Department for Environment Food & Rural Affairs

Llywodraeth Cymru
Welsh Government

Environment Agency

Cyfoeth Naturiol Cymru
Natural Resources Wales

Flood Risk Management Plans:

(i) Mock up of a FRMP Scoping Report

(ii) Mock up of a draft FRMP

August 2013

Flood Risk Management Plans:

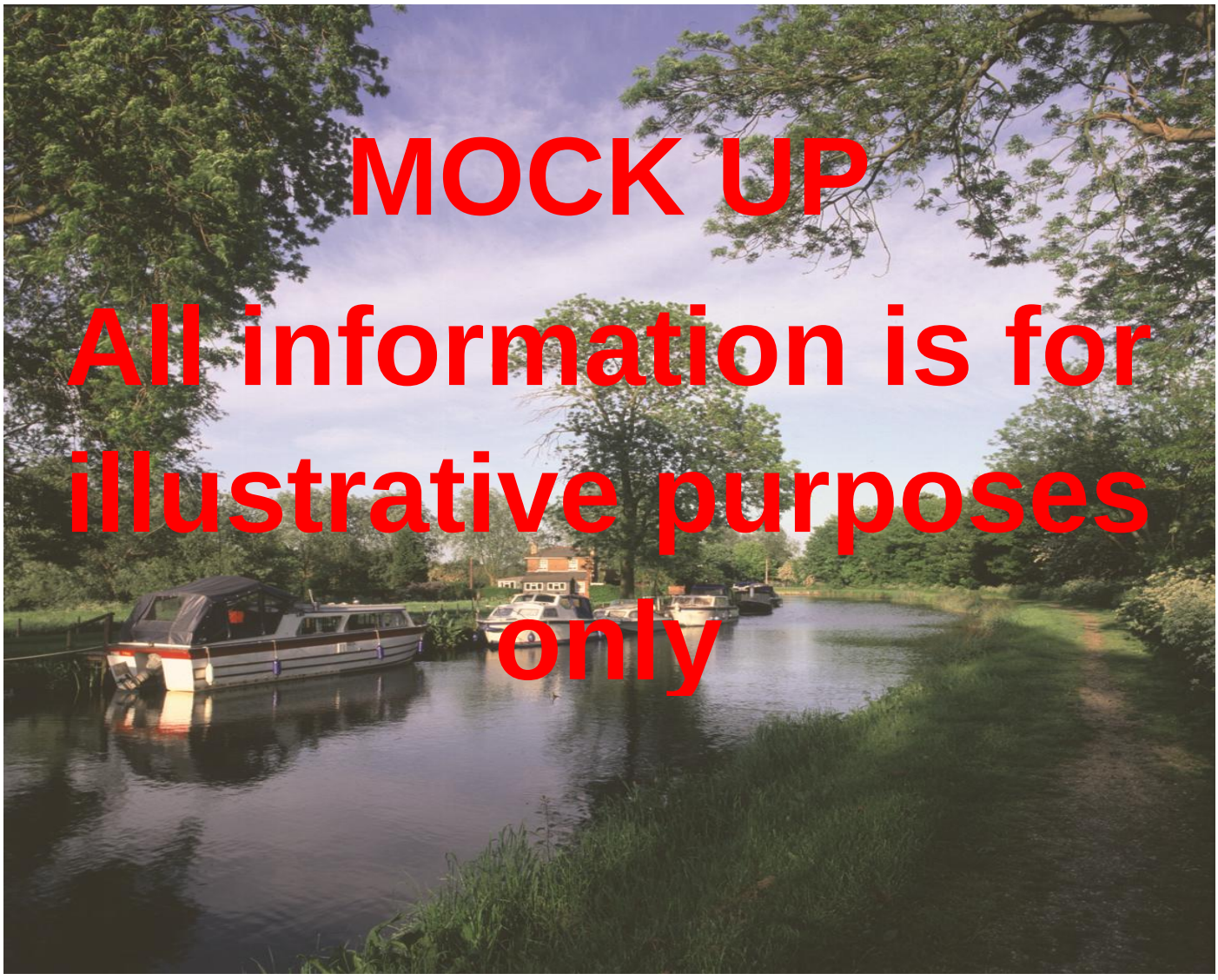
(i) Mock up of a FRMP Scoping Report

August 2013

Planning for floods: *What's being planned and when*

ALL THE INFORMATION IN THIS MOCK UP IS FOR ILLUSTRATION PURPOSES ONLY

Anglian River Basin District
Flood Risk Management Plan – Scoping document
December 2013



Foreword

Flooding is part of nature and something that we need to live with, but risk management authorities can support communities and businesses to adapt to flooding and become more resilient. A healthy water environment is also important for wildlife and in supporting livelihoods. It is the role of the Environment Agency to work with others to make sure the water environment is protected and improved.

Recently published information on flood hazard and flood risk means that understanding of flood risk is improving. We and other risk management authorities are in a good position to set out, with communities, how best to manage the risk of flooding. Planning to manage flood risk is something that the Environment Agency and Lead Local Flood Authorities are already doing but now we are setting out plans for flood risk management across each river basin district. This document is not a consultation, but it highlights the scope of those plans, in terms of what sources of flooding are covered and when we intend to consult the public on those draft plans.

We hope that in understanding what plans are being developed, by whom and when, you will be able to get involved in shaping those flood risk management plans, and ultimately, develop a more resilient society and healthy environment.

Director, Anglian (Environment Agency)

Contents

1 Flooding matters to you

Even if your home or business has not been flooded, you have an interest in flooding. Flooding affects everyone because we all contribute in some way to the cost of managing flood risk and we are all affected in some way by floods when they happen. The best way to manage flood risk is by everyone being actively involved.

Box 1. The purpose of this document

This document is not a consultation. It sets out what flood risk planning is going on across the Anglian river basin district, the timing of specific consultations, and which organisations lead on those consultation.

By highlighting these consultations early on we hope that you will get involved in shaping the plans and be part of managing flooding.

This document also sets out the level of detail of the environmental information that we aim to include in the environmental assessment that will accompany the flood risk management plan we prepare.

2 Supporting information

This document builds on other background information that you might find useful.

To find out more about legal requirements, in particular the Floods Directive and Flood Risk Regulations please visit: Environment Agency web site.

To find out more about the roles and responsibilities of different flood risk management authorities please visit: Defra website.

To find out more about our previous consultation on the approach developing Flood Risk Management plans in England and Wales, and the findings from that consultation, please visit: Environment Agency web site – consultation page

To find out more about flood risk where you live, please visit our web site at: WIYBY

Box 2. Co-ordinating with River Basin Planning

The Environment Agency also leads on the development of River Basin Management Plans that set out how we and others plan to protect and improve the water environment.

We aim to co-ordinate our work effectively, and support others to do the same, so that we can do more for the environment when we manage flooding.

If you want to know more about River Basin Planning, or get involved, visit our web site: Environment Agency web site

3 Planning for flood and coastal erosion risk management

Planning for flood and coastal erosion risk management is evolving over time. There are different types of plans, developed for different reasons, by different authorities. The table below summarises the main plans and who leads on them.

Table 1 Flood and coastal erosion risk management plans in Anglian River Basin District

Plan	Purpose and scope of plan	Drivers	Lead authority
Flood Risk Management Plans (FRMPs) Link to EA web site:	To manage flooding from rivers, the sea, reservoirs, surface water and groundwater.	Required under the European Floods Directive; implemented in England by the Flood Risk Regulations 2009	Lead Local Flood Authorities for flooding from surface water, groundwater and ordinary watercourses. Environment Agency for flooding form main rivers, the sea and reservoirs.
Local Flood Risk Management Strategy Link to Defra web site:	Sets out responsibilities for managing flooding in each Lead Local Flood Authority, objectives and measures for the management of local flood risk (i.e. from surface water, groundwater and ordinary watercourses).	Statutory requirement under the Flood and Water Management Act 2010. No statutory deadline for production.	All Lead Local Flood Authorities must prepare a Local FRM Strategy.
Surface Water Management Plans (SWMPs) Link to Defra web site:	To establish preferred approach to managing surface water flooding.	Voluntary plans.	Likely to be Lead Local Flood Authorities, in partnership with others.
Catchment Flood Management Plans (CFMPs) Link to EA web site:	Current and future inland flood risk management across all catchments.	Voluntary plans. Published in 2009-10	Environment Agency
Shoreline Management Plans (SMPs) Link to EA web site:	Current and future flood and coastal erosion risk management along the coastline.	Voluntary plans. Second round of SMPs published in 2012-13	Coastal Groups
Estuary Strategies Link to EA web site:	Outline investment proposals for flood and coastal erosion risk management in estuaries.	Voluntary plans.	Operating authorities.

4 What planning is happening now

The Floods Directive aims to provide a consistent approach to managing flood risk across Europe. The Directive is implemented through the Flood Risk Regulations and we are currently in the first cycle of planning where some LLFAs need to prepare flood hazard maps, flood risk maps and Flood Risk Management Plans (FRMPs) that cover surface water flooding for the 10 Flood Risk Areas in England and 8 in Wales (see adjacent figure). The Environment Agency, and Natural Resources Wales need to prepare flood hazard and risk maps, and FRMPs, for main rivers the sea and reservoirs covering the whole of England and Wales.

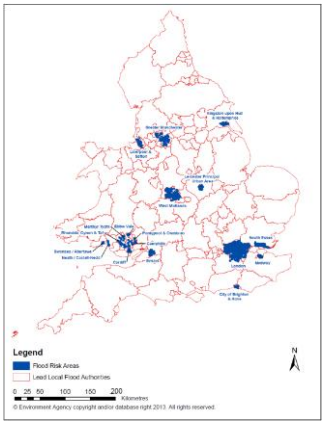


Figure 1 Flood Risk Areas in England and Wales

FRMPs are important because they set out how risk management authorities and communities will work together to reduce the harm that flooding can cause.

5 What that means for Anglian River Basin District

Overview

The legislation allows for separate FRMPs to be prepared by LLFAs for managing flooding from surface water and the Environment Agency for managing flooding from main rivers the sea and reservoirs. So, some LLFAs have decided to prepare separate FRMPs for surface water while some LLFAs have chosen to pool information and prepare plans jointly with the Environment Agency, so that they cover all sources of flooding.

In addition, while the legislation on requires FRMPs for surface water flooding to be prepared for Flood Risk Areas, some LLFAs outside of Flood Risk Areas have chosen to voluntarily pool information with the Environment Agency so that they can contribute fully to the development of flood risk management plans that cover all sources of flood risk. Lead Local Flood Authority areas are shown in Figure 2.

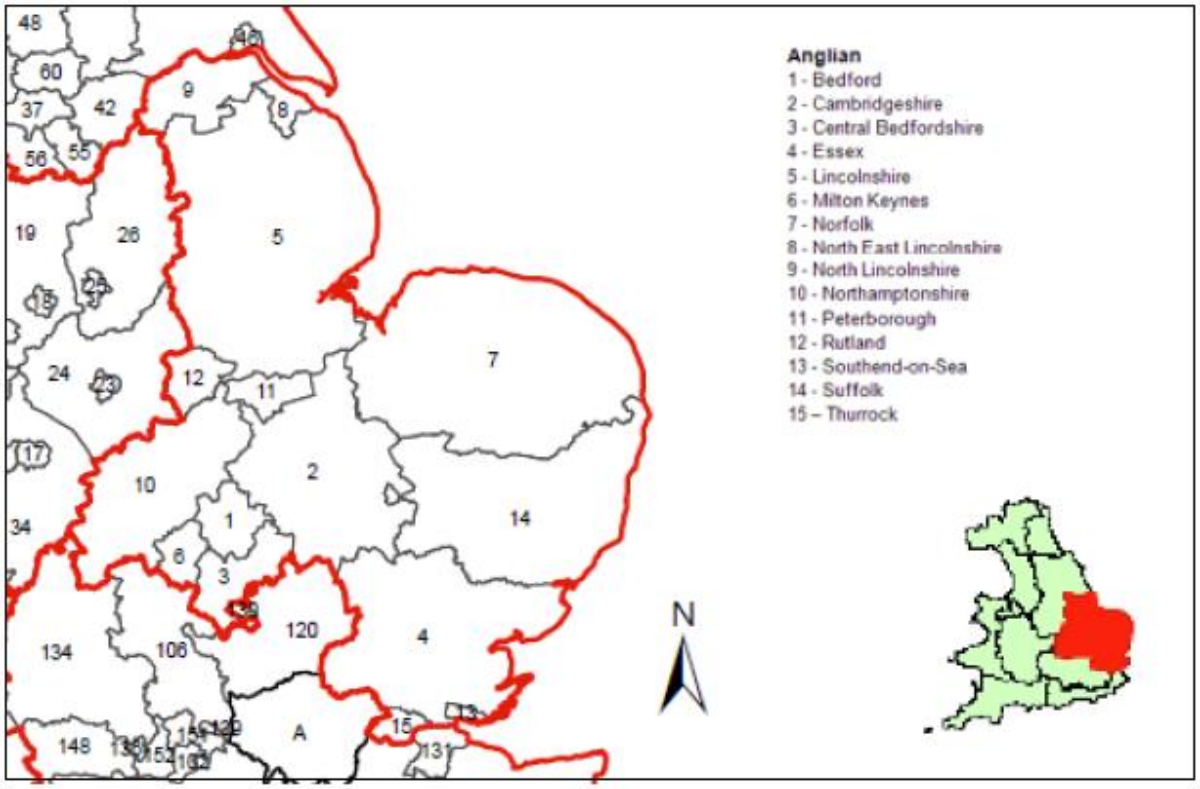


Figure 2 Lead Local Flood Authorities in Anglian River Basin District

Sources of flood risk included in the FRMP for Anglian RBD

This section needs to be prepared following discussions between risk management authorities and decisions by LLFAs on the approach they want to take to meet their statutory obligations under the Flood Risk Regulations, and any voluntary contribution they want to make to the development of the 'all sources' FRMP – below is an example only.

For the Anglian RBD, the areas that will be covered by the 'all sources' FRMP, and areas where the FRMP will only cover particular sources of flooding are summarised in Box 3 and Figure 3. Many Local Flood Risk Management Strategies are also being progressed by LLFAs, and these are listed in Annex 1, along with the timescales when they are being consulted on, so that anyone who wants to be involved in planning to manage flood risk knows when plans are being prepared and consulted on, what they cover, and which authority to contact.

In developing Flood Risk Management Plans we are also seeking to include information about coastal erosion risk management that is set out within Shoreline Management Plans. In this way, risk management authorities can share information about all sources of flooding and coastal erosion risk management in one place, in a way that is more accessible to the various authorities involved in planning, as well as interested communities and the public.

Box 3. FRMPs in Anglian RBD being prepared and consulted on*

For Anglian River Basin District, for the first cycle of planning under the Flood Risk Regulations, Risk Management Authorities will prepare the following plans and consult the public on draft plans during the dates set out below:

- Consultation from June 2014 to December 2014 on a draft single Flood Risk Management Plan that covers coastal erosion risk management for the whole coastline and all sources of flooding for the following areas:
  - Essex County Council (as part of a Flood Risk Area),
  - Lincolnshire County Council (as voluntary information),
  - Northamptonshire County Council (as voluntary information).

  and also covers flooding from main rivers the sea and reservoirs for the rest of the river basin district.

PLUS

- Consultation from October 2014 to December 2014 on a separate draft Flood Risk Management Plan that covers only surface water flooding for the following area:
  - Southend-on Sea Borough Council (as part of a Flood Risk Area)

These areas and sources of flood risk are shown in Figure 2.

**Note: this information is included for illustrative purposes only – as part of this mock up. It does not mean that any authorities have committed to prepare FRMPs using a particular approach.*

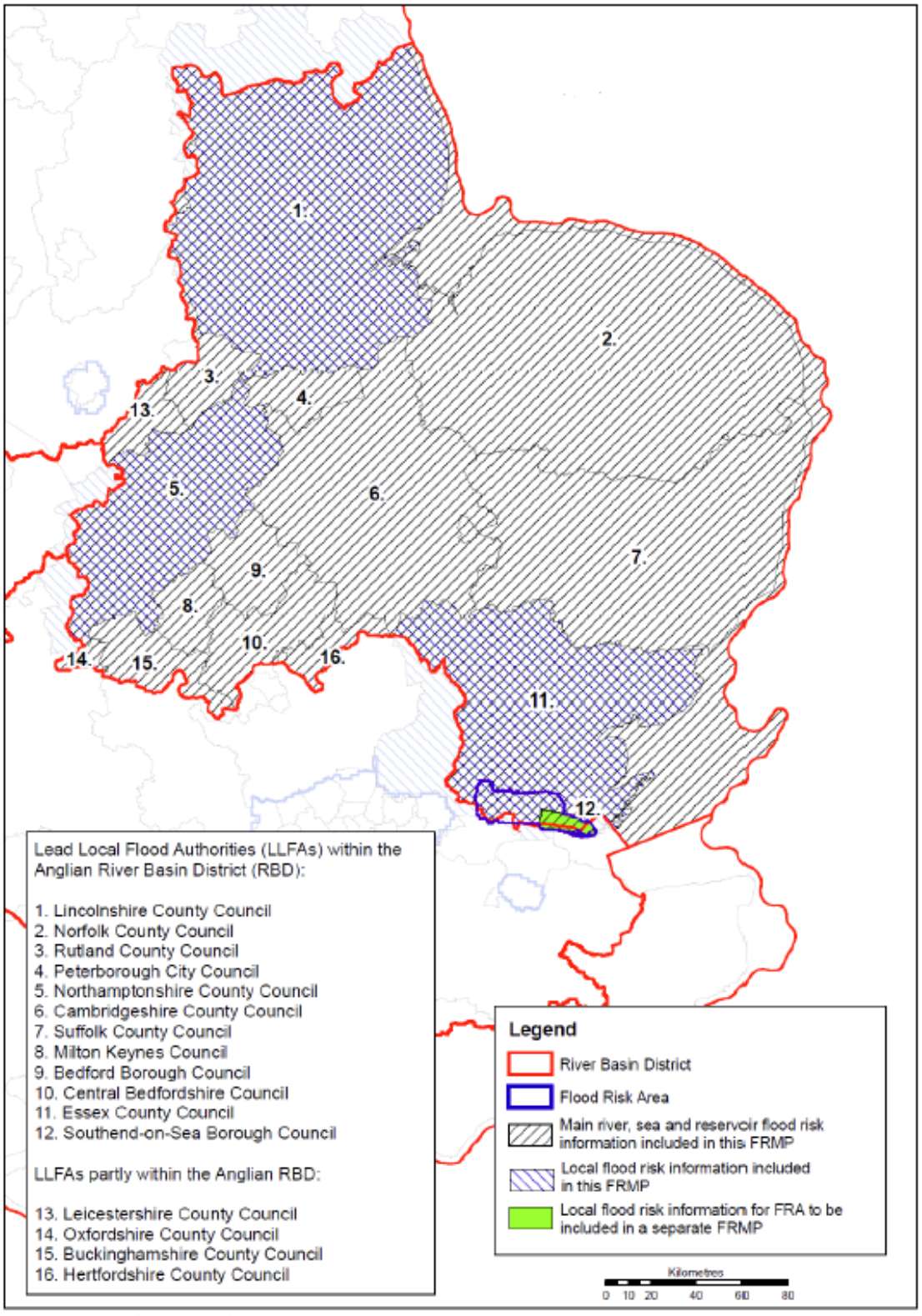


Figure 3 Scope of Flood Risk Management Planning for Anglian River Basin District

5 Strategic Environmental Assessment

The purpose of strategic environmental assessment

The primary purpose of a strategic environmental assessment (SEA) is to develop a plan that delivers better environmental outcomes. By working alongside the development of the plan, the assessment can prompt changes that reduce any negative environmental effects and make the most of the benefits people receive from the environment.

The plan for managing flood and coastal erosion risk can have intended or unintended consequences for people or the wider environment. These may be positive, for example by improving recreational opportunities in an area; or may be negative, for example risk harming historic features.

We will use the SEA to influence the development of the Flood Risk Management Plan to make the most of positive outcomes that can arise from managing flood and coastal erosion risk, and help to avoid or reduce the negative effects.

We want to focus on those effects that are significant. By significant we mean that they would result in noticeable change (both positive and negative) to people's lives and the environment. Further consideration will be given to the environmental effects of individual actions arising from the plan at a local level before they are implemented. When planning specific projects, there is greater scope to be more precise about the effects and the actions required to mitigate or manage them.

Providing a strategic context

In preparing to manage flood and coastal erosion risk over the next six years there are a range of other policies, plans and programmes that we need to consider. These include those produced by the government, government agencies and local authorities. They could:

- have a significant effect on flood and coastal erosion risk and therefore we might need to think about how we adapt our plans
- conflict with actions we want to include in the plan
- inform us of key environmental issues that we should consider or provide additional environmental information
- help us to identify opportunities to take action that benefits the objectives of more than one plan
- help us to identify the potential cumulative effects of the plans

We have set out the plans that we consider to be relevant to the Anglian River Basin District in Annex 2 to this document. We will be producing Environmental Reports to be published with the draft Flood Risk Management Plans, that will provide a brief commentary of the key issues arising from the plans, policies and programmes and how we have taken them into account. *[Note: LLFAs will need to indicate if they will be preparing Environmental Reports for any separate FRMPs.]*

Key environmental effects

Water environments provide a range of benefits which the Flood Risk Management Plans seek to protect and enhance, including economic, social and environmental benefits. There is a strong link between these benefits and the environmental factors that we will address as part of the SEA. Additionally, we will assess the significant effects on the wider environment.

The SEA Regulations set out a number of environmental factors to be considered during the assessment. In our assessment we want to focus on those effects that are likely to be significant, whether positive or negative. The following table sets out the environmental issues referred to in the Regulations, indicates how these relate to the FRMPs and whether we intend to address the issue as part of the SEA.

Where we propose to include an environmental effect in the assessment, the key issues listed in the table are not intended to be a comprehensive list of possible impacts, but simply to provide some justification for inclusion. In the text following Table 2, we have provided some background on the current environment and indicated how the key environmental effects more specifically apply to Anglian River Basin District.

The assessment will focus on those actions within the FRMP that result in 'on the ground' activity such as, constructing / removing something, changes to land management or river restoration. Other types of actions may be more focused on promoting changes in behaviour of those that may be exposed to flood risk. Examples could be, education campaigns, developing guidelines, etc. These are undoubtedly beneficial, but it is difficult to assess, with any certainty, whether these are likely to result in significant environmental effects. We therefore do not intend to consider these types of actions further in the assessment. The Environmental Report will be clear on which actions have been assessed and which effects are too uncertain to justify consideration.

Table 2: Scoping environmental effects for the SEA

Environmental topic	Key effects to consider	To be addressed by the SEA?
Biodiversity, flora and fauna	• Effects on areas protected for their nature conservation value (e.g. European Special Areas of Conservation and Special Protection Areas, Ramsar sites and the nationally designated Sites of Special Scientific Interest) • Effects on protected species and habitats associated with the water environment • Effects on and of species introduced from outside of the UK that are harmful to the environment • Effects on the wider protection and enhancement of biodiversity.	Yes
Population and human health	• Effects on the recreational use of water • Effects on growth, regeneration and tourism • Improving access to water environments and the associated health benefits • Effects on water abstracted for drinking water • Effects on water dependent industry, e.g. agriculture, energy and ports.	Yes
Soil	• Effects of polluted land on the water environment • Effects on areas of land vulnerable to erosion • Effects on nitrate vulnerable zones • Influences on how land is managed	Yes

Water	• Effects on the habitats and the shape and flow of water bodies • Effects on groundwater quality and quantity • Effects on bodies of water resulting from abstraction • Effects on the quality of coastal waters, including bathing waters • Effects on flood and coastal erosion risk management	Yes
Air	While individual actions may have a small localised impact on air quality, at a strategic level, it very unlikely that the River Basin Management Plan would have a significant effect on air quality within the river basin district.	No
Climatic factors	• Climate change mitigation and adaptation • Flood risk • Changes in greenhouse gas emissions relating to water management	Yes
Infrastructure	• Effects on water related infrastructure such as canals, hydro power plants, flood defences, ports and harbours, etc.	Yes
Cultural heritage	• Effects on sites designated for their historic importance • Effects on the wider historic environment associated with water bodies.	Yes
Landscape	• Effects on landscapes designated for their quality • Effects on wider landscape character and quality • Visual impacts on the landscape setting	Yes

Note: this list is for illustrative purposes only for this mock up

The Environmental Report, to be published with the draft FRMP, will provide information about the environment. The Anglian River Basin District is relatively large and so, our description will be at a strategic level.

Annex 1. A summary of Local Flood Risk Management Strategies prepared by Lead Local Flood Authorities

Number on map	Lead Local Flood Authority	Within a Flood Risk Area for surface water flooding (Yes/No)	Local flood risk information included in Anglian 'all sources' FRMP?	Local Strategy progress (as of March 2013)	Dates of consultation	Publication date
1	Lincolnshire CC	No	Yes	Summary of strategy published	*xxx date*	Published December 2012
2	Norfolk CC	No	No	In progress	*xxx date*	
3	Rutland	No	No	In progress	*xxx date*	
4	Peterborough City	No	No	In progress	*xxx date*	
5	Northamptonshire CC	No	Yes	Public consultation on strategy in progress or complete	*xxx date*	Consultation ended February 2013. Cabinet approval Summer 2013
6	Cambridgeshire CC	No	No	Summary of strategy published	*xxx date*	Published April 2013
7	Suffolk CC	No	No	Summary of strategy published	*xxx date*	Published February 2013
8	Milton Keynes	No	No	In progress	*xxx date*	
9	Bedford BC	No	No	In progress	*xxx date*	
10	Central Bedfordshire	No	No	In progress	*xxx date*	
11	Essex CC	Yes	Yes	Summary of strategy published	*xxx date*	Published February 2013
12	Southend-on-Sea BC	Yes	No - separate FRMP	In progress	*xxx date*	
13	Leicestershire CC	No	No	In progress	*xxx date*	
14	Oxfordshire CC	No	No	In progress	*xxx date*	
15	Buckinghamshire CC	No	No	Summary of strategy published	*xxx date*	Published May 2013
16	Hertfordshire CC	No	No	Summary of strategy published	*xxx date*	Published 2013
	To be completed with relevant information. Note: the information included for this mock up is for illustrative purposes only					

Note: LLFAs will also want to highlight the dates of consultation of any Environmental Reports prepared for the environmental assessment, as well as any Habitats Regulations Assessments and Appropriate Assessments undertaken for their Local FRMP Strategies.

Annex 2. Policies, plans and programmes to be considered by the Strategic Environmental Assessment

Table A sets out the national plans, policies and programmes and Table B those that are only relevant to the catchment or River Basin District. Rather than identify every possible plan or programme we intend to focus on those that are likely to significantly influence the plan or our consideration of the environmental effects.

Table A: National plans, policies and programmes to be considered in the SEA

Policy / Plan / Programme	Published by	Year
Water white paper: Water for life	Defra	2011
Water for people and the environment: Water resources strategy for England and Wales	Environment Agency	2009
National Planning Policy Framework	Communities & local government	2012
Natural environment white paper: The natural choice: Securing the value of nature	Defra	2012
Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services	Defra	2012
Government Forestry & Woodlands Policy Statement	Defra	2013
The invasive and non-native species framework strategy for Great Britain	Defra, Scottish Government, Welsh Assembly Government	2008
Coastal squeeze: Implications for flood management. The requirements of The European Birds and Habitats Directives. Defra policy guidance.	Defra	2005
Safeguarding our soils: A strategy for England	Defra	2009
Understanding the risks, empowering communities, building resilience: The national flood and coastal erosion risk management strategy for England	Defra & Environment Agency	2011
UK Marine Policy Statement	HMG, NI Executive, Scottish Government, Welsh Assembly Government	2011
National Policy Statements (Overarching Energy, Renewable Energy, Fossil Fuels, Oil and Gas Supply and Storage, Electricity Networks, Nuclear Power, Ports, Hazardous Waste, Waste Water Treatment)	HMG	2011-12
Managing the Environment in a Changing Climate	Environment Agency	2010
The Government's Statement on the Historic Environment for England 2010	HMG	2010
All Landscapes Matter	Natural England	2009

When identifying plans, policies and programmes relevant to the Anglian River Basin District, we have concentrated on those plans that are similar in scale to the flood risk management plan we are preparing for Anglian River Basin District, or that are likely to directly impact on the catchments within the Anglian River Basin District. We anticipate that as plans and projects are implemented the implications of any local plans will also be considered. There are some plans that provide comprehensive coverage across the Anglian River Basin District, for example local authority core strategies. Rather than list these individually we have identified the type of plan, and when we undertake the assessment we will consider all of the plans of this type that are relevant to the Anglian River Basin District.

Table B: Plans, policies and programmes relevant to the Anglian RBD

Policy / Plan / Programme	Published by	Year
Anglian Rivers Sea Trout Project: Phase 1 Report	Anglian Sea Trout Project partnership	undated
Broads Plan	Broads Authority	2011
The Chilterns AONB Management Plan 2008-2013	Chilterns Conservation Board	2008
Dedham Vale AONB and Stour Valley Management Plan 2000-2015	Dedham Vale AONB and Stour Valley Joint Advisory Committee	2010
Heritage at Risk 2012: East of England	English Heritage	2012
Anglian Region Drought Plan	Environment Agency	2012
Eel Management Plan: Anglian River Basin District	Environment Agency	2009
Water resources strategy: Regional Action Plan for Anglian Region	Environment Agency	2009
Catchment Abstraction Management Plans	Environment Agency	Various
Anglian River Basin Management Plan (Draft)	Environment Agency	2014
Catchment Flood Risk Management Plans (Note: we will be drawing from these to develop the FRMPs)	Environment Agency	Various
Lincolnshire Wolds AONB Management Plan 2012-2017	Lincolnshire Wolds Countryside Service and Lincolnshire Wolds Joint Advisory Committee (AONB Partnership)	2011
Core Strategies	Local authorities	Various
Minerals and Waste Plans	Local authorities	Various
Regional Transport Plans	Local authorities	Various
Surface Water Management Plans	Local authorities	Various
Water Cycle Strategies/Studies	Local authorities	Various
Developing Marine Plans for East Inshore, East Offshore and	Marine Management Organisation	Various

South East Inshore		
National Character Areas: Profile 46 The Fens	Natural England	2013
National Character Areas: Profile 85 The Brecks	Natural England	2012
Investing in the East of England's natural assets, state value and vision	Natural England	2009
Norfolk Coast AONB Management Plan 2009-2014	Norfolk Coast Partnership	2009
Final Draft Suffolk Coast and Heaths AONB Management Plan 2013-2018	Suffolk and Coast Heaths AONB Partnership	2012
Suffolk Coast and Heaths AONB Management Plan 2008-2013	Suffolk and Coast Heaths AONB Partnership	2008
Coastal and Flood Risk Management Strategies, including Local Flood Risk Management Strategies prepared by LLFAs and Surface Water Management Plans	Various	Various
Local Biodiversity Action Plans	Various	Various
Shoreline Management Plans (Note: we will be drawing from these to develop the FRMPs)	Various	Various
Water Level Management Plans	Various	Various
Drought Plan	Water companies (Anglian Water, Cambridge Water Company, Essex and South Suffolk Water and Affinity Water)	Various
Water Resources Management Plan	Water companies (Anglian Water, Cambridge Water Company, Essex and South Suffolk Water and Affinity Water)	Various

Flood Risk Management Plans:

(ii) Mock up of a draft FRMP

August 2013

Introduction to the mock FRMP

This mock up has been developed to prompt feedback on the format of the draft flood risk management plan. It has been developed with support from:

- *Anglian Water*
- *Essex County Council*
- *Lincolnshire County Council*
- *Northamptonshire County Council*

Some thoughts from risk management authorities involved in this mock up

In working on this mock up, our partners have shared their thoughts on flood risk management planning.

"As part of working in partnership with other risk management authorities across the area, we think it's important to highlight where we're contributing to managing flood risk".

Anglian Water, July 2013

"Essex County encompasses a Flood Risk Area (South Essex), so we must prepare a FRMP by December 2015. We've been working in partnership with other risk management authorities since becoming a Lead Local Flood Authority, so the opportunity to work on a plan for all sources of flood risk makes sense in any case. Our Local FRM Strategy has now been completed, and as our new team's understanding of surface water risk across the County improves, we recognise the benefit of working with other risk management authorities to develop a FRMP that includes shared actions where mutual benefits and priorities are identified"

Essex County Council, July 2013

"NCC have been provided with a great opportunity to help develop and influence the structure and content of Flood Risk Management Plan template. We very much look forward to the continued partnership working and in particular the opportunity to create an all-encompassing, shared action plan between all partners moving forward in the future".

Northamptonshire County Council, July 2013

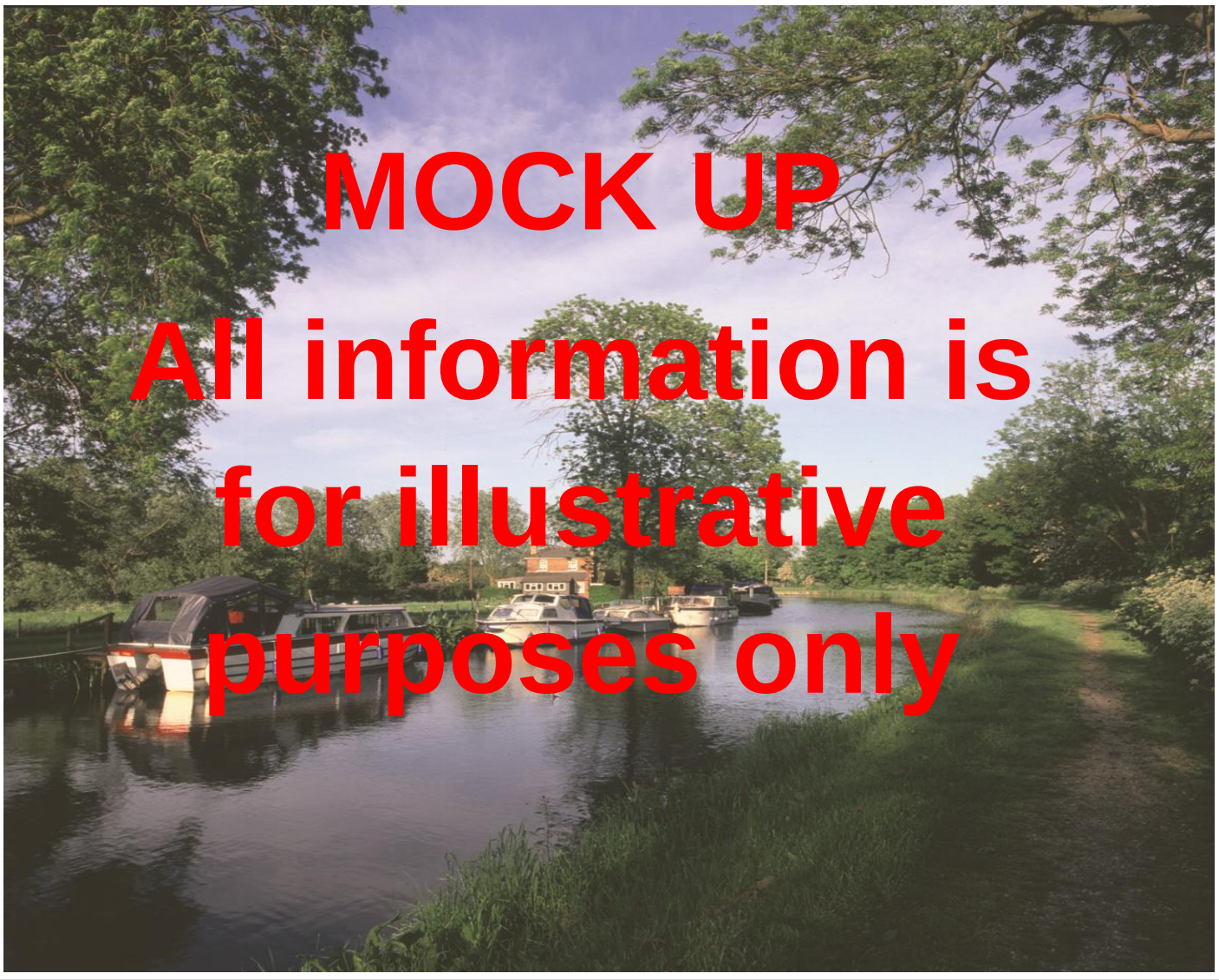
"The Lincolnshire Flood Risk and Drainage Management Partnership has collaboratively produced a Joint Local Flood Risk and Drainage Management Strategy, which covers all sources of flood risk. We look forward to developing our Flood Risk Management Plans on a similar basis, taking account of new information such as the excellent work undertaken on the updated Flood Maps for Surface Water, to enable us to gain the best understanding of the overall flood risk to our communities and derive shared actions and priorities."

Lincolnshire County Council, July 2013

Planning for floods: *What's planned for your area*

ALL THE INFORMATION IN THIS MOCK UP IS FOR ILLUSTRATION PURPOSES ONLY

Anglian River Basin District
Flood Risk Management Plan – Draft for consultation
June 2014



We are risk management authorities. We work in partnership to reduce risk the risks to people and properties from flooding.

We cannot do this alone. We work closely with others, including government, business, other agencies, civil society groups and the communities we serve.

Welcome

This flood risk management plan sets out the proposed actions to manage flood risk in the Anglian river basin district (RBD) from 2015 to 2021 and beyond. This plan should be read in conjunction with the following:

- xxx FRMP for surface water flooding in XXX LLFA, scheduled for consultation from xx data to xx date. List all FRMPs prepared separately for Flood Risk Areas and when these are available for consultation (*this will have been set out in the FRMP Scoping document*).

- The following Local Flood Risk Management Strategies:

  List Local FRM Strategies in the Anglian RBD also being consulted on from June to December 2014.

Risk Management Authorities (RMAs) work in partnership to reduce the risk of flooding. The following RMAs have worked together across the Anglian River Basin District to develop this Flood Risk Management Plan (FRMP):

- Anglian Water Company
- Environment Agency
- Essex County Council
- Lincolnshire County Council
- Northamptonshire County Council (who also contributes to the Humber FRMP)
- xxx County Council
- xxx District Council
- xxx Internal Drainage Board
- Etc. [list contributing organisation - alphabetised]

In preparing this FRMP we have considered flood and coastal erosion risk across the RBD and set out how we, as individual organisations and partner risk management authorities, can work with communities and others to manage flood risk from rivers (main rivers and ordinary watercourses), the sea, reservoirs, surface water and groundwater. This plan also considers coastal erosion risk management. The proposals within this FRMP are set out to share with others so that they too can contribute to reducing risk, and help shape a more sustainable future for communities and businesses, and the environment within which they thrive.

These proposals are subject to funding and we will monitor and report annually on progress in implementing them. We will revise the proposals in the FRMP by 2021, ensuring that we can maintain a forward look of prioritised proposals for managing flood risk.

We want your views by 22 December 2014 on the proposed plan and ask you to use the E-consultation tool at the following website: **xxxxxxxxxx.gov.uk.**

Contents

What is a Flood Risk Management Plan?

[This should be two pages. Each paragraph should be brief]

What is the FRMP for?

Flood risk management planning is important because it sets out where and how to manage flooding so that communities and the environment benefit the most. It's integral to the way risk management authorities work and the new European legislation has formalised this.

Why are we preparing FRMPs?

The Flood Risk Regulations 2009 (the Regulations) implement the requirements of the Floods Directive. They require some Lead Local Flood Authorities (LLFAs) and the Environment Agency (EA) to prepare and publish Flood Risk Management Plans (FRMPs) by December 2015. The Regulations set up a six year cycle of assessing, mapping and developing plans to manage flood risk.

We are currently in the first cycle of implementation where Lead Local Flood Authorities are only required to prepare FRMPs in Flood Risk Areas (Figure 1), where the risk of flooding from local flood risks is significant (as described in Government guidance). The Environment Agency is required to prepare FRMPs for all of England covering flooding from main rivers, the sea and reservoirs. The Environment Agency is also required to co-ordinate the publishing of FRMPs for each river basin district (the areas of England and Wales for reporting to the European Commission).

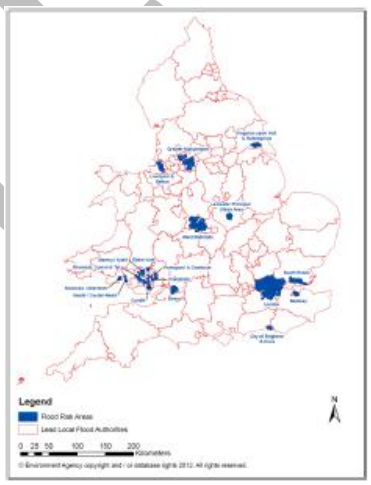


Figure 1. Flood Risk Areas identified in the Preliminary Flood Risk

What flood risks are covered by the FRMP?

While the Regulations only require those LLFAs in Flood Risk Areas to prepare FRMPs by December 2015, other LLFAs have contributed to the FRMP voluntarily to help share proposals about all sources of flood risk. Table 1 (Part A) lists the Flood Risk Areas identified in the Anglian RBD, along with Lead Local Flood Authorities that have contributed to this FRMP. Some LLFAs have prepared FRMPs that are presented as a separate document from this plan, and these are also listed below (Part B). [delete if not applicable]

Table 1. Flood Risk Areas in Anglian RBD and LLFAs contributing to this FRMP

PART A: LLFA and Flood Risk Areas included in this draft FRMP	
Flood Risk Area (or voluntary contribution from LLFA)	**Lead Local Flood Authorities**
South Essex Flood Risk Area	Essex County Council
Voluntary Contribution	Lincolnshire County Council
Voluntary Contribution	Northamptonshire County Council
Add LLFAs who have contributed to consolidated FRMP	
PART B: LLFAs and Flood Risk Areas included in separate draft FRMPs	
Flood Risk Area (or voluntary contribution from LLFA)	**Lead Local Flood Authorities**
South Essex Flood Risk Area	Southend-on-Sea*

** Note: Southend-on-Sea has been shown as preparing a separate FRMP for the purposes of this mock up in order to demonstrate that LLFAs in Flood Risk Areas may chose to do so. This does not necessarily represent how Southend-on-Sea will undertake its responsibility to prepare a FRMP under the Flood Risk Regulations.*

What the plan does

The FRMP sets out what needs to be done to mange flood risk. The FRMP draws from flood hazard and flood risk maps published under the Flood Risk Regulations *[LINK to maps when published*]. It summarises the risk of flooding from rivers, the sea and reservoirs across the whole of the RBD, and from surface water flooding for the Lead Local Flood Authority areas listed in Part A of Table 1 (see areas identified in Figure 2).

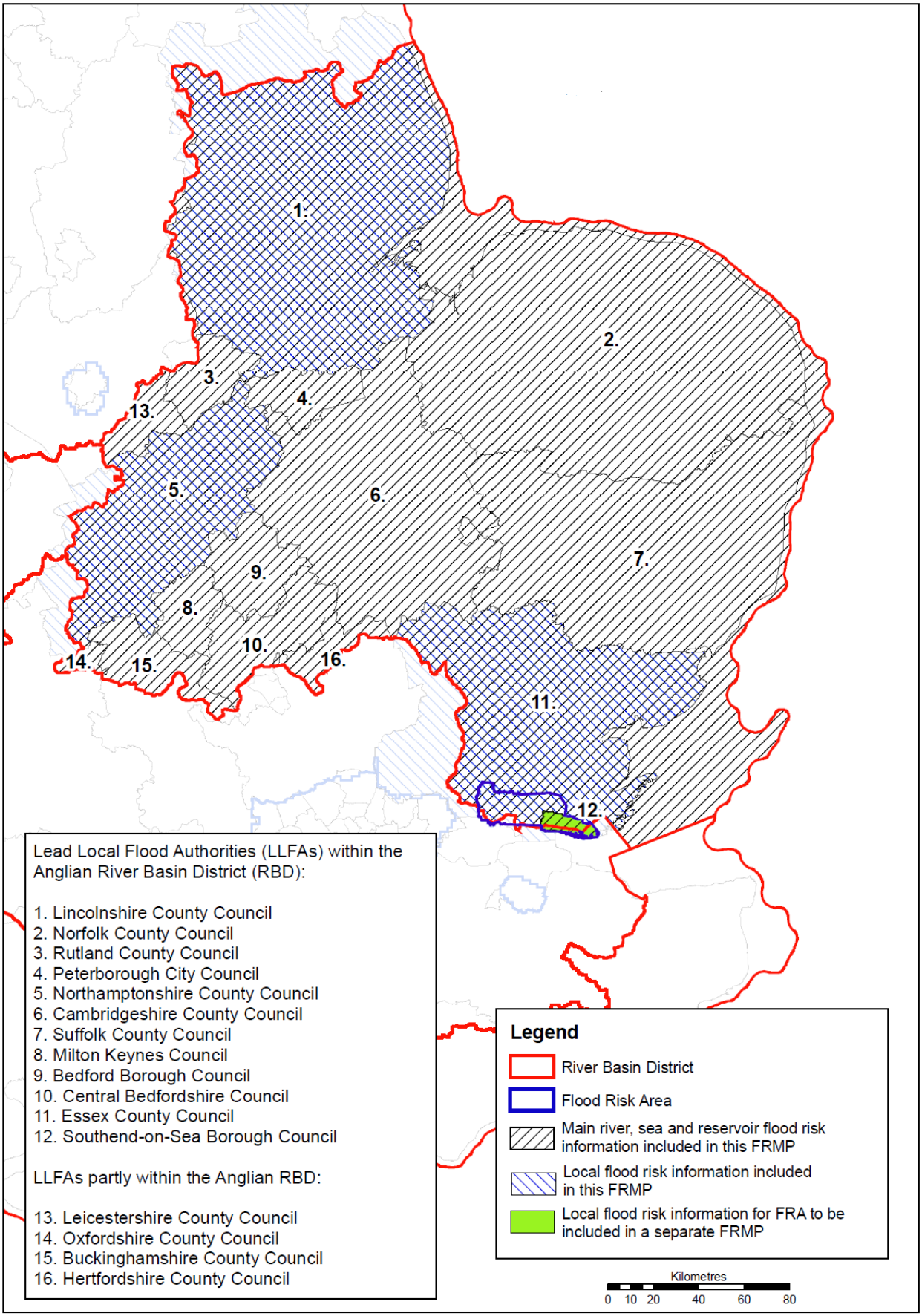
The FRMP draws relevant conclusions from these risks about problems or opportunities for managing risk. Risk management objectives have been set out to steer the development of appropriate actions that can help achieve those objectives, that is, what should be done to manage risk. The various actions have been identified at the most appropriate scale, for example, a particular community, or an rural area so that it is clear where the proposed actions are and where they there may be potential benefits. These places have been set out within the context of the catchments for this RBD.

Co-ordinating with river basin planning

In developing the draft FRMP, we have co-ordinated with the development of the draft River Basin Management Plan by:

Set out the consideration of significant water management issues, and how FCRM contributes to these; how we have taken account of the RBMP objectives in developing our FRMP objectives and how the actions we are proposing contribute to achieving the objectives of the Water Framework Directive.

Figure 2. Sources of Flood Risk included in this draft FRMP



How we have developed the plan

In August 2012 the Environment Agency consulted on the approach to developing FRMPs. They set out some options about the scale of the FRMP, the extent of integration or co-ordination across the different sources of flood risk, the use of existing plan information, and how best to co-ordinate consultation between plans covering different sources of flood risk as well as with the River Basin Management Plan (prepared under the Water Framework Directive).

In June 2013 Defra, Welsh Government, Natural Resources Wales and the Environment Agency published the preferred approach to developing FRMP. This approach proposed the Environment Agency to work in partnership with other RMA, in particular LLFAs, to pool information to develop an overall plan for managing all sources of flood risk and coastal erosion. (see Environment Agency website)**.**

Therefore, in preparing this FRMP, the relevant information has been drawn from various sources, as set out in Table 2. In drawing actions together, RMAs have revisit priorities and ensured that there is a shared understanding of the outcomes we are aiming for and how we can work most effectively to deliver those outcomes. Where a specific action has an establish provenance (eg it is simply lifted from an existing SMP) this has been stated so that those involved in the development of those proposals can see how their contribution has fed into this FRMP.

Table 2. Sources of FRMP information according to source of flood risk

Source of flood risk	Existing plans and source of FRMP information
Flooding from main rivers	**Catchment Flood Management Plans:** Welland, Nene, Witham, Great Ouse, Broadland, Essex, *etc.*
Flooding from the sea	**Shoreline Management Plans:** Flamborough Head to Gibraltar Point, Norfolk
Flooding along estuaries	**Estuary Management Plans** Xxx Management Plan
Flooding from Reservoirs	**Reservoir Plans:** XX Reservoir – On site Reservoir Plan
Flooding from surface water	**Local FRM Strategies:** Essex County Council Local FRM Strategy Northamptonshire Local FRM Strategy Lincolnshire Local FRM Strategy **Surface Water Management Plans:** XXX SWMP

Add to this table, as appropriate

The partnership

Describe which partners have worked together on the FRMP

Consultation and engagement

How have we involved people in the process including any local road shows or focus groups . *Note: the final FRMP will need to include a record of consultation on the draft FRMP.*

How we plan and set objectives

The process that was followed how they reflect impact of human health, the environment, cultural heritage and economic activity.

You can use the links below to find out more information about FRMPs and your area.

Finding out more

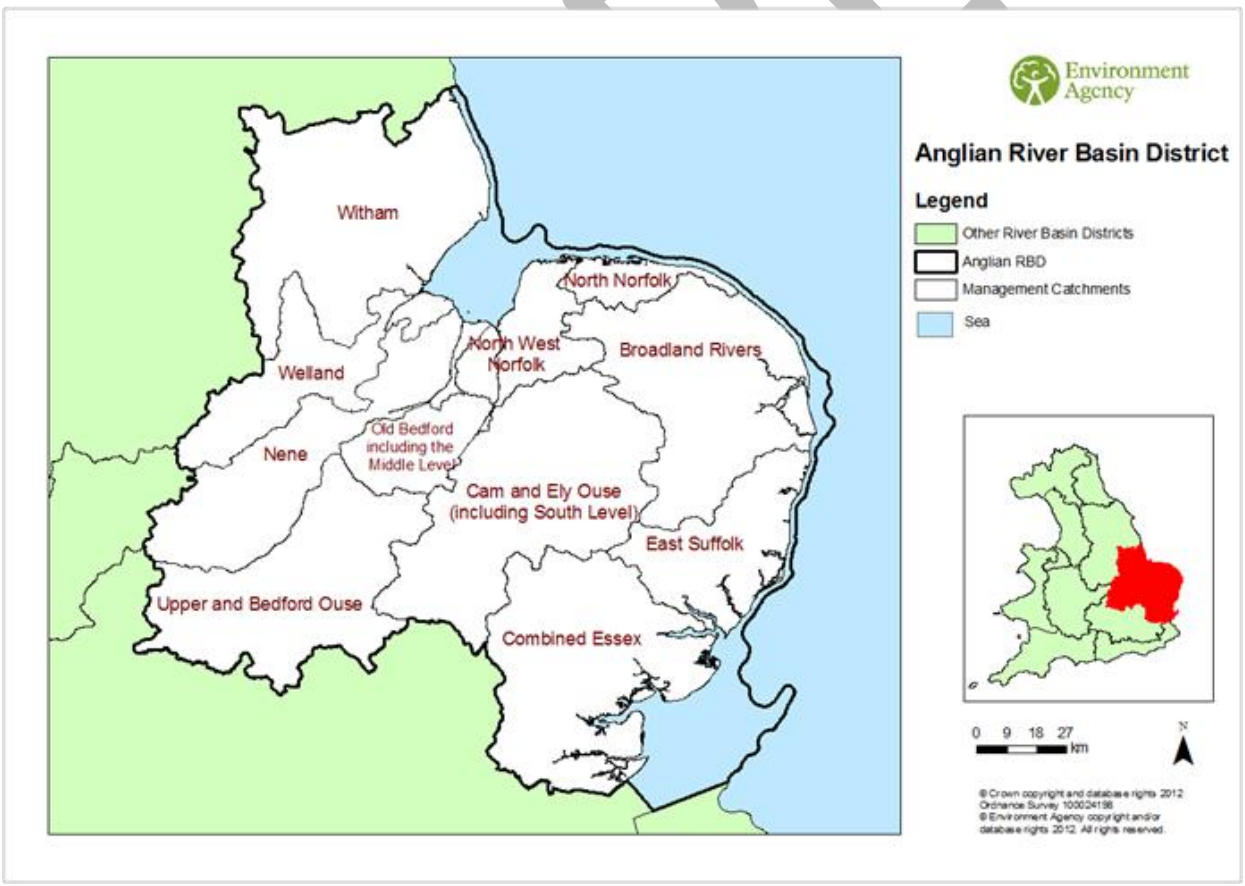
- Link to WIYBY (and flood hazard and risk maps)
- Link to FRMP Consultation Summary Report
- Link to FRMP web page

Getting to know your River Basin District and the catchments

Write a paragraph to introduce and describe the main feature and character of the River basin district. Think about relating to what is important to people within the RBD. *Text provided is for illustrative purposes*

The Anglian River Basin District covers 27,890 km^2 from Lincolnshire in the north to Essex in the south, and Northamptonshire in the west to the East Anglian coast. The river basin district comprises eleven catchments (Figure 3) which include different types of water bodies such as rivers, lakes, coastal and transitional (estuarine) waters as well as groundwater. The catchments vary: some are in a more natural state, while others have been significantly altered by man, for example, to reduce the risk of flooding from rivers and the sea, and to drain the land for agriculture.

Figure 3. Catchments within Anglian River Basin District



Population and human health

The river basin district is predominantly rural, with more than half of its land used for agriculture and horticulture. This has led to physical changes to the water environment and pollution from agricultural runoff (see the draft River Basin Management Plan). This is particularly evident in the Lincolnshire and Cambridgeshire Fens (which fall across six of the eleven catchments). Tree cover is approximately 7% of the river basin district, with Thetford Forest in the Cam and Ely Ouse catchment being the largest forest covering 20,000ha.

Over 7.1 million people live and work in small or medium sized towns and cities within the river basin district. The water environment within urban areas has been physically altered to allow for development and water supply. Many of the towns are proposing significant housing growth, along with the creation of jobs and services. In particular, the Nene catchment is the largest growth area outside of London. Many of the industries are water dependent, for example, agriculture, horticulture, commercial fishing, power generation and manufacturing.

The current population in most communities in Norfolk, Suffolk and Cambridgeshire is healthier and lives longer than the national average, and this trend is expected to continue. However in some communities there are widening health inequalities. Some waterside locations are areas of deprivation that result from industrial decline or neglect. Improvements to these areas and regeneration initiatives can have multiple benefits, including; improving the environment and quality of life; providing employment and other potential economic benefits.

The Anglian River Basin District offers some outstanding recreational opportunities which contribute to people's quality of life and bring economic benefit from tourism. Some examples include the Norfolk Broads within the Broadlands catchment, seaside towns and wildlife in the coastal catchments, Grafham Water and the Grand Union Canal in the Upper Ouse and Bedford Ouse catchment, Rutland Water within the Welland catchment, and numerous other opportunities for angling and boating.

Infrastructure

Infrastructure in the river basin district may affect the water environment, for example, through the dredging of the river channel required to enable navigation to ports. It may also be affected by the way the water environment is managed, for example, through the way flood risk is managed for infrastructure. Infrastructure within the river basin district include railways (such as the East Coast Main Line Railway), motorways, primary roads, power stations including Sizewell nuclear power station (within the East Suffolk catchment), hydropower, airports (including Royal Air-force and US Airforce bases), canals, marinas and ports. The river basin district has approximately 1,300 licensed waste sites, and 2000 historic landfill sites, many of which lie in close proximity to water bodies.

Landscape

The landscape in the river basin district ranges from gentle chalk and limestone ridges to the extensive lowlands of the Fens and East Anglian coastal estuaries and marshes. There are five Areas of Outstanding Natural Beauty (Lincolnshire Wolds, Norfolk Coast, Suffolk Coast and Heath, the Chilterns and Dedham Vale) and The Broads National Park. There are two heritage coasts in the river basin district (North Norfolk and Suffolk). These areas attract large numbers of tourists each year, providing an important contribution to the economy. The water

environment within some of these designated areas, for example, The Broads National Park, is fundamental to the character of the landscape.

Biodiversity

The river basin district is the richest region in the UK for wetland wildlife and there is an extensive and varied coastline which includes 33% of the UK's saltmarsh habitat. The importance of this habitat is reflected by a variety of international, national and local nature conservation designations. The international designations comprise; 24 Special Areas of Conservation (SACs), 22 Special Protection Areas (SPAs) and 25 Ramsar sites are water related. There are five recommended Marine Conservation Zones (Lincs Belt, Cromer Shoal Chalk Beds, Alde Ore Estuary, Stour and Orwell Estuary, and Blackwater, Crouch , Roach and Colne Estuary) that fall within or adjacent to the river basin district. Of the five recommended, the Stour and Orwell Estuary and the Blackwater, Crouch, Roach and Colne Estuary are recommended for designation in 2013. There are approximately 678 Sites of Special Scientific Interest (SSSIs) and 55 National Nature Reserves (NNRs). Towards the east, where much of the land is flat and low lying, many of the SSSIs have close links with the water environment. The majority of SSSIs in the river basin district are in favourable condition, with abstraction, general water shortage, and flooding and coastal erosion considered to be the key threats to the condition of these SSSIs.

Water bodies and wetland areas within the river basin district support a number of protected species (such as otters and water voles) and priority species listed in the UK Biodiversity Action Plan (such as freshwater white-clawed crayfish and bittern). Invasive species are present in over half of the water bodies across the river basin district, such as the signal crayfish. These species may be affected by the way we manage the water environment.

The coastal areas of the Anglian River Basin District are covered by two marine plan areas (East Inshore and South East Inshore). Further offshore, there is also the East Offshore marine plan area. The marine plans are currently being developed by the Marine Management Organisation. They will inform and guide marine users and regulators across England, managing the sustainable development of marine industries, such as wind farms and fishing, alongside the need to conserve and protect marine species and habitats.

Cultural Heritage

Cultural heritage has a high profile in the river basin district with approximately 2,500 Scheduled Ancient Monuments (SAMs), and numerous Registered Parks and Gardens, listed buildings and heritage sites. The majority of listed buildings in the river basin district are within built up areas. Where these areas are low lying and where the town was developed either as a trade centre, because of its canal or river links to the sea, or as a port adjacent to the sea, listed buildings may be vulnerable to both river and tidal flooding. Many structures such as mills, bridges, weirs and sluices directly associated with the water environment have listed status or are of local historic importance.

The river basin district is rich in archaeology; this is particularly true in the fens, where the peat has preserved organic material, which has largely disappeared from drier parts. There are large areas of land where we have little or no knowledge of what might lie beneath the topsoil and in certain places, such as along the River Witham (Witham catchment), well-preserved archaeological remains are believed to be present.

Soil

The bedrock geology of the river basin district is characterised by sandstone, mudstone and limestone. The surface, or drift geology features peat, clays, sands, silts and gravels laid over the bedrock in some places, whilst in others, the bedrock remains exposed or lies directly beneath the soil. A band of chalk runs diagonally across the river basin district into the North Norfolk catchment whilst around the Wash are areas of silt and clay. Within the river basin district, there are a number of SSSIs that are designated for geological reasons, for example, Gibraltar Point in Lincolnshire and Adventurer's Land in Cambridgeshire

Minerals extraction is an important industry across the river basin district, and a number of former extraction sites have been turned into reservoirs or recreational water bodies, or have been used as landfills. Surface quarrying is particularly important in the Upper Ouse and Bedford Ouse catchment.

Water

The groundwater and surface water bodies are subject to high levels of abstraction, mainly for public water supplies and agriculture . In particular, the Nene and Welland catchments provide water to Rutland Water, the Upper Ouse and Bedford Ouse catchment provide water to Grafham Water, and the Cam and Ely Ouse catchment provides water supplies both within the catchment and to Essex and Suffolk via the Ely Ouse to Essex transfer scheme. Abstraction can cause damage to the water environment through a reduction in water flow and less dilution of contaminants (see the draft River Basin Management Plan).

Climatic factors

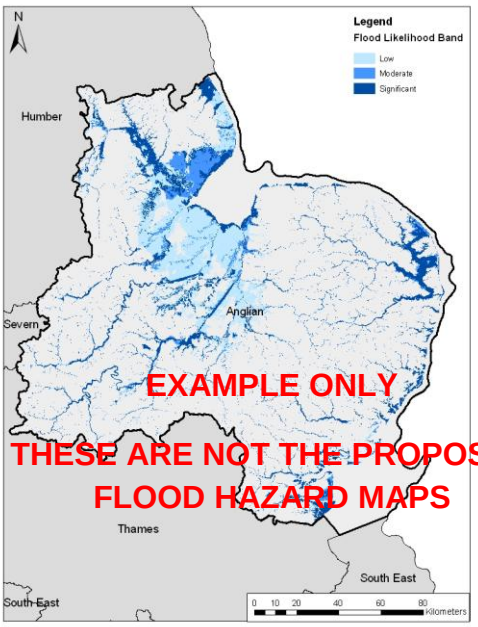
According to UKCIP, by the 2020s, temperatures across the river basin district could rise by up to 3°C under a low or high emissions scenario (50% probability level). Summer rainfall may decrease by up to 20% under either scenario, and winter rainfall may increase by up to 20% under either scenario. These extremes impact on water related issues such as decreased water availability and an increase people and properties being at risk from the affects of flooding.

ALL THE INFORMATION IN THIS DOCUMENT IS FOR ILLUSTRATION PURPOSES ONLY

Key Flood Risk Issues

Include key message about the RBD, could include links to RBMP, WFD measure and environment here:

Map of flooding from rivers and the sea:



EXAMPLE ONLY

THESE ARE NOT THE PROPOSED FLOOD HAZARD MAPS

Map of flooding from surface water:

INSERT MAP

EXAMPLE ONLY

THESE ARE NOT THE PROPOSED FLOOD HAZARD MAPS

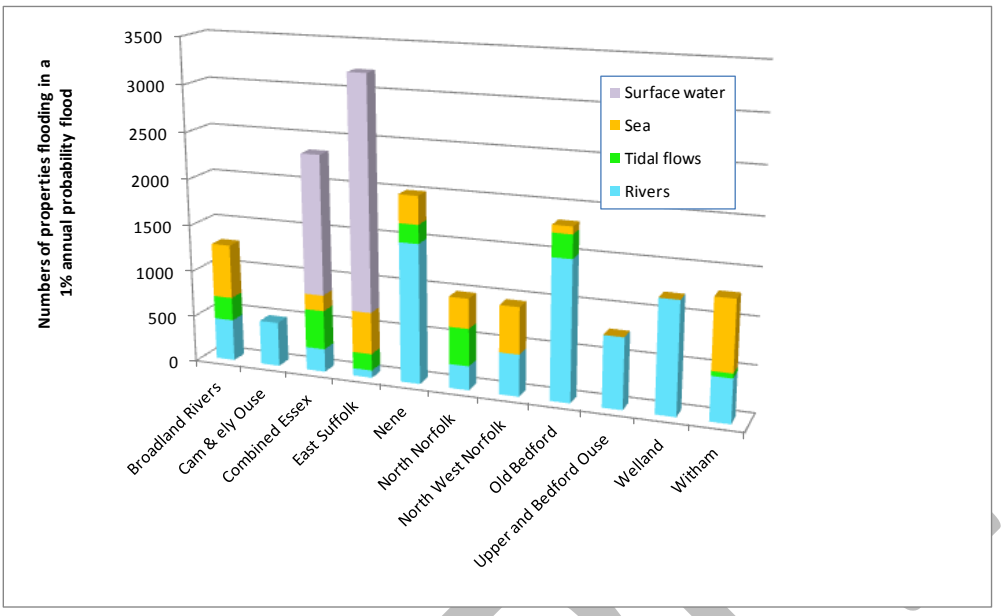
Map of flooding from reservoirs:

EXAMPLE ONLY

THESE ARE NOT THE PROPOSED FLOOD HAZARD MAPS

INSERT MAP

Figure. X. Summary chart of flooding across the Anglian catchments.



Key Statistics

Include a summary table of infrastructure and assets at risk from flooding

Finding out more

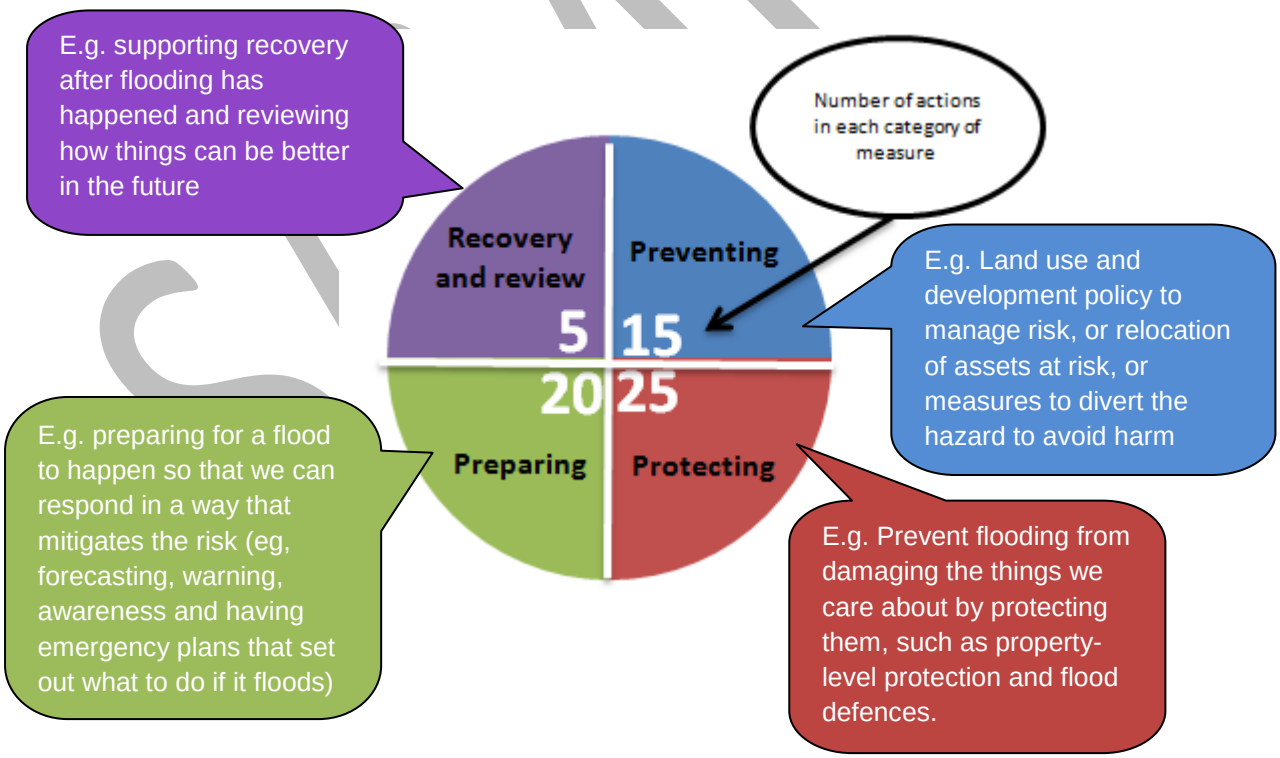
- Link to WIYBY
- Link to draft River Basin Management Plan

Actions to manage risk

There are different approaches to managing flood and coastal erosion risk depending on the probability and consequences, as well as the technical natural of the risk. We use the following terminology:

- Preventing risk: for example, by not building homes in areas that can be flooded we can prevent risks from arising in the first instance.
- Preparing for risk: for example, by improving awareness of flood risk, or by providing warning and forecasting for floods, people can take precautions to safeguard their valuables.
- Protecting from risk: for example, by using water proof boards over doors and airbricks people can protect their properties from the damages of flood water.
- Recovery and review of risk: for example, by improving access to tradesman and other services, recovery after flooding can be improved.

To manage flood and coastal erosion risk effectively it take a single measures, or a combination of measures, and this depends on many factors, including the complexity of the risk, what's at risk, as well as the cost of the measures. All these factors need to be considered before measures can be implemented effectively.



This plan sets out the type of measures proposed to manage the risk we currently know about. In developing the proposed measures we have:

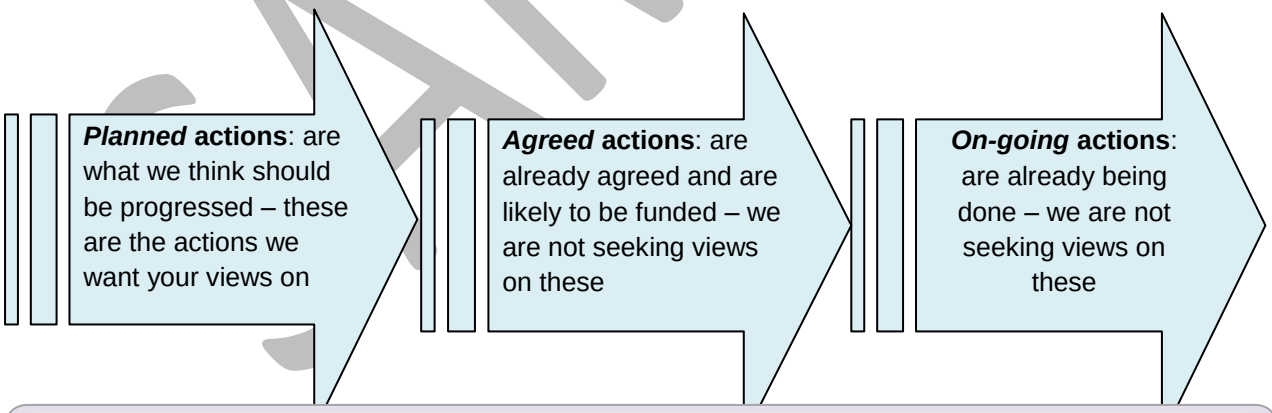
Set out the thinking behind developing the actions:

- drawn conclusions from hazard and risk maps: this helps us all to understand the problem or opportunities we are aiming to manage;
- developed risk management objectives (related to people and society, the environment and economy): that set out the outcomes are we trying to achieve; and
- identified the likely approach to managing risk: using the categories listed above: preventing, preparing, protecting and recovering and review.

There are already many actions underway to manage flood and coastal erosion risk. These are *on-going* actions and we are not seeking views on these *on-going* actions. Over time, some *on-going* actions may need to change, for example, an established maintenance regime may need to change, perhaps because it is too costly, or new technology offers opportunities to do things differently. In these instances, we would want to work with communities to develop new ways of managing risk and we would do this through *planned* actions.

There are also actions that are proposed (and likely to be funded over the coming years). These actions are considered *agreed* and we are not seeking views on these *agreed* actions.

The *planned* actions are those that we think should be progressed from 2015 onwards and these are the actions we want your views on. So, we have a "pipeline" of proposals, and the *planned* actions in this FRMP are those that we want your views on.



We want your views

- Add specific question you seek view son (e.g. the areas where actions are proposed, the balance between different approach etc?

On-going actions across the Anglian River Basin District

Across Anglian RBD the on-going actions to manage flood risk include *(include maps where appropriate):*

- Preventing risk: *Summarise the relevant measures already in place to prevent flood and coastal erosion risk. Eg.* National Planning Framework; other planning policies by planning authorities. *On-going maintenance programmes is included in this category, so link to maintenance programmes on website.*

- Preparing for risk: *Summarise the relevant measures already in place to prepare for risk. Anglian RBD has XX flood warning areas (include map); and xx Multi-Agency Flood Plans, etc.*

- Protecting from risk: *Summarise the relevant measures already in place to protect from risk. Summarise the assets (e.g. from asset registers) and the scale of protection afforded (eg broad numbers of properties benefiting etc); the scale of property-level protection implemented etc.*

- Recovery and review of risk: *Summarise the relevant measures already in place to prepare for risk. E.g. community recovery plans, etc.*

Agreed actions across the Anglian River Basin District

Across Anglian RBD the agreed actions to manage flood risk include *(include maps where appropriate)*:

- Preventing risk: *Summarise the relevant measures that are agreed to prevent flood and coastal erosion risk. Eg.* new policies, new modelling and assessment work that will be undertaken etc.

- Preparing for risk: *Summarise the the relevant measures that are agreed to prepare for risk. Anglian RBD has XX agreed new flood warning areas (include map).*

- Protecting from risk: *Summarise the the relevant measures agreed to protect from risk. Summarise the proposed measures (link to the medium term plan) and the scale of protection afforded (eg broad numbers of properties benefiting etc); the scale of property-level protection proposed etc.*

- Recovery and review of risk: *Summarise the the relevant measures agreed to prepare for risk. E.g. community recovery plans, etc.*

Planned actions across the Anglian River Basin District

Across Anglian RBD there are 1755 planned actions to manage flood and coastal erosion risk. This FRMP does not include details of all of these actions but they are summarised across each catchment in the sections to follow (see also Figure X). The planned actions include the following: *(include maps where appropriate)*:

Note: we will want to ensure that any actions that cover the entire RBD are highlighted. We will also want to ensure we have identified any actions that interact with actions in other river basin districts.

- Preventing risk: *Summarise the relevant measures that are planned in this FRMP to prevent flood and coastal erosion risk. Include the total number of 'preventing risk' measures for the river basin district: eg. There are 245 planned prevention measures for the RBD (useful to break them down into other categories – using the EU reporting codes).*

- Preparing for risk: *Summarise the relevant measures that are planned in this FRMP to prepare for flood and coastal erosion risk. Include the total number of 'preparing for risk' measures for the river basin district: eg. There are 840 planned prevention measures for the RBD (useful to break them down into other categories – using the EU reporting codes).*

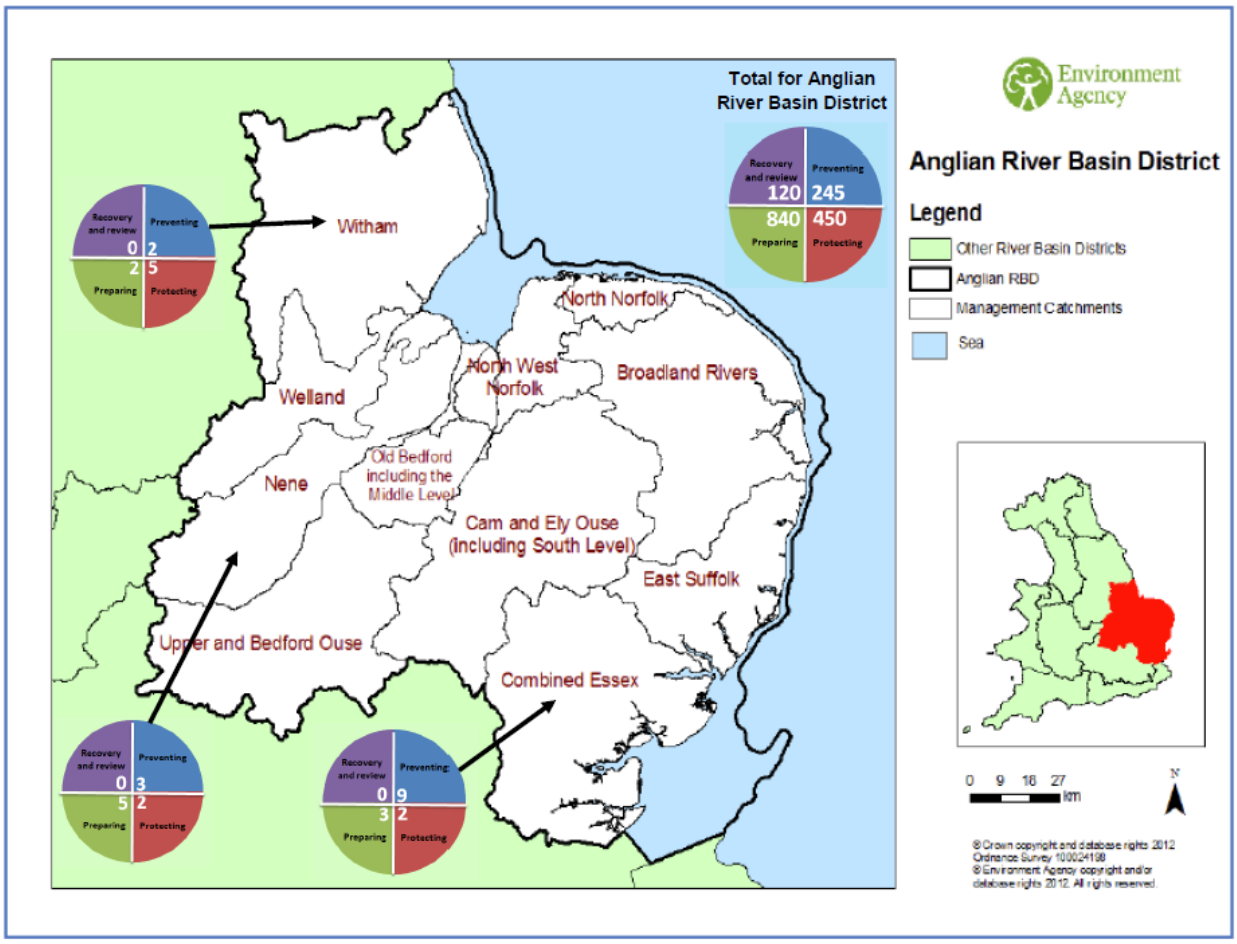
- Protecting from risk: *Summarise the relevant measures planned in this FRMP to protect against flood and coastal erosion risk. Include the total number of 'protecting from risk' measures for the river basin district: eg. There are 450 planned protection measures for the RBD (useful to break them down into other categories – using the EU reporting codes).*

- Recovery and review of risk: *Summarise the relevant measures planned in this FRMP to for recovery and review of flood and coastal erosion risk. Include the total number of 'recovery and review of risk' measures for the river basin district: eg. There are 120 planned recovery and review of risk measures for the RBD (useful to break them down into other categories – using the EU reporting codes).*

Note: the numbers of measures included above are for illustrative purposes only – they do not tally with catchment examples.

Figure X. Summary of planned actions for the catchments in Anglian RBD

Note: the numbers shown are for illustrative purposes and they are only shown for three catchments:the Combined Essex, the Nene and the Witham.



The following sections consider, in turn, the planned actions for each of the following catchments in the Anglian River Basin District:

- Combined Essex *(included in this mock up)*
- Broadland *(NOT included in this mock up)*
- Cam and Ely Ouse (including South Level) *(NOT included in this mock up)*
- East Suffolk *(NOT included in this mock up)*
- Nene *(included in this mock up)*
- North Norfolk *(NOT included in this mock up)*
- North West Norfolk *(NOT included in this mock up)*
- Old Bedford including the Middle Level *(NOT included in this mock up)*
- Upper and Bedford Ouse *(NOT included in this mock up)*
- Welland Catchment *(NOT included in this mock up)*
- Witham Catchment *(included in this mock up)*

The Combined Essex Catchment

[REPEAT FOR EACH CATCHMENT]

Introduction to the catchment *Text provided is for illustrative purposes*

The Combined Essex Rivers catchment extends from Basildon and Southend in the south to Great Dunmow, Haverhill, Hadleigh and Harwich in the north. It includes the rivers and tributaries of the Roach, Crouch, Chelmer, Blackwater, Colne and Stour. Over 70% of land within the catchment is agricultural, with arable farming being most common. However, there are also significant urban centres throughout the catchment and a substantial industrial and manufacturing base.

Watercourses are used for a variety of activities, including recreation, public water supply, fisheries and conservation. The area is rich in landscape and wildlife heritage, including Dedham Vale Area of Outstanding Natural Beauty, and most of the coast is of international importance for conservation.

Summary of the catchment, the issues, key statistics. You can include photos and case studies.

Summary

Describe the issues and the catchment: opportunities and constraints.

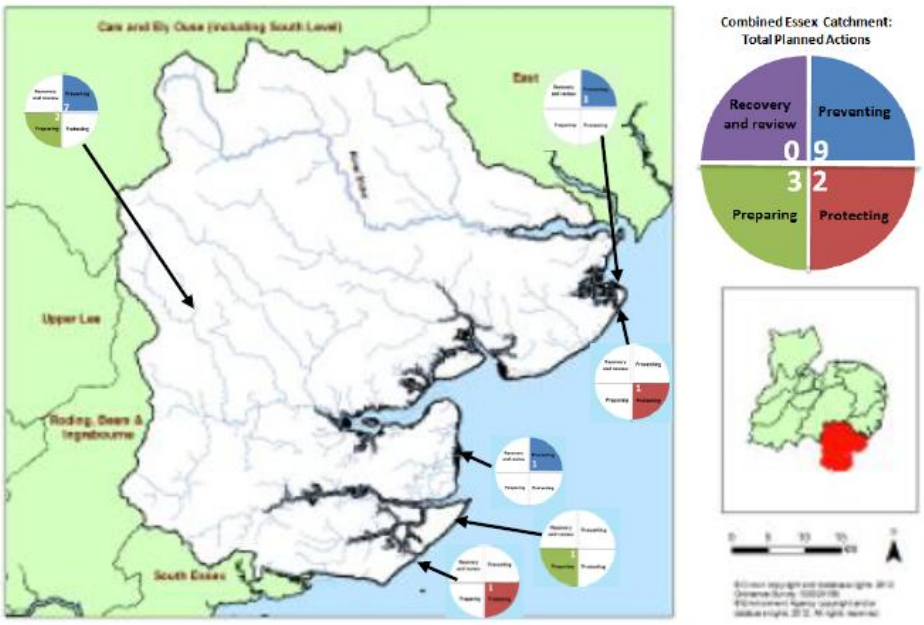
Key Statistics

Use a table to show risk information – or this could be a simple chart

Critical infrastructure at risk	Four electricity sub-stations, two sewage treatment works, Sections of A road, Sections of railway

Number of residential properties at risk of flooding (for a 1% flood)	Locations	Source of flooding Riv	Sea	Res	SW	GW
>1,000	Town A, B and C	●	○	○	○	○
500 - 1, 000	Town D, E and F	●	●	○	○	○
200 - 500	Town G, H and I	○	●	○	●	○
100 - 200	Town J and K	○	●	○	○	○
50 - 100	Town L	●	○	○	○	●
<50	Various villages	●	○	○	○	○

Planned actions to manage risk



Note: the numbers of actions set out below for the Combined Essex Catchment are fictitious, but they correspond to the figure above and the action plan that follows so that RMAs can see how the numbers of different categories of actions are summed to generate the total number of actions planned for the catchment, and summed again across catchments for the total for the river basin district.

In the Combined Essex Catchment there are 14 actions planned to manage risk from 2015 to 2021. These are shown in Figure XX. There are no catchment-wide actions planned, but the following actions are planned for specific locations:

Planned actions in specific locations are summarised as follows, and described more fully in the Action Plan below:

- Preventing risk: 9 actions *Summarise the relevant measures that are planned in this catchment to prevent flood and coastal erosion risk.*
- Preparing for risk: 3 actions *Summarise the relevant measures that are planned in this catchment for risk.*
- Protecting from risk: 2 actions *Summarise the relevant measures planned in this catchment from risk.*
- Recovery and review of risk: there are no actions planned *Summarise the relevant measures planned in this catchment for risk.*

The Combined Essex Catchment – Planned Actions (2015 – 2021)

Place Name	Source of Flood Risk or Coastal Erosion								Contribution to WFD outcomes		Conclusions from flood hazard / flood risk maps	Objectives			Describe objectives	Measures (Actions to achieve the objectives)	Action (Describe the measure)	Timing	Priority	Partnership implementing measures (lead in bold)
	Main River	Ordinary Watercourses	Sea	Coastal Erosion	Reservoirs	Surface Water	Ground-water	Foul Sewers	Indicate if there is potential to contribute to WFD	What WFD outcomes / objectives	*(This captures the 'issue', i.e. the flood risk problem or the opportunity, e.g. To enhance the environment/improve sustainability)*	People / Society	Environment	Economy	*(This sets out what you are trying to achieve in managing risk. It relates to outcomes rather than actions.)*	*(Pick from Prevention, Protection, Preparedness, Recovery & Review and Other)*		*(Pick from FRMP Planning Cycles: 2015 - 2021; 2021 - 2027; 2027 - 2033; 2033 - 2039 After 2039)*	*(Pick from Critical, Very High, High, Medium, Low)*	
Text (or "XX" for mock-up)	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*Drop down List (tbc) E.g. Hydromorphology, diffuse pollution (sediment etc)*	*Text*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*Text*		*Text*	*Text*	*Text*	*Text*
Essex County		Y				Y	Y				**Considering local flood risk:** Ranking risk across the LLFA area, has enabled identification of 3 Tiers of priority areas: - Tier 1: More than 1000 people predicted to be at risk; - Tier 2: Between 1000 and 500 people predicted to be at risk; - Tier 3 Less than 500 people predicted to be at risk. *(Note: We will review conclusions on publication of the updated hazard and risk maps for surface water that will be published under the Flood Risk Regulations by December 2013. We are also aiming to include specific WFD objectives and measures in our policy measures).*	Y	Y	Y	Improve understanding of local flood risks	Prevention	Undertake Surface Water Management Plans in Tier 1 and 2 areas	2015-2021	Medium	**Essex CC**, District and Borough Councils, Environment Agency and communities
Essex County		Y				Y	Y					Y	Y	Y		Prevention	Implement Recording and investigation System	2015-2021	High	**Essex CC**, District and Borough Councils
Essex County		Y				Y	Y		Y	Policy to reflect WFD objectives		Y	Y	Y		Prevention	Develop a SuDS Design and Adoption Guide	2015-2021	High	
Essex County		Y				Y	Y		Y			Y	Y	Y	Adapt spatial planning policy to reflect local flood risk	Prevention	Include assessment of local flood risk in SFRAs	2015-2021	High	**Essex CC**, District and Borough Councils
Essex County		Y				Y	Y		Y			Y	Y	Y		Prevention	Develop local guidance to ensure that all LPAs adopt similar standards	2015-2021	High	
Essex County		Y				Y	Y					Y			Improve understanding of local flood risk - Easily accessible information on flood risk	Preparedness	Create improved online facility and explore use of social media to facilitate access to flood information	2015-2021	Medium	**Essex CC**, District and Borough Councils
Essex County		Y				Y	Y					Y			Improve understanding of local flood risk - Raise awareness of flood risk in communities	Preparedness	Work with Environment Agency, emergency responders and charities to deliver workshops / road shows and other initiatives	2015-2021	Medium	**Essex CC**, District and Borough Councils, Environment Agency, LRFs and communities
Essex County		Y				Y	Y		Y	Policy to reflect WFD objectives		Y	Y	Y	Provide a policy for regulation of works on ordinary watercourses - Consenting Policy	Prevention	Develop, publish and consistently implement clear policy for consenting works	2015-2021	Medium	**Essex CC**
Essex County		Y				Y	Y		Y			Y	Y	Y	Provide a policy for regulation of works on ordinary watercourses - Enforcement Policy	Prevention	Develop, publish and consistently implement clear policy for enforcement actions	2015-2021	Medium	**Essex CC**
Clacton			Y	Y				Y	Y	Sewer overflow and bathing water quality	Threat of erosion to coastal town of Clacton, including 3000 residential properties and 185 commercial properties over the next 100yrs. Major sewer infrastructure potentially at risk from collapse, with potential consequences for bathing water quality.	Y	Y	Y	To reduce the risk of coastal erosion to residential and commercial properties in Clacton. To reduce risk of pollution to bathing waters at Clacton.	Protection	Coastal protection to Clacton, including protection of sewer outfall.	2015-2021	Very High	**Tendring District Council,** Anglian Water, Essex County Council, Environment Agency
Naze Cliffs north				Y							Threat of erosion of a scheduled ancient monument and loss of associated tourism	Y		Y	To reduce the risk of erosion to the Naze tower	Protection	Development and construction of a partial protection scheme as a part of Tendring District Council Pathfinder project for the Naze Tower	2015 - 2021	High	**Tendring District Council,** Essex County Council, Cragg Walk Project, Essex Wild Life Trust
Walton Channel			Y	Y				Y	Y	Point source pollution	Treat of flooding and erosion risk to sewage treatment works	Y	Y	Y	To reduce the risk of flooding or erosion to the sewage treatment works	Prevention	Continue discussion with Anglian Water to determine the future of sewage treatment works	2015 - 2021	Medium	**Environment Agency**, Anglian Water, Tendring District Council
Dengie peninsular	Y	Y	Y			Y	Y				Risk of flooding of agricultural land freshwater drainage issue as sea levels rise	Y		Y	Reduce risk of flooding to agricultural land	Prevention	Work with landowners to discuss future maintenance and drainage and pumping.	2015 - 2021	Medium	**Environment Agency**, Maldon District Council, National Farmers Union and Country Landowners and Business Association
Foulness Island			Y								Need flood risk evacuation	Y			Safe evacuation during flooding	Preparedness	Engage with Ministry of Defence to ensure they have the correct community evacuation plans in place to evacuate the island in a flood	2015 - 2021	High	**Essex County Council**, Maldon District Council, Environment Agency

The Nene Catchment

Summary of the catchment, the issues, key statistics and a list of planned actions. You can include photos and case studies.

[REPEAT FOR EACH CATCHMENT]

Summary

Describe the issues and the catchment

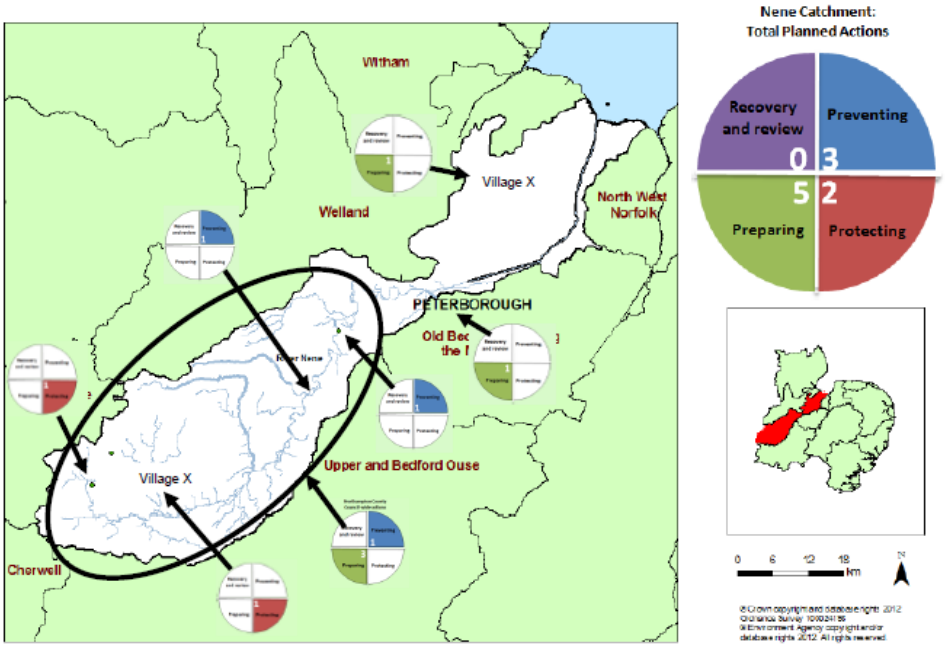
Key Statistics

Use a table to show risk information – or this could be a simple chart

Critical infrastructure at risk	Four electricity sub-stations, two sewage treatment works, Sections of A road, Sections of railway

Number of residential properties at risk of flooding (for a 1% flood)	Locations	Source of flooding Riv	Sea	Res	SW	GW
>1,000	Town A, B and C	●	○	○	○	○
500 - 1, 000	Town D, E and F	●	●	○	○	○
200 - 500	Town G, H and I	○	●	○	●	○
100 - 200	Town J and K	○	●	○	○	○
50 - 100	Town L	●	○	○	○	●
<50	Various villages	●	○	○	○	○

Planned actions to manage risk



Note: the numbers of actions set out below for the Combined Essex Catchment are fictitious, but they correspond to the figure above and the action plan that follows so that RMAs can see how the numbers of different categories of actions are summed to generate the total number of actions planned for the catchment, and summed again across catchments for the total for the river basin district.

In the Nene Catchment there are 10 actions planned to manage risk from 2015 to 2021. These are shown in Figure XX. There are no catchment-wide actions planned, but the following actions are planned for specific locations:

Planned actions in specific locations are summarised as follows, and described more fully in the Action Plan below:

- Preventing risk: 3 actions *Summarise the relevant measures that are planned in this catchment to prevent flood and coastal erosion risk.*
- Preparing for risk: 5 actions *Summarise the relevant measures that are planned in this catchment for risk.*
- Protecting from risk: 2 actions *Summarise the relevant measures planned in this catchment from risk.*
- Recovery and review of risk: there are no actions planned *Summarise the relevant measures planned in this catchment for risk.*

The Nene Catchment – Planned Actions (2015 – 2021)

Place Name	Source of Flood Risk or Coastal Erosion								Contribution to WFD outcomes		Conclusions from flood hazard / flood risk maps	Objectives			Describe objectives	Measures (Actions to achieve the objectives)	Action (Describe the measure)	Timing	Priority	Partnership implementing measures (lead in bold)
	Main River	Ordinary Watercourses	Sea	Coastal Erosion	Reservoirs	Surface Water	Ground-water	Foul Sewers	Indicate if there is potential to contribute to WFD	What WFD outcomes / objectives	*(This captures the 'issue', i.e. the flood risk problem or the opportunity, e.g. To enhance the environment/improve sustainability)*	People / Society	Environment	Economy	*(This sets out what you are trying to achieve in managing risk. It relates to outcomes rather than actions.)*	*(Pick from Prevention, Protection, Preparedness, Recovery & Review and Other)*		*(Pick from FRMP Planning Cycles: 2015 - 2021; 2021 - 2027; 2027 - 2033; 2033 - 2039 After 2039)*	*(Pick from Critical, Very High, High, Medium, Low)*	
Text (or "XX" for mock-up)	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*Drop down List (tbc) E.g. Hydromorphology, diffuse pollution (sediment etc)*	*Text*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*Text*		*Text*	*Text*	*Text*	*Text*
Northamptonshire County		Y				Y	Y				Communities in Northamptonshire are at risk of local flooding *(xx probability and xx residents at risk).*	Y			Northamptonshire CC has secured just under £300k DEFRA funding towards an innovative community led demonstration project to address local flood risk.	Preparedness	A two year, Defra funded, pilot to develop a community flood risk tool kit for 15 identified communities in the County.	2015 - 2021	High	**Northamptonshire CC as Lead Local Flood Authority,** Environment Agency, All Seven District and Borough Councils, Anglian Water, Thames Water, Severn Trent Water, The 15 Communities
Northamptonshire County		Y				Y	Y				There is a low awareness of flooding across the community	Y			Raise awareness of flooding in the community	Preparedness	Community Flood Awareness: A series of flood fairs have previously been undertaken, which included public consultation on this strategy and the Northampton Surface Water Management Plan (SWMP) throughout October, November and December 2011. Future Flood Fairs shall be explored. The first should relate to the launch of the approved Local Flood Risk Management Strategy.	2015 - 2021	Medium	**Northamptonshire CC as Lead Local Flood Authority,** Highways Authority, Emergency Services, Volunteer sector, Environment Agency, All Seven District and Borough Councils, Anglian Water, Thames Water, Severn Trent Water, The Community
Northamptonshire County						Y	Y		Y	Reduce urban diffuse pollution Improve groundwater quality	Drainage needs to be managed for the proposed new development	Y			Encourage sustainable future development; Reduce future flood risk from surface water; Reduce future flood risk from groundwater.	Prevention	A Northamptonshire specific sustainable urban drainage systems (SuDS) Guidance document and a Groundwater Guidance Document will be produced to inform the Development Management Process.	2015 -2021	Medium	**Northamptonshire CC as Lead Local Flood Authority,** Highways Authority, Environment Agency, Anglian Water, Thames Water, Severn Trent Water, All Seven District and Borough Councils
Northamptonshire County						Y					There are a number of areas where the probability of surface water flooding is relatively high.	Y			Assess risk from surface water	Preparedness	Four Surface Water Management Plans (SWMPs) will be undertaken for the Districts of: • East Northamptonshire • Daventry • South Northamptonshire • Wellingborough	2015-2021	High	**Northamptonshire CC as Lead Local Flood Authority,** Highways Authority, Environment Agency, ENDC, BCW, SNDC, DDC, Anglian Water, Thames Water, Severn Trent Water, The Community
Village X	Y										Approximately 60 residential properties are flooded in a 1 in 10 fluvial event.	Y		Y	To reduce the risk of fluvial flooding to residential and commercial properties in village X.	Protection	Flood alleviation scheme for village x	2015-2021	High	**Environment Agency**, Northamptonshire County Council, South Northamptonshire District Council, Anglian Water, residents of community including flood warden
River Y Flood Balancing Scheme (this river is a tributary of the River Nene).	Y								Y	Environment improvements by creating new habitat	Approximately 25 residential properties are flooded in a 1 in 50 fluvial event.	Y	Y	Y	To reduce the risk of fluvial flooding to residential and commercial properties along the river Y. Take the opportunity to link the proposed actions with development proposals. Works of this nature provide an opportunity for environmental improvements. Because of the importance and proximity of this natural corridor through the new development areas there is a strong opportunity to meet the aspirations of the Nature Improvement Area and Water Framework objectives for achieving "Good status" and "No deterioration".	Protection	Combination of channel improvements and strategic flood balancing areas.	2015-2021	High	Northamptonshire County Council, South Northamptonshire District Council, Developer.
River Nene Corridor CFMP policy unit	Y								Y	Environment improvements by creating new habitat through floodplain connectivity.	240 properties at risk from 1 in 100 year event in various towns along the river Nene corridor.	Y	Y	Y	To minimise flood related risks to the population; To minimise community disruption from flooding; To minimise economic impacts of flooding; Ensure future investment in the catchment is proportional to the risks; Protect and contribute to the improvement of designated nature conservation sites (SSSI, SPA, SAC and Ramsar); Enhance the biodiversity of the catchment by improving the quality of the river environment and contributing to UK Biodiversity Action Plan targets	Prevention	Develop a Flood Storage Study to investigate creating/developing storage on the River Nene Corridor policy unit. This will mitigate future flood risk to Wellingborough, Kettering, Thrapston, River Nene (Oundle to Water Newton) and Peterborough and the Nene Washes policy units. The study should determine the possible location of storage and combination of river restoration and engineered flood storage. The study should investigate the use of abandoned gravel pits in association with the policies outlined in the Northamptonshire Minerals Local Plan and the need to protect the Upper Nene Gravel Pits SSSI/pSPA/Ramsar site. Where possible the study should enhance the environment by improving the natural state of the river and its habitat.	2015-2021	Medium	**Environment Agency,** Northamptonshire County Council, Borough Council of Wellingborough, Kettering Borough Council, East Northamptonshire Borough Council, Natural England, River Nene Regional Park.
Village Z	Y										30 properties at risk in 1 in 25 year flood. Properties are predicted to flood to 3m depth.	Y		Y	To minimise flood related risks to the population; To minimise community disruption from flooding; To minimise economic impacts of flooding	Preparedness	Flood Awareness campaign to ensure that the local community are aware of the risk of flooding, and how to prepare and respond to flooding.	2015-2021	Critical	**Environment Agency**, local community
Peterborough						Y		Y			Increased flood risk to residents of Peterborough	Y			Anglian Water's Fat Oil & Grease (FOG) campaign aims to reduce the risk of flooding from both foul and combined sewers.	Preparedness	Education programme that raises awareness of the consequences of putting fat, oil and grease down the drains.	2015-2021	High	**Anglian Water**, Peterborough City Council, Local residents
Northampton	Y	Y				Y					Threat of flooding to residents from surface water from a number of sources	Y			To reduce the risk of flooding from surface water from a number of sources	Prevention	Sewer and culvert rehabilitation, land drainage renewal, engagement with residents/flood warden	2015-2021	High	**Anglian Water**, Northamptonshire County Council, Environment Agency, Local residents

The Witham Catchment

Summary of the catchment, the issues, key statistics and a list of planned actions. You can include photos and case studies.

[REPEAT FOR EACH CATCHMENT]

Summary

Describe the issues and the catchment

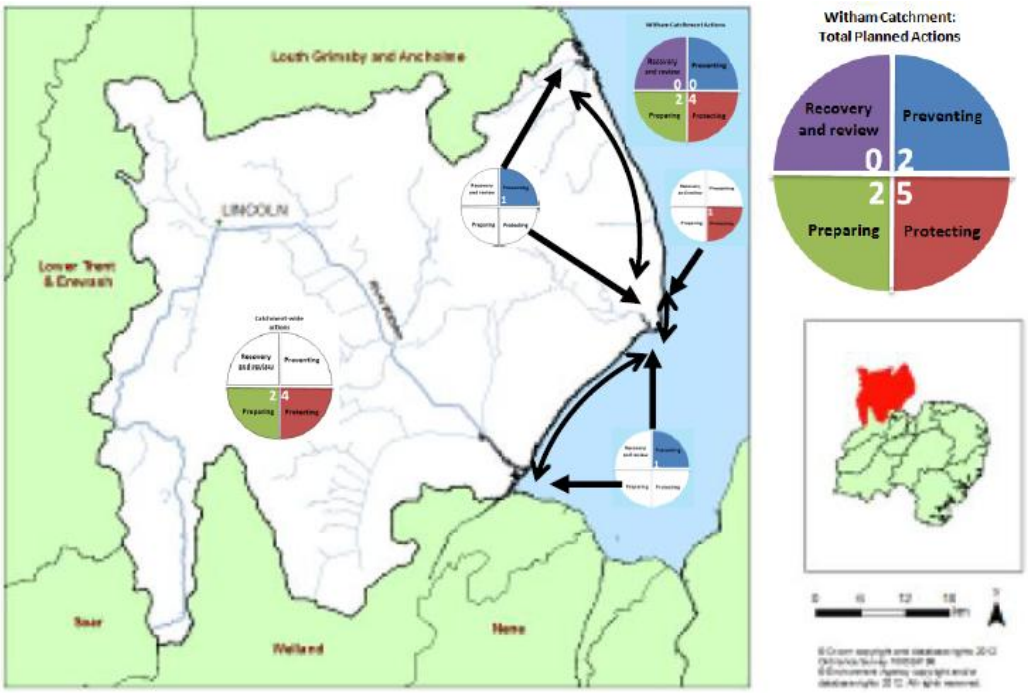
Key Statistics

Use a table to show risk information – or this could be a simple chart

Critical infrastructure at risk	Four electricity sub-stations, two sewage treatment works, Sections of A road, Sections of railway

Number of residential properties at risk of flooding (for a 1% flood)	Locations	Source of flooding Riv	Sea	Res	SW	GW
>1,000	Town A, B and C	●	○	○	○	○
500 - 1, 000	Town D, E and F	●	●	○	○	○
200 - 500	Town G, H and I	○	●	○	●	○
100 - 200	Town J and K	○	●	○	○	○
50 - 100	Town L	●	○	○	○	●
<50	Various villages	●	○	○	○	○

Planned actions to manage risk



In the Witham catchment there are 9 actions planned to manage risk. These are shown in Figure XX, and are comprised of the following:

There are 6 actions that are planned actions across the whole of the catchment:

- Preventing risk: 0 actions *Summarise the relevant measures that are planned in this catchment to prevent flood and coastal erosion risk.*
- Preparing for risk: 2 actions *Summarise the relevant measures that are planned in this catchment for risk.*
- Protecting from risk: 4 actions *Summarise the relevant measures planned in this catchment from risk.*
- Recovery and review of risk: 0 actions *Summarise the relevant measures planned in this catchment for risk.*

There are 3 actions planned in specific locations:

- Preventing risk: 2 actions *Summarise the relevant measures that are planned in this catchment to prevent flood and coastal erosion risk.*
- Preparing for risk: 0 actions *Summarise the relevant measures that are planned in this catchment for risk.*
- Protecting from risk: 1 action *Summarise the relevant measures planned in this catchment from risk.*
- Recovery and review of risk: 0 actions *Summarise the relevant measures planned in this catchment for risk.*

The Witham Catchment – Planned Actions (2015 – 2021)

Place Name	Source of Flood Risk or Coastal Erosion								Contribution to WFD outcomes		Conclusions from flood hazard / flood risk maps	Objectives			Describe objectives	Measures (Actions to achieve the objectives)	Action (Describe the measure)	Timing	Priority	Partnership implementing measures (lead in bold)
	Main River	Ordinary Watercourses	Sea	Coastal Erosion	Reservoirs	Surface Water	Ground-water	Foul Sewers	Indicate if there is potential to contribute to WFD	What WFD outcomes / objectives	*(This captures the 'issue', i.e. the flood risk problem or the opportunity, e.g. To enhance the environment/improve sustainability)*	People / Society	Environment	Economy	*(This sets out what you are trying to achieve in managing risk. It relates to outcomes rather than actions.)*	*(Pick from Prevention, Protection, Preparedness, Recovery & Review and Other)*		*(Pick from FRMP Planning Cycles: 2015 - 2021; 2021 - 2027; 2027 - 2033; 2033 - 2039 After 2039)*	*(Pick from Critical, Very High, High, Medium, Low)*	
Text (or "XX" for mock-up)	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*Drop down List (tbc) E.g. Hydromorphology, diffuse pollution (sediment etc)*	*Text*	*(Y/N)*	*(Y/N)*	*(Y/N)*	*Text*		*Text*	*Text*	*Text*	*Text*
Witham Catchment	Y	Y			Y				Y	Hydromorphology	Reliance on assets to manage flood risk - needs to consider a more integrated approach with risk management authorities.	Y	Y	Y	Efficient asset management	Protection	Develop EA-IDBs integrated System Asset Management Plans (SAMPs) in sub-catchments to better manage outcomes in flood risk, WFD and land drainage	2015-2021	High	**Environment Agency**, Internal Drainage Boards
Witham Catchment	Y	Y			Y		Y		Y	Hydromorphology, sediment, habitat	Residential and commercial properties, critical infrastructure and agricultural land at risk of flooding.	Y	Y	Y	Carry out an Opportunity Study leading to the development of an appropriate plan or strategy for managing flood risk in the Witham catchment, by optimising the efficiency of the system that balances technical, environmental, economic and social issues.	Protection	Measures to manage flood risk would include a combination of flood risk protection, property level protection, improved flood plane connectivity, integrated catchment management by maximising capacity of IDB systems, improved land management.	2015-2021	High	**Environment Agency**, Internal Drainage Boards, Lead Local Flood Authority, LWT, RSPB, Landowners
Witham Catchment	Y		Y								In excess of 10,000 properties in the highest hazard areas	Y	Y	Y	Develop a flood risk management solution to address the risk of flooding from the sea, whilst providing an amenity benefit and supporting regeneration	Protection	Provide a tidal barrier	2015-2021	Very High	**Environment Agency**, Lead Local Flood Authority, Local Authority, Landowners, Local Businesses
Witham Catchment	Y	Y				Y			Y		In excess of 200 properties in the flood risk area	Y	Y	Y	Develop a flood risk management solution to address fluvial risk of flooding, whilst providing an amenity benefit and supporting regeneration	Protection	Provide a flood storage area in combination with other flood risk management options	2015-2021	High	**Environment Agency**, Internal Drainage Boards, Lead Local Flood Authority, Town Council, Landowners, Local Businesses
Witham Catchment	Y	Y	Y		Y	Y	Y				Identified Communities most at risk of flooding and identify and deliver most effective measures of engagement	Y	Y	Y	Encourage people to sign up to and respond to flood warnings. Raise awareness of risks and actions people	Preparedness	Develop and deliver an engagement plan	2015-2021	High	**Environment Agency**, Lead Local Flood Authority
Witham Catchment	Y	Y	Y		Y	Y	Y				Communities rely on Flood Forecasting and Warning Service	Y	Y	Y	Continue to review the Flood Warning Service, now community based, in light of any improved hydraulic modelling or experienced events	Preparedness	Improved Flood Warning Service, Community Engagement Plan, Fully trained flood wardens, Enhanced Forecasting model for River Witham	2015-2021	High	**Environment Agency**, Lead Local Flood Authority, Communities
Gibraltar point to Wolfston Creek - Hunstanton cliffs				Y							Erosion Risk	Y			Feasibility of defending cliffs	Prevention	Feasibility study of defending the cliffs long term and the impacts this would have on adjacent natural process	2015 - 2021	High	**Environment Agency**, Natural England, English Heritage, Norfolk County Council, Norfolk Archaeology, stakeholder
(HECAG) Flambrough Head to Gibraltar point - SMP wide	Y	Y	Y			Y	Y	Y			Risk from combined flooding in low lying areas of the coast	Y	Y	Y	Reduce the risk of combined flooding in low lying areas	Prevention	Involve water and drainage organisations when implementing SMP2 policies in the low-lying flood risk areas to look at combined issues	2015 - 2021	High	**Environment Agency**, IDBs and water companies
o - Viking Gas terminal (Mablethrope) to Southern end of Skegness			Y	Y							Improve sustainability	Y	Y		To establish long term sustainability of defences and realign in necessary	Protection	Monitor defences and beach changes through the coastal monitoring programme to ensure long term feasibility. In the longer term consider managed realignment in areas were the current line is no longer sustainable.	2015 - 2021	High	**Environment Agency**

Implementing our plan

How we intend to implement the actions described

The Catchment based approach

You might want to explain links to other plans ie RBMP and the benefits of a catchment base approach and what this means at the river basin scale.

Monitoring delivery of actions

Set out the proposals for monitoring and reporting on delivery of actions.

What happens next?

Include a timeline for consultation and how and when their comments need to be submitted. Include what we will do with the comments and when they can expect to see the final document. Include a link to where they can find information in the mean time.

Glossary

Department for Environment Food & Rural Affairs

☎ 08459 33 55 77 (UK only)

email defra.helpline@defra.gsi.gov.uk

or visit www.gov.uk/government/organisations/department-for-environment-food-rural-affairs

The Welsh Government

☎ English: 0300 0603300 or 0845 010 3300

☎ Welsh: 0300 0604400 or 0845 010 4400

(Monday to Friday, 8:30am – 5:30pm)

email Floodcoastalrisk@wales.gsi.gov.uk

or visit www.wales.gov.uk/flooding

Environment Agency

☎ 03708 506 506 (Mon-Fri 8am-6pm)

email enquiries@environment-agency.gov.uk

or visit www.environment-agency.gov.uk

Cyfoeth Naturiol Cymru

Natural Resources Wales

☎ 0300 065 3000 (Mon-Fri, 8am - 6pm)

Email enquiries@naturalresourceswales.gov.uk

or visit www.naturalresourceswales.gov.uk