 'local flood risks'. These include the risks of flooding from ordinary watercourses, surface runoff and ground water²¹.
- 3.2.22 Local Authorities have always had certain responsibilities in relation to ordinary watercourses, and in practice most Local Authorities took the lead in dealing with surface water flooding incidents prior to the changes contained within the Flood and Water Management Act 2010. This is, however, the first time responsibility for the risks of flooding from surface runoff have been allocated to any body in law.

²¹ Section 10(2) of the Flood and Water Management Act 2010.

3.2.23 The Flood and Water Management Act 2010 places a number of statutory duties on Local Authorities in their new role as LLFA including:

- the preparation of local flood risk management strategies²²;
- a duty to comply with the National Strategy²³;
- to co-operate with other authorities, including sharing data²⁴;
- a duty to investigate all flooding within its area, insofar as a LLFA consider it necessary or appropriate²⁵;
- a duty to maintain a register of structures and features likely to affect flood risk²⁶; and
- a duty to contribute to sustainable development²⁷.

3.2.24 In addition to these each LLFA has a number of what are called permissive powers. These are powers that allow them to do something, but do not compel them to and include:

- powers to request information;
- powers to designate certain structures or features that affect flood or coastal erosion risk;
- the expansion of powers to undertake works to include broader risk management actions; and
- the ability to cause flooding or coastal erosion under certain conditions.

3.2.25 LLFA in Wales will also take on the role of the SuDS Adopting and Approving Body in relation to sustainable drainage systems. In this role they will be responsible for both approving the original design of the SuDS and adopting and maintaining the finished system.

3.2.26 The minimum statutory content of Local Strategies is set out in Section 10 of the Flood and Water Management Act 2010 and LLFAs are required to consult with the public in preparing them. Local Strategies must set out the objectives and measures for managing local flood risks along with the timescales and costs of implementation.

3.2.27 To fully enable a LLFA to implement their new roles and responsibilities in respect of local flood risk certain functions previously held by the Environment Agency have been transferred. This includes taking responsibility for consenting works on ordinary watercourses (from April 2012).

²² Section 10(1) of the Flood and Water Management Act 2010.

²³ Section 10(5) of the Flood and Water Management Act 2010.

²⁴ Section 13 of the Flood and Water Management Act 2010.

²⁵ Section 19 of the Flood and Water Management Act 2010.

²⁶ Section 21 of the Flood and Water Management Act 2010.

²⁷ Section 27 of the Flood and Water Management Act 2010.

3.2.28 The allocation of responsibility for local flood risks is replicated in the Flood Risk Regulations 2009. These Regulations allocate specific responsibility for conducting assessments in relation to and mapping and planning (for flood risk areas identified in the assessment) for the risks of flooding from everything other than main rivers, the sea and reservoirs to LLFA.

3.2.29 A number of Local Authorities in Wales are also designated coastal erosion risk management authorities under the Coast Protection Act 1949, providing them with certain responsibilities in respect of coastal erosion and coastal protection. Formally referred to as Coastal Protection Authorities they may also be referred to as Coastal Local Authorities or Maritime Authorities and retain their current permissive powers in relation to coastal erosion risk management.

Internal Drainage Boards (IDBs)

3.2.30 IDBs are independent statutory bodies responsible for land drainage in areas of special drainage need. They are long established bodies operating predominantly under the Land Drainage Act 1991 and have powers to undertake work to secure drainage and water level management of their districts including flood defence works on ordinary watercourses.

3.2.31 No changes have been made to the operational arrangements for IDBs. They will continue to act as the lead operational authority for ordinary watercourses and for drainage and water level management within their drainage districts.

3.2.32 The Flood and Water Management Act 2010 places a number of statutory duties on IDBs including:

- a duty to comply with the National Strategy and the relevant Local Strategy;
- co-operation with other authorities, including sharing data; and
- a duty to contribute to sustainable development.

3.2.33 In addition to these IDBs have a number of what are called permissive powers. These are powers that allow them to do something but do not compel them to and include:

- powers to designate certain structures or features that affect flood or coastal erosion risk;
- the expansion of powers to undertake works to include broader risk management actions; and
- the ability to cause flooding or coastal erosion under certain conditions.

3.2.34 IDBs will need to contribute to the preparation of Local Strategies prepared by LLFA. Provisions to allow IDBs to act on behalf of other Risk Management Authorities were also included within the Act.

Water and Sewerage Companies

3.2.35 Water and sewerage companies are responsible not only for the provision of water, but also for making appropriate arrangements for the drainage of foul water, the treatment of waste, surface water sewers and combined sewers. They have primary responsibility for floods from water and sewerage systems, which can include sewer flooding, burst pipes or water mains or floods caused by system failures.

3.2.36 No changes have been made to the operational arrangements for water and sewerage companies in respect of flood risk.

3.2.37 The Flood and Water Management Act 2010 places a number of statutory duties on Water and sewerage companies including:

- a duty to act consistently with the National Strategy;
- a duty to have regard to the content of the relevant Local Strategy; and
- co-operation with other Authorities, including sharing data.

3.2.38 Water and sewerage companies often hold valuable information which could greatly aid the understanding of flood risks faced by communities across Wales. Water and sewerage companies will also need to contribute to the preparation of the Local Strategies prepared by LLFAs.

Working in Partnership

3.2.39 With the new duty to co-operate set out within the Flood and Water Management Act 2010, the Risk Management Authorities will need to work together to develop a shared understanding of both the risks and the appropriate actions to manage them. It is important that all the Risk Management Authorities work together in partnership if we are to avoid duplication of effort and investment, or worse, contradictory policies and actions that undermine one another. This subject is explored further in section 4 “Partnership Working”.

Sustainable Development

3.2.40 In exercising a flood or coastal erosion risk management function, LLFA and IDBs must also aim to make a contribution towards the achievement of sustainable development.

Sustainable development is about making the best use of our resources to improve our quality of life without damaging the resources or quality of life for future generations.

3.2.41 This requirement is provided under Section 27 of the Act, which also provides that the Welsh Ministers must issue guidance providing a definition of what 'sustainable development' means and how LLFA and IDBs should discharge this duty.

3.2.42 This guidance will be issued directly to LLFA and IDBs within Wales and is also available from the Welsh Government website²⁸.

3.2.43 The Welsh Government is one of only a few governments to have a legal duty to sustainable development and so have made this their central organising principle.

3.2.44 The Welsh Government aims to move towards sustainable development by:

- improving the economy, and social and environmental wellbeing of people and communities - achieving a better quality of life for us and future generations;
- promoting fair and safe communities and equal opportunities; and
- supporting our natural and cultural environments and respecting their limits - we do this by only using our fair share of resources and sustaining our cultural legacy.

3.2.45 There are a number of key things that the Welsh Government will monitor and these Headline Indicators are provided below. Each of them are considered together, not individually, to give an overview of the progress towards a sustainable nation:

- Sustainable resource use - as measured using Wales' Ecological Footprint;
- Sustaining the environment - percentage of Biodiversity Action Plan species and habitats recorded as stable or increasing;
- A sustainable economy - Gross Value Added (GVA) and GVA per head;
- A sustainable society - percentage of the population in low-income households; and
- Wellbeing.

²⁸ Sustainable Development Guidance:
<http://wales.gov.uk/topics/environmentcountryside/epg/waterflooding/flooding/?lang=en>

3.2.46 A report is published annually to highlight the progress that has been made and these can be found on the Welsh Government website²⁹.

Wellbeing

3.2.47 Wellbeing is considered by the Welsh Government as being a positive physical, social and mental state. It requires that:

- basic needs are met;
- individuals have a sense of purpose;
- they feel able to reach personal goals and take part in society.

3.2.48 Wellbeing is enhanced by:

- supportive personal relationships;
- strong and inclusive communities;
- good health;
- financial and personal security;
- rewarding employment; and
- a healthy and attractive environment.

3.3 The objectives for managing local flood risk (including any objectives included in the authority's flood risk management plan prepared in accordance with the Flood Risk Regulations 2009).

3.3.1 Prior to the agreeing of any objectives, LLFA should consider agreeing and documenting a prioritisation system. This will ensure that these decisions are made on a consistent, defensible basis and reduce opportunities for any external pressures creating the objectives.

An objective can be defined as being an outcome or target to be achieved.

3.3.2 When developing Local Strategies, LLFA may wish to consider both high level strategic objectives and more detailed objectives.

3.3.3 In considering objectives LLFA should have regard for the National Strategy and ensure that the strategic aims and objectives provided within the National Strategy are translated into meaningful objectives for their own particular area, focusing on the Prevention, Protection and Preparedness (including Climate Change Adaptation) elements.

²⁹ Sustainable Development updates and news:
<http://wales.gov.uk/topics/sustainabledevelopment/?jsessionid=B28bTtpLC0l8Z56ln8Q32szv36Fh1n2vTdhlcth1Z58c vF1p1Y3!-386975180?lang=en>

- 3.3.4 High level strategic objectives should be developed around the reduction of potential adverse consequences of flooding for human health, the environment, cultural heritage, economic activity and if considered appropriate on local community facilities, non-structural initiatives and/or on the reduction of the likelihood of flooding. By adopting this approach, the objectives will be consistent with those required under the Flood Risk Regulations 2009 and assist in ensuring that this common approach is maintained across Wales.
- 3.3.5 The more detailed objectives provide opportunities for LLFA to capture and record both long and short term objectives including and therefore not forgetting the work that is already being completed i.e. routine maintenance etc.
- 3.3.6 The Environment Agency has developed the table at fig 1, below, in relation to the social, economic and environmental risks objectives. It is important to note that not all of the risk management objectives may be relevant in all LLFA areas and that this is being provided here as an example only. It is not intended to be a definitive list that should be adhered to. Whilst, LLFA should consider objectives under each of the three key headings, i.e. social, economic and environmental, it is the responsibility of each LLFA to determine their own objectives, relevant to their local area.

Flood Risk Management Objectives:

Social:	Reduce distress (No. of people exposed to flooding) Reduce community disruption (No. of residential and commercial properties) Reduce risk to life (No. of people exposed to depth x velocity of flow) Reduce disruption to critical infrastructure (or maintain operation of)
Economic:	Reduce economic damage (e.g. Annual Average Damages (AAD)) Reduce cost of management (note: a risk management outcome for use in appraisal)
Environmental:	Reduce damages to Natura 2000 / SSSIs / BAP sites (or improve sites) Improve naturalness (reduce modification of channels / waterbodies) WFD objective: improve water quality / ecological status (or not deteriorate) - hydromorph and diffuse pollution issues

Fig. 1

3.4 The measures proposed to achieve those objectives

- 3.4.1 When the objectives have been agreed LLFA will then need to agree measures to deliver the objectives accordingly.

A measure can be defined as an activity, which will be undertaken to manage risk and achieve the agreed objectives.

- 3.4.2 A wide range of measures should be considered for the short (0-20 years), medium (20-50 years) and longer term (50-100 years). These should include both structural and non-structural activities.

- 3.4.3 Measures which will achieve multiple benefits, such as water quality, biodiversity and amenity benefits are encouraged and should be promoted wherever possible.
- 3.4.4 LLFA should consider measures under the following high level themes:
- development planning and adaptation (encompassing both new and adaptations to existing developments / landscapes);
 - flood forecasting, warning and response;
 - land, cultural and environmental management;
 - asset management and maintenance;
 - studies assessments and plans;
 - high level awareness and engagement (to increase individual and community resilience); and
 - monitoring (of the local flood risk issues).
- 3.4.5 Even if no measures have been identified under a particular theme, LLFA should record this to reflect the fact that they have all been considered.
- 3.4.6 To assist, the Environment Agency has developed the table, provided at Fig. 2 overleaf, broken down by each of the delivery themes, to illustrate examples of proposed measures that could be used to deliver objectives.

Delivery Themes	Activities	For future reference only*
1 Development planning and adaptation	Sustainable and strategic development planning (eg LDF policies)	Prevention
	SFRA / SFCA (Note: this is not under studies & assessments)	Prevention
	Water Cycle Strategies	Prevention
	Relocation	Prevention
	Minerals and waste plans	Prevention
	Sustainable urban drainage	Prevention
2 Flood forecasting, warning and response	Flood awareness	Preparedness
	Flood warning	Preparedness
	Flood forecasting	Preparedness
	Emergency response plans	Preparedness
	Community flood plans	Preparedness
	Multi-Agency Flood Plans	Preparedness
3 Land, cultural and environmental management	Land management	Prevention
	Resilience	Preparedness
	Resistance	Protection
	Restoration	Prevention
	Environmental Enhancement	Prevention
	Water Level Management Plan	Protection
	Habitat creation	Protection
4 Asset Management and Maintenance (SAMPs)	System Asset Management Plans	Protected
	Defence/structure management	Protected
	Channel maintenance	Prevention
5 Studies, Assessments and Plans (SWMPs, Project Plan, SMPs links)	Investigation	Preparedness
	Risk assessments	Preparedness
	Strategy Plan	Preparedness
	Local property-level flood mitigation - resilience (eg concrete floors)	Preparedness
	Local property-level flood mitigation - resistance (eg flood boards)	Protection
	Pre-feasibility studies, Feasibility studies	Preparedness
	Project plans (ie appraisal of options)	Preparedness
	SWMPs, linking with SMPs	Preparedness
6 High level awareness and engagement (incl discussing 3rd party assets etc)	Partnership working	Preparedness
7 Monitoring	Gravel / shingle monitoring (beach profile)	Preparedness
	Habitats monitoring (eg saltmarsh survey/monitoring, BAP habitat monitoring)	Preparedness
	Wave and tide monitoring	Preparedness
	Topographic survey	Preparedness
	Aerial photography	Preparedness

Fig. 2.

3.4.7 It is important to assess and understand both the current and potential future risks in order to be able to manage and build in adaptation thinking and planning accordingly.

3.4.8 LLFAs should also consider other existing plans, such as the Shoreline Management Plans and Catchment Flood Management Plans to see where the information provided within each can be aligned within the Local Strategy accordingly.

- 3.4.9 An example of a measure under the studies, assessments and plans theme would be to develop a greater understanding of local flood risk. This could be pursued in a particular area where such additional information was identified as being desirable through the assessment provided in the Preliminary Flood Risk Assessments (PFRA).
- 3.4.10 This could then inform technical options (e.g. structural measures) for managing the risk. It will be important to make use of existing policies, plans and strategies in identifying measures. Strategic studies such as Catchment Flood Management Plans and Shoreline Management Plans should be used to help determine measures as they set the strategic context for overall flood and coastal erosion risk management at catchment and coastal cell levels.
- 3.4.11 Structural measures to manage local flood risk could include activities such as changing land management practices to reduce surface runoff and diffuse pollution, attenuating rainfall at source through the use of sustainable drainage systems (SuDS), designing drainage systems for larger than immediately required volumes, considering the management of rainfall on highways, kerb realignment to manage overland flow paths and maintenance activities on drains and gullies.
- 3.4.12 Non-structural measures could include activities such as emergency planning, awareness campaigns, spatial planning policies to reduce flood risk on new developments and consider the adaptive approaches to be taken on existing developments and determining overarching approaches for regulating ordinary watercourses (for example through a policy on consents for culverts).
- 3.4.13 It must also be accepted that even by understanding the risks now and how these might be managed to an acceptable level (using both structural and non-structural measures) there may come a point in the future, for some locations, where the only way to manage these risks to an acceptable level would be to relocate individuals, facilities or communities.
- 3.4.14 If LLFA consider this to be the case in their area then it is imperative that they set and manage the expectations of the public as one of the measures to be adopted. Building an appropriate communication strategy and raising awareness accordingly.
- 3.4.15 LLFA should also note that where a Significant Flood Risk Area has been identified within their PFRA, required under the Flood Risk Regulations 2009, the measures to be identified in the subsequent Flood Risk Management Plan must compliment and accord with those within the Local Strategy.

- 3.4.16 A vital aspect in the identification of the measures will be community engagement to outline the risks now and in the future to the affected communities, discuss and agree any proposed measures to mitigate against these risks and what communities and individuals can also do for themselves. It is perfectly acceptable if a measure is proposed that will not mitigate the risks directly, but improves the knowledge and understanding of those risks in a given area. However, it is imperative that this is clearly communicated to the communities affected.
- 3.4.17 In determining objectives and measures it is recommended that LLFA work with other Risk Management Authorities within its area to not only realise the benefits of collaborative working, e.g. shared solutions and funding, but also to ensure that there is a shared vision and buy in to the outcomes from the outset.
- 3.4.18 In developing objectives and measures LLFA must also consider the impacts of climate change to ensure that the measures are designed and are resilient to the changing climate. Sustainable development is a central core operating principle of the Welsh Government and should be reflected through the work of the LLFA, in line with the statutory duty set out in Section 27 of the Act.
- 3.4.19 Climate change and its impact on flooding must be considered by each Risk Management Authority and must be a factor in any flood alleviation plans. LLFA adaptation programmes should be integral to the Local Strategy.
- 3.4.20 Climate change projections suggest that weather patterns will alter and that there will be an increase in the intensity of rainfall, the frequency of sudden storms and sea level rises across Wales. Taken together these factors are likely to increase the *likelihood* of flooding and coastal erosion.
- 3.4.21 The UK Climate Projections 2009 show that the key findings³⁰ for Wales are:
- by 2050 average annual temperatures are projected to increase by 2.3°C
 - summer daily maximum temperatures are projected to increase by 3.4°C
 - winter minimum temperatures are projected to increase by 2.5°C
 - rainfall is projected to increase in winter on average by 14 per cent and decrease in summer by 16 per cent
 - sea levels around Wales are predicted to rise by approximately 20cm by 2050
 - storm intensity in summer and winter will increase, leading to more severe storms and larger waves attacking our shores

³⁰ The UK Climate Projections 2009 : <http://www.ukcip.org.uk/ukcp09/>, the key findings have been taken from the medium emission scenario, using the central estimate of probability.

3.4.22 The evidence of the increasing risks from both flooding and coastal erosion is underpinned by a series of reports produced in the last few years including the *Foresight: Future Flooding Study*³¹, the *Stern Review on the Economics of Climate Change*³² and most recently, the *Pitt Review into the Summer 2007 Floods*³³.

3.4.23 The Welsh Government is working with the Environment Agency to develop updated guidance on what Risk Management Authorities should plan for in relation to climate change when undertaking flood or coastal erosion risk management works. This guidance will be available later in 2011.

3.4.24 Other guidance to aid the assessment of climate change is already available and these include the Flood and Coastal Erosion Risk Management Appraisal Guidance (FCERM-AG³⁴), Technical Advice Note 15 (Tan15³⁵) and others which are listed within FCERM-AG.

3.4.25 Further information and advice on how to improve individual resilience to flooding is also available from the Environment Agency via their 'Floodline' service³⁶.

3.5 How and when the measures are expected to be implemented

3.5.1 How and when measures are expected to be implemented is a matter for each individual LLFA to determine. They should consider their own priorities and objectives and ensure that these measures are realistic in terms of both the financial and physical resources available and that they are achievable.

3.5.2 Where LLFA have worked in partnership with other Risk Management Authorities in determining their measures they should also agree how, by when and by whom these measures are expected to be implemented.

3.5.3 This should be recorded within the Local Strategy, broken down by the short (0-20 years), medium (20-50 years) and longer term (50-100 years).

31 Foresight: Future Flooding Study: <http://www.bis.gov.uk/foresight/our-work/projects/published-projects/flood-and-coastal-defence/project-outputs/volume-1> & <http://www.bis.gov.uk/foresight/our-work/projects/published-projects/flood-and-coastal-defence/project-outputs/volume-2>

32 Stern Review on the Economics of Climate Change: http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/sternreview_index.htm

33 Pitt Review: Learning Lesson from 2007 Floods:

<http://webarchive.nationalarchives.gov.uk/20100807034701/http://archive.cabinetoffice.gov.uk/pittreview/thepittreview.html>

34 FCERM-AG: <http://www.environment-agency.gov.uk/research/planning/116705.aspx>

35 TAN 15: <http://wales.gov.uk/topics/planning/policy/tans/tan15/?skip=1&lang=en>

36 EA Floodline: 0845 988 1188 or Typetalk 0845 602 6340

3.6 The costs and benefits of those measures, and how they are to be paid for

- 3.6.1 For each of the measures identified within the Local Strategy the associated costs, benefits (be they tangible or intangible) and how they are to be paid for must be determined and incorporated within the Local Strategy.
- 3.6.2 A cost/benefit analysis is ultimately dependant on the strategic priorities and the means of funding, which is why the Local Strategy should address these issues together wherever possible. It is important to establish who is paying for and who is benefiting from any proposed measures, since the answers to these questions will largely determine the cost/benefit analysis process.
- 3.6.3 The Welsh Government will be undertaking a review of the appraisal guidance relating to the allocation of funding, and it is anticipated that this will be out for consultation in 2012. Until any revised guidance is published LLFA should continue to use the current PAG series³⁷ supported by any specific additional or updating material provided by the Welsh Government.
- 3.6.4 The principles of a cost/benefit analysis as outlined in the Flood and Coastal Defence Project Appraisal Guidance FCDPAG3 “Economic Appraisal”³⁸ should be employed.
- 3.6.5 It is acknowledged that measures, to date, have been based upon a cost/benefit ratio where the benefits are determined to be greater in the long term than the associated costs. Going forward, however, measures should retain the cost/benefit compliance, whilst ensuring that they are proportionate to the level of risk presented.
- 3.6.6 When considering the works required in delivering the Local Strategy, LLFA should be mindful of work ongoing to deliver the National Strategy, and also of works carried out by other organisations in the area, particularly other Risk Management Authorities. Early engagement with other Risk Management Authorities will assist with this by providing an opportunity to share and therefore gain a better understanding of the work program for each partner accordingly.

³⁷ Project Appraisal Guidance (PAG) -

<http://wales.gov.uk/topics/environmentcountryside/epg/waterflooding/flooding/?lang=en>

³⁸ Flood and Coastal Defence Project Appraisal Guidance FCDPAG3 “Economic Appraisal”
www.sdccg.org.uk/Climate-change-update.pdf

3.7 The assessment of local flood risk for the purpose of the strategy

- 3.7.1 The PFRA completed by all LLFA, as required by the Flood Risk Regulations 2009, should be used to inform the development of Local Strategies. The identification of the areas potentially at risk of flooding and the assessment of that risk contained therein should be used to determine if further investigation or studies are required.
- 3.7.2 LLFA who have areas identified as being at significant flood risk (as defined by the Welsh Government³⁹) will be completing further specific analysis of these areas, providing Flood Hazard and Flood Risk Maps by 2013 and a full risk management plan for the relevant areas.
- 3.7.3 Whilst, these significant flood risk areas and the further analysis are unlikely to cover the whole of an LLFA area, the information should also be considered and addressed within a Local Strategy.
- 3.7.4 As part of the PFRA exercise LLFA using their own records and liaising with other Risk Management Authorities may have accumulated a considerable information resource relating to historic flooding events. With the new responsibilities provided under the Act for LLFA to investigate all flooding incidences it is expected that this resource will be enhanced and should therefore be considered by each LLFA to inform their assessment of their local flood risk.
- 3.7.5 The Environment Agency has also developed a number of surface water flooding related maps, which are available from their 'DataShare' data download website⁴⁰, which can be very beneficial in considering this area. A listing of all the data sets available on the DataShare website, as at September 2011, has been provided at Annex D.
- 3.7.5a DataShare allows users to view and download the available data in a number of different electronic formats (such as GIS data formats). The data is 'cookie-cut' to a user's area of interest, such as a Local Authority operational area. Use of the data is subject to the licence supplied alongside the download.
- 3.7.5b The data hosted on DataShare is updated as necessary to ensure that the most up to date information is available to download. For example Flood Map, Historic Flood Map and Main Rivers data are updated quarterly and end users are emailed to confirm that the data has been refreshed.

³⁹ Welsh Government and Defra Guidance "Selecting and reviewing flood risk areas for local sources of flooding" available from: <http://www.environment-agency.gov.uk/research/planning/125459.aspx>

⁴⁰ DataShare website available at: <http://www.geostore.com/environment-agency/>

3.8 How and when the strategy is to be reviewed

- 3.8.1 The National Strategy will be formally reviewed on a six-yearly cycle, mirroring the requirements of the Flood Risk Regulations 2009. This will enable the Welsh Government to consider the information being produced from the mapping and planning exercises that the Environment Agency and LLFA will complete.
- 3.8.2 This information will also continue to inform the development of Local Strategies ongoing and so it seems logical for the Local Strategies to reflect this six yearly review cycle.
- 3.8.3 However, Local Strategies should be subject to continuous improvement and not be completed as one off exercises. Regular reviews should be built in to allow an iterative approach to be adopted with all of the relevant data being taken into consideration.
- 3.8.4 It will be for each LLFA to determine the frequency of their review, mindful of the National Strategy reviews, and to ensure that this is clearly set out within their Local Strategies.

3.9 How the strategy contributes to the achievement of wider environmental objectives

- 3.9.1 Each LLFA must consider and record how their Local Strategies contributes to the achievement of wider environmental objectives. How some have been considered within the National Strategy has been recorded below, with the relevant policy, regulations and legislation clarified within Annex E.

Water Framework Directive

- 3.9.2 In keeping with the requirements of the Water Framework Directive (WFD)⁴¹ and the National Strategy, considering sustainable development and working with natural processes⁴² to provide solutions to flood risks will help to mitigate the effects on biodiversity. Risk management measures can significantly benefit biodiversity in protecting designated sites and contributing to improving and maintaining these in a favourable condition. The National Strategy encourages the provision of biodiversity enhancements and minimising any adverse affects and so must also be considered within Local Strategies.

⁴¹ Water Framework Directive (2000/60/EC) available - http://ec.europa.eu/environment/water/water-framework/index_en.html

⁴² Working with natural processes to manage flood and coastal erosion risk - available from - <http://www.environment-agency.gov.uk/research/planning/116707.aspx>

Strategic Environmental Assessment (SEA)

- 3.9.3 The Welsh Government has determined that the National Strategy requires a Strategic Environmental Assessment (SEA) to be undertaken. Given the nature, content and legal requirement to produce Local Strategies, we anticipate that LLFA may also be required to undertake an SEA.
- 3.9.4 It is a legal requirement in the UK for certain plans and programmes stipulated by the SEA Directive (2001/42/EC), to undergo Strategic Environmental Assessment (SEA). The SEA Directive is implemented in Wales by the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004⁴³.
- 3.9.5 The purpose of SEA is to provide for a high level of protection of the environment, by ensuring the integration of environmental considerations into the preparation of the Local Strategy and to contribute to the promotion of sustainable development and environmental protection.
- 3.9.6 The environmental report produced as a result will detail the findings of the SEA, providing a description of the SEA process that was followed and the decisions taken; the consideration given to other policies and legislation that should be taken into account; identifying key environmental issues and trends to provide a context for the Local Strategies. It should clearly set out the assessment of the effects of the Local Strategy together with relevant mitigation and enhancement measures, and should provide proposals for the monitoring and use of the resultant information to develop Local Strategies and influence future reviews.
- 3.9.7 Guidance entitled “*A Practical Guide to the Strategic Environmental Assessment Directive*”⁴⁴ is available, which provides information on how the SEA should be undertaken. Please note that this guidance was originally produced by the Office of the Deputy Prime Minister (ODPM), which then became the Communities and Local Government (CLG) and so any references in the text to ODPM now refer to the CLG.

⁴³ Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (SI 2004 No. 1656, W170) - <http://www.legislation.gov.uk/wsi/2004/1656/contents/made>

⁴⁴ A Practical Guide to the Strategic Environmental Assessment Directive
<http://www.communities.gov.uk/publications/planningandbuilding/practicalguidesea>

Habitats Regulations Assessment

- 3.9.8 The Welsh Government also determined that the National Strategy required a Habitats Regulations Assessment (HRA) to be undertaken. Given the nature, content and legal requirement to produce Local Strategies, LLFA may also be required to undertake a HRA for their Local Strategies.
- 3.9.9 In Wales, the Conservation of Habitats and Species Regulations (SI 490, 2010)⁴⁵, often known as the ‘Habitats Regulations’, implements the EU ‘Habitats Directive’ (Directive (92/43/EEC) on the Conservation of natural habitats and of wild flora and fauna) and certain elements of the ‘Birds Directive’ (2009/147/EC)⁴⁶. This legislation provides the legal framework for the protection of habitats and species of European importance in Wales and England.
- 3.9.10 Regulation 9(5) of the Habitats Regulations requires that a competent authority must consider the requirements of Habitats Directive in exercising any of its functions. Article 6(3) of the Habitats Directive defines the requirements for assessment of plans and projects potentially affecting European sites.
- 3.9.11 This requires that a competent national authority, before deciding to undertake, or give any consent, permission or other authorisation for a plan or project, which is likely to have a significant effect on a European site, and is not directly connected with or necessary to the management of that site, must make an Appropriate Assessment of the implications for that site in view of that site’s conservation objectives.
- 3.9.12 European Commission guidance on the Habitats Directive⁴⁷ and guidance on the Habitats Regulations⁴⁸ sets out several stages to the carrying out of assessments required under Article 6(3) and (4) of the Habitats Directive. The diagram, Fig. 3 overleaf, presents an overview of the HRA process for each LLFA to consider when developing their Local Strategies.

⁴⁵ SI 490, 2010 consolidates various amendments made to The Conservation (Natural Habitats, &c.) Regulations 1994 (SI 2716, 1994). A recent amendment: The Conservation of Habitats and Species (Amendment) Regulations 2011 (SI 625, 2011), amends the 2010 Regulations to ensure certain projects are subject to the requirements of the Habitats Directive.

⁴⁶ Council Directive 2009/147/EC on the conservation of wild birds replaces Council Directive 79/409/EEC; it covers sites classified as the most suitable territories for bird species listed in Annex I of the Directive and regularly occurring migratory birds (termed Special Protection Areas (SPAs)).

⁴⁷ EC HRA Guidance . http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

⁴⁸ Planning Policy Wales. Technical Advice Note (TAN) 5, Nature Conservation and Planning. Welsh Government, September 2009. Annex 6: The appraisal of development plans in Wales under the provisions of the Habitats Regulations. - <http://wales.gov.uk/topics/planning/policy/tans/tan5/?lang=en>

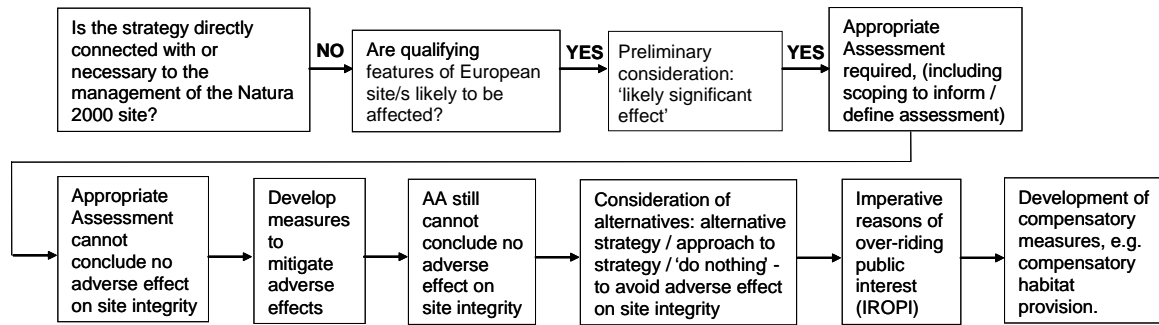


Fig.3

3.3.13 The SEA, HRA and their associated documents relating to the National Strategy are available on the Welsh Government Website⁴⁹.

⁴⁹ SEA and HRA related documents available from:
<http://wales.gov.uk/topics/environmentcountryside/epq/waterflooding/flooding/nationalstrategy/?lang=en>

4. Partnership Working

- 4.1 Partnership working and collaboration is an integral part of managing flood risk and is reflected in the duty to co-operate within Act.
- 4.2 Stronger links with local community groups is encouraged, enabling local expertise to assist in both the identification of the risks and their mitigation or resolution.
- 4.3 In 2007, in recognition of the need to change the way in which flood risks were managed, the Welsh Government applied the principles of the New Approaches Programme (NAP) to three pilot studies being supported at that time. The primary aim of the NAP initiative was to facilitate the required change in the management of flood and coastal erosion risk across Wales, moving away from the defence dominated approaches of the past to a more holistic risk management approach
- 4.4 The three pilot studies were in Barry, which focused on the floods experienced within the Coldbrook Catchment in 2007, Prestatyn, which focused on the flooding experienced in 2007, and Pwllheli, which looked at a combination of issues including coastal and inland flooding and drainage issues. The NAP principles were applied to ensure that these studies not only considered the measures relating to the defences against flood and coastal erosion risks, but also managed the causes, raised awareness amongst the local community, provided emergency support and enhanced community and infrastructure resilience against those risks.
- 4.5 Three separate reviews were undertaken to learn from this new approach and reports produced on each, which are available from the Welsh Government website⁵⁰.
- 4.6 The feedback received from the pilot study representatives suggested that that there are strong benefits to adopting a partnership approach to flood and coastal erosion risk management in Wales, and that these are further enhanced where communities are fully engaged with the process. It was also suggested that whilst developing partnership groups was not without its difficulties the benefits outweighed the disbenefits in all areas.

⁵⁰ Lessons Learnt reports available from ;
<http://wales.gov.uk/topics/environmentcountryside/epq/waterflooding/flooding/?lang=en>

- 4.7 In late 2010, the Welsh Government commissioned a formal evaluation of flood risk management activities of the three ‘New Approaches Programme’ pilot studies and a sample of the European Regional Development Funded capital programme. This evaluation formed the basis of a Flood Risk Management toolkit, which aims to provide guidance on how Risk Management Authorities can effectively engage with communities to raise awareness of flooding. The toolkit is available from the Welsh Government website⁵¹.
- 4.8 The purpose of the ‘toolkit’ is to provide a guide that can be used by anyone who is interested in engaging with communities about flood risk. It is designed to assist those responsible for flood risk management schemes or those who may be involved in wider flood risk management activities, and provides guidance on how to approach community engagement and partnership working. It is based on an evaluation of the effectiveness of recent schemes including the three pilot flood alleviation studies that have been implemented in Prestatyn, Barry and Pwllheli and a sample of the European Structural Regional Funded Programme Schemes. It provides good practice guidance, which has been derived from these experiences.
- 4.9 Working with communities in managing flood risk will help:
- Understand the needs of individuals, communities and businesses;
 - Make better informed plans, decisions and policies;
 - Communities to understand what flood risk means for them, including what they should do in a flood;
 - Communities to recover more quickly after a flood;
 - Meet goals (including timescales);
 - Increase local support;
 - Increase trust in government; and
 - Improve the reputation of LLFA (and other partners)
- 4.10 Further information relating to this has been provided at Annex F.
- 4.11 Section 13 of the Flood and Water Management Act 2010 provides that Risk Management Authorities must co-operate with other relevant authorities in the exercise of their flood and coastal erosion risk management functions. Enabling the sharing of information between authorities in order to discharge this function.
- 4.12 It also allows for Risk Management Authorities to arrange for a flood risk management function to be exercised on its behalf by:
- a) another Risk Management Authority; or
 - b) a Navigation Authority.

⁵¹ Flood Risk Management toolkit
<http://wales.gov.uk/topics/environmentcountryside/epg/waterflooding/flooding/communities/toolkit/?lang=en>

- 4.13 However, this does not apply to the production of Local Strategies with responsibility for preparing these remaining with the LLFA.
- 4.14 Section 14 of the Act provides the Welsh Ministers, LLFA and the Environment Agency with the power to also request a person to provide information in connection with their flood and coastal erosion risk management functions.
- 4.15 The information requested must be provided within the period and in the form or manner specified in the request.
- 4.16 LLFA in Wales are also supported by the commencement of the provisions relating to Section 15 of the Act, which provides an opportunity to issue enforcement notices for non-compliance to a request for information made under Section 14. The enforcement notices must specify the information that has been requested, state that the Authority may impose a penalty if that information is not provided within a specified period (at least 28 days from date of issue) and stating that the person may make representations to the Authority about the notice within this period.
- 4.17 The Authority may then impose a penalty (by way of a penalty notice) on any persons failing to comply with an enforcement notice by the specified date.
- 4.18 This is envisaged as being a last resort as steps are already being taken to establish a more cohesive, partner based approach to managing flood and coastal erosion risk in Wales.
- 4.19 The Environment Agency is currently piloting the provision of a single point of contact for queries and information on flood risk, with a view to rolling the service out across Wales. This would mean the public only need to call one number to report flooding incidents, regardless of the source or who is responsible for the water.
- 4.20 Each LLFA worked closely with the Environment Agency to prepare their Preliminary Flood Risk Assessments under the Flood Risk Regulations 2009, sharing information and best practice by establishing invaluable partnership arrangements.
- 4.21 The European Regional Development Fund investment in Flood and Coastal Erosion Risk Management has also been used by the Welsh Government to encourage robust partnership working and public engagement.

Annex A - National Strategy

1. The Welsh Government is responsible for developing, maintaining and applying a flood and coastal erosion risk management strategy for Wales; a National Strategy.
2. The National Strategy will give effect to the requirements of the Flood and Water Management Act 2010, providing a framework for more specific actions to be implemented by the Welsh Risk Management Authorities. It will create a framework for delivering effective flood and coastal erosion risk management in Wales both now and in the future.
3. Under Section 8 of the Act the National Strategy is required to include details of:
 - the Risk Management Authorities in Wales;
 - the flood and coastal erosion risk management functions that may be exercised by those Authorities in relation to Wales;
 - the objectives for managing flood and coastal erosion risk;
 - the measures proposed to achieve those objectives;
 - how and when the measures are to be implemented;
 - the costs and benefits of those measures, and how they are to be paid for;
 - the assessment of flood and coastal erosion risk for the purpose of the strategy;
 - how and when the strategy is to be reviewed;
 - the current and predicted impact of climate change on flood and coastal erosion risk management; and
 - how the strategy contributes towards the achievement of wider environmental objectives.
4. The Welsh Government is committed to ensuring that the Risk Management Authorities manage the risks of flooding and coastal erosion in Wales and reduce their impacts by adopting a broader range of responses that encompass not only traditional defences and protection against flooding and coastal erosion, but a wider group of interventions and using the full range of risk management tools.
5. An effective flood and coastal risk management system must focus on protecting people and key assets and managing the impacts of the risk on the natural environment.
6. It is the Welsh Government's intention to develop a system that:
 - embeds sustainable development as the key principle informing decisions and which is reflected in an approach that promotes the wellbeing of people in Wales and addresses the needs of the economy and the environment;

- is focussed on the needs of individuals, communities and businesses and which recognises that different groups have different needs and varying capacity to deal with flood risk and that the service they receive must be tailored accordingly;
 - promotes equality and does not exacerbate poverty;
 - is based upon a holistic understanding of the risks and consequences;
 - considers the full range of risk management responses;
 - facilitates long term resource planning; and
 - allows prioritisation of investment, resources and actions.
7. To support the development of this system the Welsh Government is committed to delivering the four overarching objectives for flood and coastal erosion risk management in Wales as follows:
- **reducing the impacts** on individuals, communities, businesses and the environment from flooding and coastal erosion;
 - **raising awareness of and engaging people in the response** to flood and coastal erosion risk;
 - **providing an effective and sustained response** to flood and coastal erosion events; and
 - **prioritising investment** in communities most at risk.
8. The National Strategy will set out the expectations on the Risk Management Authorities in order to achieve these objectives.
9. A public consultation exercise on the Draft National Strategy was completed in 2010 and the consultation responses received along with the formal *Assembly Government Response to the Public Consultation* is available on the Welsh Government website⁵².
10. Following comments received during the consultation and in light of subsequent discussions with the Environment Agency, Countryside Council for Wales and Cadw it was determined that a Strategic Environmental Assessment (SEA) and a Habitats Regulations Assessment should be completed. The completed assessments are available from the Welsh Government website⁵³.
11. The findings of these assessments has fed into the development of the National Strategy ensuring that the environment is afforded a high level of protection by ensuring the integration of environmental considerations into the preparation and adoption of the National Strategy and contributing to the promotion of sustainable development and environmental protection.

⁵² <http://wales.gov.uk/consultations/environmentandcountryside/floodstrategy/?lang=en&status=closed>

⁵³ <http://wales.gov.uk/topics/environmentcountryside/epg/waterflooding/flooding/nationalstrategy/?lang=en>

Annex B - Flood Risk Management Authorities in Wales

Environment Agency Wales

The Agency is a Welsh Government Sponsored Public Body, whose principal aims are to protect and improve the environment, and to promote sustainable development.

Head Office Tŷ Cambria House 29 Newport Road Cardiff CF24 0TP	South West Area Office Maes Newydd Llandarcy Neath Port Talbot SA10 6JQ
South East Area Office Rivers House St Mellons Business Park Fortran Road St Mellons Cardiff CF3 0EY	Northern Area Office Ffordd Penlan Parc Menai Bangor Gwynedd LL57 4DE
Phone Number: 08708 506506 Email: enquiries@environment-agency.gov.uk Website: www.environment-agency.gov.uk	
Floodline Phone Number: 0845 988 1188 (24 hour service) Type Talk: 0845 602 6340	

Lead Local Flood Authorities in Wales

A Lead Local Flood Authority (LLFA), in relation to an area in Wales is either:

- a) the county council for the area; or
- b) the county borough council for the area.

There are 22 county or county borough councils in Wales and they are;

<p>Blaenau Gwent County Borough Council</p> <p>Civic Centre Ebbw Vale Blaenau Gwent NP23 6XB</p> <p>Phone Number: 01495 311556 Minicom: 01495 355959 Email address: info@blaenau-gwent.gov.uk Website: http://www.blaenau-gwent.gov.uk</p>	<p>Bridgend County Borough Council</p> <p>Civic Offices Angel Street Bridgend CF31 4WB</p> <p>Phone number: 01656 643643 Fax: 01656 668126 Email address: talktous@bridgend.gov.uk Website: http://www.bridgend.gov.uk</p>
<p>Caerphilly County Borough Council</p> <p>Tŷ Penallta House Tredomen Park Ystrad Mynach Hengoed CF82 7PG</p> <p>Phone number: 01443 815 588 / 01495 226 622 Out of hours emergency: 01443 875 500 Text phone: 01443 863 474 Email address: info@caerphilly.gov.uk Website: http://www.caerphilly.gov.uk</p>	<p>Cardiff Council</p> <p>County Hall Atlantic Wharf Cardiff CF10 4UW</p> <p>Phone number: (English) 02920 872087 Phone number: (Cymraeg) 02920 872088 Text phone: 02920 872085 Fax: 029 2087 2086 Email address: c2c@cardiff.gov.uk Website: http://www.cardiff.gov.uk</p>
<p>Carmarthenshire County Council</p> <p>County Hall Carmarthen Carmarthenshire SA31 1JP</p> <p>Phone number: 01267 234 567 Email address: direct@carmarthenshire.gov.uk Website: www.carmarthenshire.gov.uk</p>	<p>Ceredigion County Council</p> <p>Neuadd Cyngor Ceredigion Penmorfa Aberaeron Ceredigion SA46 0PA</p> <p>Phone number: 01545 570 881 Email address: reception@ceredigion.gov.uk Website: www.ceredigion.gov.uk</p>

<p>Conwy County Borough Council</p> <p>Bodlondeb Conwy North Wales LL32 8DU</p> <p>Phone number: 01492 574 000 Fax: 01492 592 114 Email address: information@conwy.gov.uk Website: www.conwy.gov.uk</p>	<p>Denbighshire County Council</p> <p>County Hall Wynnstay Road Ruthin Denbighshire LL15 1YN</p> <p>Phone number: 01824 706 000 Customer service centre: 01824 706 100 (Cymraeg), 01824 706 101 (English) Minicom: 01824 706170 Fax: 01824 706180 Email address: customerservice@denbighshire.gov.uk Website: www.denbighshire.gov.uk</p>
<p>Flintshire County Council</p> <p>County Hall Mold Flintshire CH7 6NB</p> <p>Phone number: 01352 752121 Email address: info@flintshire.gov.uk Website: www.flintshire.gov.uk</p>	<p>Gwynedd County Council</p> <p>Council Offices Shirehall Street Caernafon Gwynedd LL55 1SH</p> <p>Phone number: 01766 771000 Fax: 01286 673 993 Website: www.gwynedd.gov.uk</p>
<p>Isle of Anglesey County Council</p> <p>Council Offices Llangefni Anglesey LL77 7TW</p> <p>Phone number: 01248 750057 Website: www.anglesey.gov.uk</p>	<p>Merthyr Tydfil County Borough Council</p> <p>Civic Centre Castle Street Merthyr Tydfil CF47 8AN</p> <p>Phone number: 01685 725000 Email address: customer.care@merthyr.gov.uk Website: www.merthyr.gov.uk</p>
<p>Monmouthshire County Council</p> <p>County Hall Cwmbran Gwent NP44 2XH</p> <p>Phone number: 01633 644644 Fax: 01633 644 666 Email address: contact@monmouthshire.gov.uk Website: www.monmouthshire.gov.uk</p>	<p>Neath Port Talbot County Borough Council</p> <p>Port Talbot Civic Centre Port Talbot SA13 1PJ</p> <p>Phone number: (English) 01639 686868, Phone number: (Cymraeg) 01639 686869 Fax: 01639 763444 Email address: fcs@npt.gov.uk Website: www.neath-porttalbot.gov.uk</p>

<p>Newport City Council</p> <p>Civic Centre Newport South Wales NP20 4UR</p> <p>Phone number: 01633 656656 Minicom: 01633 656657 Fax: 01633 244721 Email address: info@newport.gov.uk Website: www.newport.gov.uk</p>	<p>Pembrokeshire County Council</p> <p>County Hall Haverfordwest Pembrokeshire SA61 1TP</p> <p>Contact centre: 01437 764 551 Out of hours emergency: 0845 601 5522 Fax: 01437 775 303 Email address: enquiries@pembrokeshire.gov.uk Website: www.pembrokeshire.gov.uk</p>
<p>Powys County Council</p> <p>County Hall Llandrindod Wells Powys LD1 5LG</p> <p>General enquiries number: 0845 055 2155 Out of hours emergency: 0845 054 4847 Email address: customer@powys.gov.uk Website: www.powys.gov.uk</p>	<p>Rhondda Cynon Taf County Borough Council</p> <p>Headquarters The Pavilions, Cambrian Park Clydach Vale Tonypany CF40 2XX</p> <p>General enquiries number: 01443 424000 Out of hours emergency: 01685 876 831 Website: www.rhondda-cynon-taf.gov.uk</p>
<p>Swansea City and County Council</p> <p>Civic Centre Oystermouth Road Swansea SA1 3SN</p> <p>Phone number: 01792 636 000 Website: www.swansea.gov.uk</p>	<p>Torfaen County Borough Council</p> <p>Civic Centre Pontypool Torfaen NP4 6YB</p> <p>Phone number: 01495 762200 Fax: 01495 755513 Email address: your.call@torfaen.gov.uk Website: www.torfaen.gov.uk</p>
<p>Vale of Glamorgan Council</p> <p>Civic Offices Holton Road Barry CF63 4RU</p> <p>Phone number: 01446 700111 Website: www.valeofglamorgan.gov.uk</p>	<p>Wrexham County Borough Council</p> <p>The Guildhall Wrexham LL11 1AY</p> <p>Phone number: 01978 292000 Minicom: 01978 292067 Email address: webmaster@wrexham.gov.uk Website: www.wrexham.gov.uk/</p>

Internal Drainage Boards (IDBs) in Wales

An IDB, as referred to in the Flood and Water Management Act 2010, has the same meaning as in section 1 of the Land Drainage Act 1991⁵⁴.

IDBs were set up in areas of special drainage need to sustain both agricultural and developed land use. The principal function of IDBs is to manage water levels in their areas to minimise the flood risk and supply water (irrigation) to people, property and land. IDBs have a duty to “exercise a general supervision over matters relating to the drainage of land” in their areas.

Much of their work involves water level management by improving and maintaining rivers, drainage channels and pumping stations for social, environmental and agricultural benefit. IDB membership includes elected members representing the occupiers of the land in the district and members nominated by Local Authorities to represent other local interests.

In Wales there are three IDB's (listed below) and there are a further 11 drainage districts in North Wales that are administered by the Environment Agency Wales.

<p>Caldicot & Wentlooge Levels IDB</p> <p>Pye Corner Broadstreet Common Nash Newport NP18 2BE</p> <p>Phone number: 01633 275922 Fax: 01633 281155 Website: www.caldandwentidb.gov.uk Email: admin@caldandwentidb.gov.uk</p>	<p>Lower Wye IDB</p> <p>Pye Corner Broadstreet Common Nash Newport NP18 2BE</p> <p>Phone number: 01633 275922 Fax: 01633 281155 Website: www.lowerweidb.org.uk Email: admin@caldandwentidb.gov.uk</p>
<p>Powysland IDB</p> <p>Wern Farm Burgedin Welshpool SY21 9LQ</p> <p>Phone number: 01691 650200 Website: www.powyslandidb.org.uk Email: Gaw001@gmail.com</p>	

⁵⁴ Section 1 of the Land Drainage Act 1991, available from - <http://www.legislation.gov.uk/ukpga/1991/59/section/1>

Water Companies in Wales

A 'water company' means a company which holds:

- an appointment under Chapter 1 of Part 2 of the Water Industry Act 1991⁵⁵; or
- a licence under Chapter 1A of Part 2 of that Act.

<p>Dŵr Cymru - Welsh Water *</p> <p>Pentwyn Road Nelson Treharris CF46 6LY</p> <p>Head office phone number: 01443 452300 Customer services: 0800 052 0140 Website: www.dwrcymru.co.uk</p>	<p>Severn Trent Water Ltd</p> <p>Customer Relations Sherbourne House St Martin's Road, Finham Coventry CV3 6SD</p> <p>Tel: 024 7771 5000 Website: www.stwater.co.uk</p>
<p>Dee Valley</p> <p>Packsaddle Wrexham Road, Rhostyllen Wrexham LL14 4EH</p> <p>Customer Services number: 01978 833200 Fax: 01978 846888 Leakline: 0800 298 7112 Emergency: 01978 846946 Email: contact@deevalleygroup.com Website: Dee Valley Group</p>	<p>Albion Water Limited</p> <p>78 High Street Harpenden Herts AL5 2SP</p> <p>Phone number: 01582 767720 Emergencies: 0800 917 5819 Email: info@albionwater.co.uk Website: www.albionwater.co.uk</p>
<p>Scottish & Southern Water</p> <p>Scottish and Southern Energy plc. Inveralmond House 200 Dunkeld Road Perth PH1 3AQ</p> <p>Phone number: 0845 744 4555 Website: http://www.sse.com/Home/</p>	

* Covers most of Wales.

⁵⁵ Water industry Act 1991, available from - <http://www.legislation.gov.uk/ukpga/1991/56/contents>

Highways Authority

A Highway Authority has the same meaning given by section 1 of the Highways Act 1980⁵⁶. Local Authorities in Wales act as highway authorities in respect of local roads⁵⁷.

⁵⁶ Highways Act 1980, available from - <http://www.legislation.gov.uk/ukpga/1980/66>

⁵⁷ The Welsh Government is responsible for trunk roads and motorways in Wales.

Annex C – Additional Risk Partners

Whilst Risk Management Authorities are specifically referred to in the Act, it is also essential to recognise the key contribution of other internal and external authorities and stakeholders that have a key responsibility for flood risk management in their own areas of discipline.

‘Internal’ partners might include:

Civil Contingencies Unit / Emergency Planners	Strategic/Forward Planning
Property Services	Bridges and Structures
Highways Planning Liaison (Highways Development Control)	Countryside and Coastal teams
Development Engineering (Infrastructure, Supervision and Audit, Road Records and Licensing)	County Farms
Engineering Programme Management (including Local Transport Plan, Safety Engineering, Programming and Implementation)	Public Rights of Way Planning Departments
Parks, Drainage, Amenity and Street Care	Car parks

‘External’ partners might include:

Flood Risk Management Wales (RFCC)	National Park Authorities
Emergency services	Network Rail
Housing Associations	Parish and Town Councils
British Waterways	Local Resilience Forum
National Flood Forum	Countryside Council for Wales
National Farmers Union	Met Office
Local partnerships, forums and community groups	Association of British Insurers
Royal Society for the Protection of Birds	Association of Drainage Authorities
Land owners and land/estate managers	Country Land and Business Association
Universities	Professional Institutions
Developers	Utility Providers
SuDS Working Group for Wales	

Both **Planners** and **Developers** have an important role to play in delivering the outcomes of the Local Strategies. Where appropriate, new developments should contribute to delivering the objectives of Local Strategies. Local Planning Authorities should use Local Strategies as part of the evidence base to inform the formulation and review of Local Development Plans so that future developments have proper regard to the local flood risk management strategy and the need for climate change adaptation.

Regional Flood and Coastal Committees (RFCCs) have been established to take forward much of the work previously carried out by the Regional Flood Defence Committees (RFDCs), with an extended remit to include coastal erosion. They will provide an important local role in guiding flood and coastal activities and approving programmes of work. It is intended that they will also have a wider role in assisting with the review of LLFA risk assessments, maps and plans required under the Flood Risk Regulations 2009⁵⁸ and providing support, as required, for LLFAs in their development of their Local Strategies. In Wales there is only one RFCC - Flood Risk Management Wales.

⁵⁸ Flood Risk Regulations 2009, available from: <http://www.legislation.gov.uk/ukxi/2009/3042/contents/made>

Annex D - Datasets available on the EA DataShare website.

As at September 2011, the following datasets were available to Local Authorities via the Environment Agency DataShare website (<http://www.geostore.com/environment-agency/>):

- Areas Susceptible to Surface Water Flooding
- Areas Susceptible to Groundwater Flooding
- Detailed River Network
- Flood Zones 2
- Flood Zones 3
- Flood Defences
- Flood Storage Areas
- Areas Benefiting from Flood Defences
- Flood Map for Surface Water 1:200 Rainfall
- Flood Map for Surface Water 1:30 Rainfall
- Flood Map for Surface Water DTM
- Historic Flood Map
- Historic Landfill
- National Receptor Dataset - Property Points
- National Receptor Dataset - Social, cultural and environmental (part 1)⁵⁹
- National Receptor Dataset - Social, cultural and environmental (part 2)⁶⁰
- Sealed Main Rivers
- WFD Classification Data
- WFD Risk Assessment Data
- WFD Environmental objectives
- WFD Measures/Actions
- WFD River Waterbodies (River_Waterbodies_fRBMP)
- WFD River Waterbody Catchments (River_Waterbody_Catchments_fRBMP)
- WFD River Basin Districts (RBD_fRBMP)
- WFD Lake Waterbodies (Lakes_fRBMP)
- WFD Coastal Waterbodies (Coastal_fRBMP)
- WFD Transitional (Estuarine) Waterbodies (Transitional_fRBMP)
- WFD Groundwaterbodies (Groundwaters_fRBMP)
- WFD Monitoring Network (MonitoringNetwork_fRBMP)
- WFD Artificial Waterbodies: Canals (AWB_Canals_fRBMP)
- WFD Artificial Waterbodies: Surface Water Transfer Channels (AWB_SWT_fRBMP)
- SSSI Ditches (AWB_SSSI_Ditches_fRBMP)

⁵⁹ Battlefield England; Heritage Coasts; Listed Buildings; National Parks England; National Trail England; MSOA_AUG_2004_EW_BFE; Railways; Roads; Active IPPC; Active RAS Authorisations; Active RAS Registrations; Waste Licences REGIS

⁶⁰ Agircultural Land Classification; International Designations; Local Designations; Miscellaneous Designations; National Designations; Policy Designations; Parks and Gardens; SAM; WHS; Country Parks; LSOA_FEB_2004_EW_BFE; LSOA_FEB_2004_EW_BGC; MSOA_AUG_2004_EW_BGC.

Annex E – Relevant Policy, Regulations and Legislation

Water Framework Directive

1. The Water Framework Directive (WFD) is the most substantial piece of EC water legislation to date and is designed to improve and integrate the way water bodies are managed throughout Europe. It came into force on 22 December 2000 and was transposed into UK law in 2003 via the Water Environment (Water Framework Directives) (England and Wales) Regulations 2003⁶¹. Member States must aim to reach good chemical and ecological status in inland and coastal waters by 2015. It is designed to:
 - Prevent deterioration in the classification status of aquatic ecosystems, protect them and improve the ecological condition of waters;
 - Aim to achieve at least good status for all waters. Where this is not possible, good status should be achieved by 2021 or 2027;
 - Promote sustainable use of water as a natural resource;
 - Conserve habitats and species that depend directly on water;
 - Progressively reduce or phase out releases individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;
 - Progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants; and
 - Contribute to mitigating the effects of floods and droughts.
2. The Water Framework Directive establishes new and better ways of protecting and improving rivers, lakes, groundwater, transitional (where freshwater and sea water mix) and coastal waters. In order to achieve this, in 2009 the Environment Agency produced 3 River Basin Management Plans in Wales setting out measures to protect and improve the water environment. These are currently being implemented and will be revisited in 2015, 2021 and 2027, to ensure that the water bodies status does not deteriorate from standards set in 2009 as part of the initial River Basin Management Plans.
3. It is important that measures to manage local flood risk do not cause deterioration of water bodies and should consider opportunities to improve water bodies in conjunction with local flood risk management.

TAN 15 - Development and Flood Risk (2004)

4. Technical Advice Note 15 (TAN15) sets out the Welsh Government's policy on development and flood risk. It identifies that flood risk should be taken into account at all stages of the planning process. It sets out a precautionary approach that seeks to avoid inappropriate development in

⁶¹ Water Environment (Water Framework Directive) (England and Wales) Regulations 2003:
<http://www.legislation.gov.uk/ukxi/2003/3242/contents/made>

areas at risk of flooding and to direct new development away from the areas of highest risk shown on Development Advice Maps. Where new development is, exceptionally, necessary in such areas, the policy objective is to mitigate flood risk to an acceptable level for the lifetime of the development without increasing flood risk elsewhere, taking into account the impacts of climate change.

Climate Change Act 2008

5. The Climate Change Act 2008 requires a UK-wide climate change risk assessment every five years, accompanied by a national adaptation programme for England-only and non-devolved matters that is also reviewed every five years. The Act has given the UK and Welsh Governments powers to require public bodies and statutory organisations such as water companies to report on how they are adapting to climate change.

Conservation of Habitats and Species Regulations 2010

6. The Conservation of Habitats and Species Regulations 2010 transpose the Habitats Directive into UK law. The Regulations aim to help maintain and enhance biodiversity in the UK and throughout the EU, by conserving natural habitats and protecting priority species and their habitats. The requirement to identify and designate sites of Community importance for habitat type and species, known as Special Areas of Conservation is a key aspect of the regulations. In addition, the Regulations provide strict protection measures for particularly rare and threatened species and require that assessments are undertaken before permissions or consents are granted within European sites.

Environmental Assessment of Plans and Programmes (Wales) Regulations 2004

7. The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 transpose into law European Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment", commonly known as the Strategic Environmental Assessment (SEA) Directive. The aim of the Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. The SEA process identifies the likely significant environmental effects that are likely to result from a plan or programme and should show how the results of the environmental assessment have been taken into account in the implementation of the plan or programme. Guidance is available on the Welsh Government website⁶².

⁶² SEA Guidance available from : <http://wales.gov.uk/topics/environmentcountryside/consmanagement/sea/?lang=en>

The Land Drainage Act 1991

8. The Land Drainage Act 1991 outlines the duties and powers to manage land drainage for a number of bodies including the Environment Agency, Internal Drainage Boards, Local Authorities, Navigation Authorities and riparian owners.

Civil Contingencies Act (2004)

9. The Civil Contingencies Act 2004, and accompanying non-legislative measures, delivers a single framework for civil protection in the United Kingdom capable of meeting a full range of challenges such as flooding. The Act is separated into two substantive parts: local arrangements for civil protection (Part 1) and emergency powers (Part 2).

Annex F – Communicating with the public, raising awareness and encouraging local leadership.

1. Communities offer a wide range of perspective and experiences relating to flooding that can be invaluable in helping to create the vision and response for flood risk management.
2. By encouraging their participation, Local Authorities can achieve a more complete picture of flood risk and better understand and promote solutions. In return, it is incumbent on all to understand the effects and limitations of flood risk management actions and to act responsibly to help themselves and others.
3. Ensuring people are well informed about flood risk management services is crucial to building trust and a strong reputation for local authorities.
4. There are some communities that are acutely aware of the importance of flood risk management and have taken action in their own local areas. These communities are typically those that have experienced at first hand the effects of flooding.
5. There will always be the handful of enthusiastic people in any community who are keen to tackle the threat of flooding, however, it is the task of the LLFAs to encourage all the others to do something. In order to make real progress in reducing the risk of flooding, communities will need to be involved and collective action will need to be seen as both desirable and normal.
6. LLFAs are vitally important in setting the local leadership. Communities are more likely to respond to local leadership who share their concerns and interests. Community leaders can have direct access to people, understand local issues and sensitivities and can sustain activity over time.
7. It should be recognised that a consistent message needs to be conveyed when engaging with communities. Likewise, in setting levels of service and service standards, there is a need for all Risk Management Authorities to 'buy-in' to the overall aims of the LLFA.
8. The key to success will be the attitude Local Authorities have and approach taken in engaging communities, developing a two-way dialogue, recognising that local people's views are important and can influence the decisions which affect them.

9. This will involve working with communities early on to understand their concerns, interests and priorities. The LLFA may still make the final decision but they will have worked with others in developing the solution. Through this process the communities will understand the role of the LLFA and why certain decisions have been made.
10. In deciding how best to engage with the community, to meet both the needs of the LLFA and the needs of the community, you will need to consider and agree: what do you want to do?; why do you want to work with the community and why do they want to work with you?; who do you need to work with?
11. The Environment Agency has experience of engaging with communities and has a national Stakeholder and Community Relations Team which can be accessed through the Environment Agency regional offices, who should be contacted for further details and information.
12. The Welsh Government Flood Risk Management toolkit is also available, which aims to provide guidance on how Risk Management Authorities can effectively engage with communities to raise awareness of flooding. The toolkit is available from the Welsh Government website⁶³.

⁶³ Flood Risk Management toolkit
<http://wales.gov.uk/topics/environmentcountryside/epq/waterflooding/flooding/communities/toolkit/?lang=en>

Annex G – Glossary of Terms used within this Guidance

A

Act - a Bill approved by both the House of Commons and the House of Lords and formally agreed to by the reigning monarch (known as Royal Assent).

B

Bill - a proposal for a new law, or a proposal to change an existing law that is presented for debate before Parliament.

C

Catchment – An area that serves a river with rainwater that is every part of land where the rainfall drains to a single watercourse is in the same catchment.

CCW – Countryside Council for Wales

CFMP - Catchment Flood Management Plans – plans that provide an overview of the flood risk across each river catchment and estuary. They recommend ways of managing those risks now and over the next 50-100 years.

Climate Change – the change in average conditions of the atmosphere near the Earth's surface over a long period of time.

Coastal erosion – the wearing away of coastline, usually by wind and / or wave action.

Coastal erosion risk - measures the significance of potential coastal erosion in terms of likelihood and impact.

Coastal erosion risk management - anything done for the purpose of analysing, assessing and reducing a risk of the wearing away of coastline.

Coastal Flooding – Occurs when coastal defences are unable to contain the normal predicted high tides that can cause flooding, possibly when a high tide combines with a storm surge (created by high winds or very low atmospheric pressure).

Culvert – a covered structure under road, embankment etc, to direct the flow of water.

D

Defences – A structure that is used to reduce the probability of floodwater or coastal erosion affecting a particular area.

Draft Bill – a Bill published in draft before introduction before Parliament.

Drainage Authorities – Organisations involved in water level management, including IDBs, the Environment Agency and RFCCs.

E

EAW / EA - Environment Agency Wales and Environment Agency - A Welsh Government sponsored Public Body responsible to the Welsh Ministers and an Executive Non-departmental Public Body responsible to the Secretary of State for Environment, Food and Rural Affairs.

F

FCERM – Flood and Coastal Erosion Risk Management.

FCERM Function – defined by Sections 4 and 5 of the Flood and Water Management Act 2010 as being a function, which may be exercised by a risk management authority for a purpose connected with either flood risk management or coastal erosion.

Flood – any case where land not normally covered with water becomes covered by water.

Flood and Water Management Act 2010 – an Act of Parliament updating and amending legislation to address the threat of flooding and water scarcity, both of which are predicted to increase with climate change.

Flood risk – product of the probability of flooding occurring and the consequences when flooding happens.

Flood risk management - the activity of understanding the probability and consequences of flooding, and seeking to modify these factors to reduce flood risk to people, property and the environment. This should take account of other water level management and environmental requirements, and opportunities and constraints.

Flood risk management measures – The way in which flood risks are to be managed.

Flood Risk Management Wales (FRMW) – The Regional Flood and Coastal Committee (RFCC) for Wales

Flood Risk Regulations 2009 – Regulations which transpose the EC Floods Directive (Directive 2007/60/EC on the assessment and management of flood risks) into domestic law and to implement its provisions.

Floodline Warnings Direct - is a free service that provides flood warnings direct to you by telephone, mobile, email, SMS text message and fax.

G

Groundwater – water held underground in the soil or in pores and crevices in rock.

Groundwater Flooding – Occurs when water levels in the ground rise above the natural surface. Low lying areas underlain by permeable strata are particularly susceptible.

H

Habitats Regulation Assessment (HRA) - the Conservation of Habitats and Species Regulations (SI 490, 2010), termed the 'Habitats Regulations', implements the EU 'Habitats Directive' (Directive (92/43/EEC) on the Conservation of natural habitats and of wild flora and fauna) and certain elements of the 'Birds Directive' (2009/147/EC). This legislation provides the legal framework for the protection of habitats and species of European importance in Wales.

I

IDB - Internal Drainage Board – Independent statutory bodies responsible for land drainage in areas of special drainage need in Wales and England. They are long established bodies operating predominantly under the Land Drainage Act 1991 and have permissive powers to undertake work to secure drainage and water level management of their districts.

J

K

L

LLFA - Lead Local Flood Authority - (Local Authority) the County Council or the County Borough Council for the area.

Local Flood Risk: defined within the Flood and Water Management Act 2010 as including surface runoff, groundwater and ordinary watercourses.

Local Flood Risk Strategy: required in relation to Wales by Section 10 of the Flood and Water Management Act 2010 local flood risk strategies are to be prepared by lead local flood authorities and must set out how they will manage local flood risks within their areas.

M

Main River – A watercourse shown as such on the Main River Map, and for which the Environment Agency has responsibilities and powers.

Main River Map – The definitive map showing which watercourses have been classified as a Main River.

N

National Strategy – the “National Strategy for Flood and Coastal Erosion Risk Management: Wales” produced by the Welsh Government in response to the requirement under section 8 of the Flood and Water Management Act.

O

Ordinary Watercourse – all watercourses that are not designated Main River, and which are the responsibility of Local Authorities or, where they exist, Internal Drainage Boards.

P

PFRA – Preliminary Flood Risk Assessment as required by the Flood Risk Regulations 2009.

Q

R

Reservoir – an artificial lake where water is collected and stored until needed. Reservoirs can be used for irrigation, recreation, providing water for municipal needs, hydroelectric power or controlling water flow.

Resilience – The ability of the community, services, area or infrastructure to avoid being flooded, lost to erosion or to withstand the consequences of flooding or erosion taking place.

RFCC - Regional Flood and Coastal Committee - An Environment Agency committee, responsible for consenting medium and long term plans and operational plans to the Agency's Board and Head Office. Monitors and reports on progress. In Wales there is only one RFCC and this is the FRMW (Flood Risk Management Wales) group.

Risk – measures the significance of a potential event in terms of likelihood and impact. In the context of the Civil Contingencies Act 2004, the events in question are emergencies.

Risk Assessment – A structured and auditable process of identifying potential significant events, assessing their likelihood and impacts and then combining these to provide an overall assessment of risk to inform further decisions and actions.

Risk Management – anything done for the purpose of analysing, assessing and reducing a risk.

Risk Management Authority – A Welsh risk management authority is defined in Section 6 of the Flood and Water Management Act 2010 as the Environment Agency, a lead local flood authority, a district council for an area for which there is no unitary authority, an IDB for an internal drainage district that is wholly or mainly in Wales and a water company that exercises functions in relation to an area in Wales.

Risk Management Schemes – a range of actions to reduce flood frequency and / or the consequences of flooding to acceptable or agreed levels.

River flooding – occurs when water levels in a channel overwhelms the capacity of the channel.

S

SEA – Strategic Environmental Assessment - A legal requirement in the UK for certain plans and programmes stipulated by the SEA Directive (2001/42/EC), to undergo Strategic Environmental Assessment (SEA). The SEA Directive is implemented in Wales by the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (SI 2004 No. 1656, W170). The purpose of SEA is to provide for a high level of protection of the

environment, to ensure the integration of environmental considerations into the preparation and adoption of plans and programmes, and to contribute to the promotion of sustainable development and environmental protection.

Sewer - An artificial conduit, usually underground, for carrying off sewage (a foul sewer) or rainwater (a storm sewer) or both (a combined sewer).

SMPs - Shoreline Management Plans - A large-scale assessment of the risks associated with coastal processes and helps reduce these risks to people and the developed, historic and natural environments.

Squeeze – In relation to coastal squeeze, is the term used to describe what happens to coastal habitats that are trapped between a fixed landward boundary, such as a sea wall and rising sea levels and/or increased storminess. The habitat is effectively 'squeezed' between the two forces and can diminish in quantity and or quality.

Surface Water Flooding - In the urban context, usually means that surface water runoff rates exceed the capacity of drainage systems to remove it. In the rural context, it is where surface water runoff floods something or someone.

Surface water runoff – This occurs when the rate of rainfall exceeds the rate that water can infiltrate the ground or soil.

Sustainable Drainage Systems (SuDS) – Helps to deal with excesses of water by mimicking natural drainage patterns.

T

Technical Advice Note 15: Development and Flood Risk - TAN 15 supports Planning Policy Wales and makes it clear how local authorities should make decisions about different types of 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.

U

V

W

Watercourse – A channel natural or otherwise along which water flows.

Water company – a company which holds an appointment under Chapter 1 of Part 2 of the Water industry Act 1991 or a licence under Chapter 1A of Part 2 of that Act.

Welsh Local Government Association (WLGA) - represents the interests of Local Authorities in Wales. The three fire and rescue authorities, four police authorities and three national park authorities are associate members.

WFD – Water Framework Directive

Y

Z