



# Managing the risk of flooding in Northumbria River Basin District

What's being planned and when

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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# Foreword

Over the next two years, the Environment Agency will be undertaking considerable planning work, culminating in the publication of Flood Risk Management Plans (FRMPs) and updated River Basin Management Plans (RBMPs). Together, these plans will shape important decisions, direct considerable investment and action and deliver significant benefits to society and the environment.

RBMPs identify the state of, and pressures on, the water environment. They consider the technical and economic viability of beneficial actions, set objectives and coordinate/monitor delivery of agreed actions. In so doing they set direction to maintain and improve the quality of all surface, ground water and coastal waters.

FRMPs identify the risk from flooding and set out objectives and measures for managing that risk. In so doing, they aggregate information about all sources of flooding - and coastal erosion where appropriate - to better inform prioritisation, decision making and work programming.

The Environment Agency, Local Authorities, Water Companies, and Highways Authorities carry out a 'Risk Management Authority' role in relation to flooding. We all work together to help communities and businesses understand their flood risk, deliver solutions to minimise this and support them to adapt to flooding and become more resilient, if the worst should happen.

Recently published information about the areas that get flooded and what's affected by the flooding 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 in partnership but now the Environment Agency is setting out plans for flood risk management across each river basin district. These river basin districts (RBDs) are areas identified to manage the water environment effectively. Each RBD has a defined drainage area so that what happens in one RBD is independent of another: this document covers the Northumbria RBD.

This document is not a consultation, but it highlights the scope of those plans: what sources of flooding are included and what consultation the Environment Agency are carrying out on those draft plans.

The Environment Agency will be consulting on a draft flood risk management plan for the whole of Northumbria RBD that sets out the objectives and measures we are proposing to manage flood risk. The draft plan will also include objectives and measures that some Lead Local Flood Authorities are also proposing. The draft plan will include:

- flooding issues for main rivers, the sea and reservoirs across the whole of the RBD
- flooding issues for local sources (ordinary watercourses, surface water and groundwater) for one Lead Local Flood Authority areas included on voluntary basis

Consultation on the draft FRMP will be from September 2014 to December 2014. We will publish the final FRMPs in December 2015.

We hope that in understanding what plans are being developed, by whom and when, you will be able to join us in shaping those flood risk management plans and be part of a more resilient country.

**Steve Moore**

**Director of Operations North and East, Environment Agency**

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# 1. Why produce this document

The impacts of flooding on homes and businesses, the communities directly affected, are clear, but flooding can have a much wider indirect effect. We want communities to be actively involved in planning for managing the risk posed by floods.

## **Box 1. The purpose of this document**

1. This document is not a consultation. It sets out:

- what flood risk planning is going on across the river basin district
- the timing of specific consultations
- which organisations lead on those consultations

By highlighting these activities early on we hope that you will get involved in shaping the plans and be part of managing the risk from floods

The document also includes the proposed scope of the strategic environmental assessments for the plan that we are preparing. We are sharing our proposals with statutory environmental bodies so they can help shape our proposed approach.

## 2. How we plan for flood and coastal erosion risk

### Legislation and strategy in England

- The [roles and responsibilities](#) of different flood risk management authorities (RMAs) in England and Wales are set out in the [Flood and Water Management Act, 2010](#). This act also requires the Environment Agency to set out the approach to managing flood and coastal erosion risk in England in a [National Flood and Coastal Erosion Risk Management Strategy for England](#). This strategy aims to improve flood and coastal erosion risk management for communities and businesses, and deliver greater environmental gain. The Strategy also establishes ways of working for risk management authorities:
- focusing on communities and working in partnership
- co-ordinating across management catchments and coastlines
- considering sustainability issues
- taking a proportional, risk-based approach
- seeking to deliver multiple benefits
- encouraging beneficiaries to contribute to invest in flood risk management

### European requirements

In addition, the [European Floods Directive](#) aims to provide a consistent approach to managing flood risk across Europe. The Directive is implemented through the [Flood Risk Regulations 2009](#) and we are currently in the first cycle of planning which means Flood Risk Management Plans (FRMPs) need to be prepared by December 2015.

### How we are delivering Flood Risk Management Plans

Our [previous consultation](#)<sup>6</sup> on the approach to developing Flood Risk Management Plans in England and Wales considered options for delivering FRMPs. See the [findings from that consultation](#)<sup>7</sup>.

In parallel to flood risk management planning, we also work with others to improve the quality of the water environment through River Basin Management Planning. As we develop FRMPs we aim to co-ordinate effectively with the River Basin Management Planning so we and others can deliver more for the environment.

#### **Box 2. Co-ordinating Flood Risk Management Planning with River Basin Management Planning**

The Environment Agency leads on the development of Flood Risk Management Plans and River Basin Management Plans.

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](#)<sup>9</sup>.

The National Flood and Coastal Erosion Risk Management Strategy for England provides a national framework for all Risk Management Authorities to work within. A hierarchy of strategic and tactical plans then establish the governance and approach for the various RMAs to delivering the aims and objectives of the national strategy.

The table below summarises the main plans and who leads on them.

**Table 1: Flood and coastal erosion risk management plans and strategies**

Plan or Strategy	Purpose and scope of plan or strategy	Drivers	Lead authority
<a href="#">The National Flood and Coastal Erosion Risk Management Strategy for England</a> <sup>18</sup>	The approach to managing flood and coastal erosion risk in England.	Statutory requirement under the Flood and Water Management Act 2010.	Environment Agency.
<a href="#">Flood Risk Management Plans</a> <sup>10</sup> (FRMPs)	To manage the risk of flooding from rivers, the sea, reservoirs, surface water and groundwater.  These may be separate plans for Flood Risk Areas that need to be co-ordinated across each river basin district in the whole of England.	Required under the European Floods Directive; implemented in England by the Flood Risk Regulations 2009.  FRMPs for this first cycle of planning must be published by December 2015.	Lead Local Flood Authorities for flooding from surface water, groundwater and ordinary watercourses.  Environment Agency for flooding from main rivers, the sea and reservoirs.
<a href="#">Local Flood Risk Management Strategy</a> <sup>11</sup>	To manage local flood risk in each Lead Local Flood Authority across the whole of England.  These also include 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 Flood Risk Management Strategy.
<a href="#">Surface Water Management Plans</a> <sup>12</sup> (SWMPs)	To establish preferred approach to managing surface water flooding.	Voluntary plans for co-ordinated measures to manage surface water flooding.	Likely to be Lead Local Flood Authorities, in partnership with others.
<a href="#">Catchment Flood Management Plans</a> <sup>13</sup> (CFMPs)	Current and future inland flood risk management across all catchments.  These plans set out preferred policies for inland flooding in England and Wales.	Voluntary plans.  Published in 2009-10.	Environment Agency
<a href="#">Shoreline Management Plans</a> <sup>14</sup> (SMPs)	Current and future flood and coastal erosion risk management along the	Voluntary plans.  Second round of SMPs	Coastal Groups.

	<p>coastline.</p> <p>These plans set out preferred policies for the coastline of England and Wales.</p>	published in 2010-13.	
Other <a href="#">river, estuary and coastal investment strategies</a> <sup>15</sup>	Outline investment proposals for flood and coastal erosion risk management. Prepared to support an investment proposal for funding.	Voluntary plans.	Operating authorities.
<b>Water Level Management Plans (WLMPs)</b>	Approach to managing water levels in environmentally sensitive areas. These plans are developed to enable agreement between different users of water.	Voluntary plans.	Drainage Boards, other operating authorities and land owners
<a href="#">Reservoir Flood Plans</a> <sup>16</sup>	<p>These include on-site and off-site flood plans that set out procedures for the management of flood risk in the event of an emergency.</p> <p>On-site plans deal with the management of the on-site risk and off-site plans deal with the risk in areas adjacent to the reservoir.</p>	Voluntary plans.	<p>On-site Flood Plans are developed by the owners of the reservoir.</p> <p>Off-site Flood Plans are developed by the Local Resilience Forums.</p>
<a href="#">Long-Term Investment Strategy</a> <sup>17</sup>	Long-term strategic assessment of funding scenarios for flood and coastal erosion risk management. This evidence is used to support government's decision making on funding as part of periodic spending reviews.	Voluntary plans.	Environment Agency.

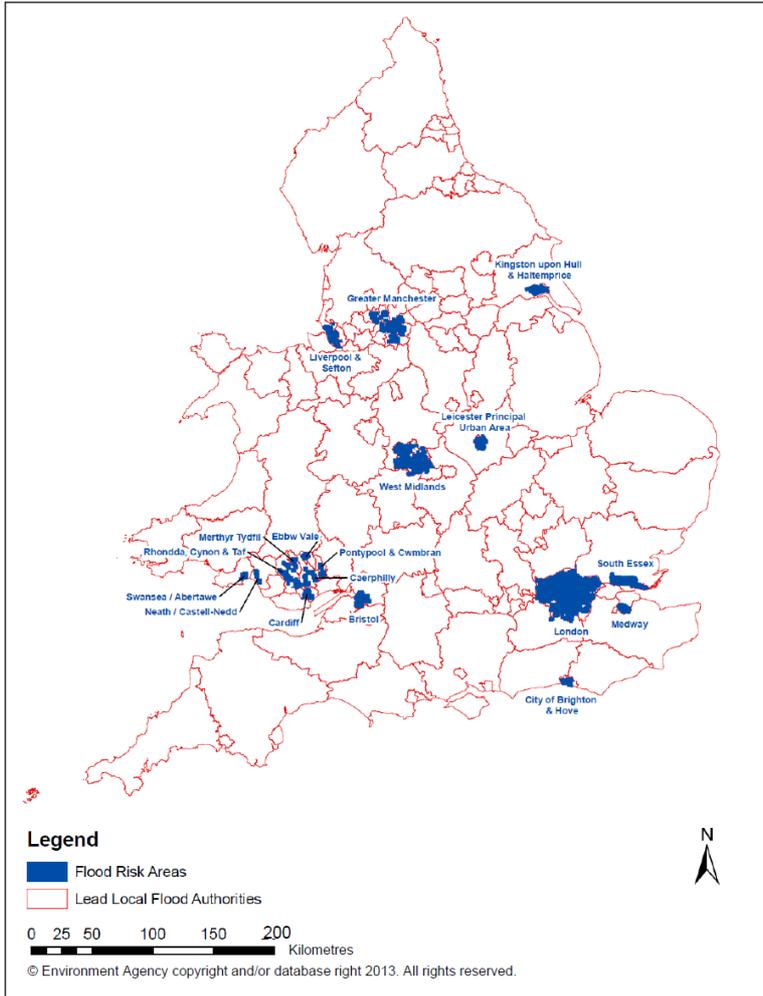
### What planning is happening now

Flood risk management planning is something that Risk Management Authorities (RMAs) do already, domestic legislation, in particular the Flood and Water management Act 2010 supports this, as does new European Floods Directive. 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 which means Flood Risk Management Plans (FRMPs) need to be prepared by December 2015.

For this cycle of plans, Lead Local Flood Authorities (LLFAs) need to prepare Flood Risk Management Plans that cover local sources of flooding for the 10 Flood Risk Areas<sup>1</sup> in England and eight in Wales (see Figure 1). The Environment Agency, and Natural Resources Wales need

to prepare FRMPs, for main rivers the sea and reservoirs covering the whole of England and Wales.

FRMPs are important because they set out how risk management authorities and communities will work together to reduce the impacts of flooding.



*Note:*  
 All Lead Local Flood Authorities (upper tier and single tier authorities) under took a Preliminary Flood Risk Assessment in 2011 to prioritise planning for flood risk management. They determined a number of areas where local flooding was particularly significant (Figure 1). The priority for the first planning cycle under the Flood Risk Regulations is to prepare FRMPs by December 2015 for these "Flood Risk Areas".

*All Lead Local Flood Authorities also need to prepare Local Flood Risk Management Strategies but there is no statutory deadline to develop these.*

**Figure 1: Flood Risk Areas in England and Wales**

<sup>1</sup> Flood Risk Areas have been identified through a Preliminary Flood Risk Assessment published in December 2011. In this first cycle of planning, to 2015, LLFAs are only required to prepare FRMPs in Flood Risk Areas (as described in [Government guidance](#)).

# 3. What that means for Northumbria river basin district

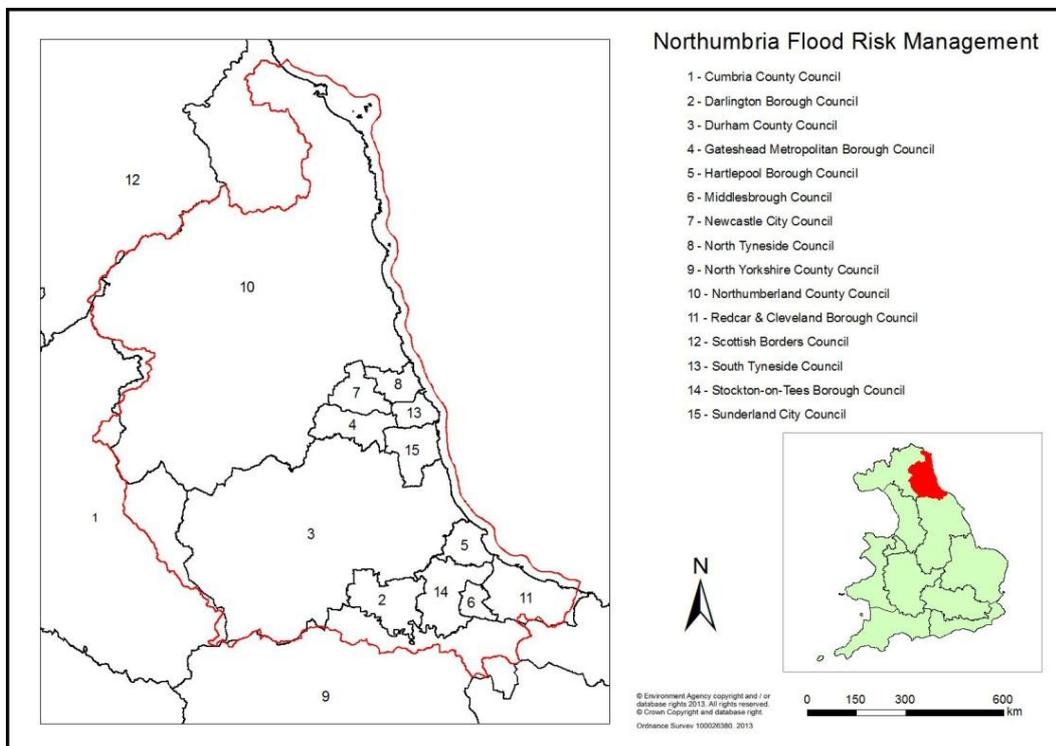
## Overview

The Environment Agency and LLFAs can develop separate plans for managing the risk from the various sources of flooding for which each is responsible. That means that LLFAs can prepare FRMPs that deal with flooding from surface water, groundwater and ordinary watercourses, while the Environment Agency will prepare FRMPs that deal with flooding from main rivers the sea and reservoirs. Alternatively, LLFAs can decide to prepare FRMPs jointly with the Environment Agency so that, in those areas, the plans cover all sources of flood risk.

While the Flood Risk Regulations only require LLFAs to prepare FRMPs by December 2015 for areas defined as Flood Risk Areas (see Figure 1), all LLFAs are already required under the Flood and Water Management Act to prepare Local Flood Risk Management (FRM) Strategies for their area (see Table 1). These Local FRM Strategies also need to consider the management of flooding from surface water, ground water and ordinary watercourses. The Environment Agency has to prepare FRMPs for the whole of each river basin district.

There are no Flood Risk Areas within the Northumbria River Basin District as defined by the regulations. While nationally some LLFAs outside Flood Risk Areas have chosen to prepare FRMPs jointly with the Environment Agency, on a voluntary basis, this is not the case within Northumbria. Instead the LLFAs are concentrating on developing robust Local FRM Strategies. However, all organisations are working closely together to ensure that we develop a more complete understanding of flood risk across the river basin district. We will be working closely over the coming years to ensure that future FRMPs cover all sources of risk where possible.

Lead Local Flood Authority areas are shown in Figure 2.



**Figure 2: Lead Local Flood Authorities in Northumbria River Basin District**

Box 3 below, outlines the scope of the FRMP which the Environment Agency will develop  
Annex 1 lists the plans and strategies that have been drawn from to develop the draft FRMP  
Northumbria RBD, and the dates of previous consultation.

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

For Northumbria 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 September 2014 to December 2014 on a draft Flood Risk Management Plan for Northumbria RBD that covers:**

- flooding from main rivers the sea and reservoirs for the RBD (as a statutory requirement)
- all sources of flooding for the following areas:
  - North Yorkshire County Council
- **All other LLFAs within the Northumbria RBD are currently developing their Flood Risk Management Strategies which will look at other sources of flooding. We will work with the LLFAs to see how that information can inform the FRMPs prior to publication of the final plan in December 2015. In order to be included in the final plan the strategies will need to go through a public consultation process similar to the one proposed for the FRMP**

## 4. Strategic environmental assessment

The primary purpose of a strategic environmental assessment (SEA) is to ensure that wider environmental effects are considered during the development of a plan. SEA aims to contribute to a higher level of protection of the environment and promote sustainable development. The relevant legislation sets out the [requirements for SEA](#)<sup>19</sup>.

The FRMP for each river basin district is intended to bring together information from a number of plans covering different sources of risk, prepared by different authorities across the river basin district. A list of the plans from which information has been drawn to compile the FRMP, alongside a record of any SEA reports, is shown in Annex 1.

SEA is a statutory requirement under the SEA Regulations for FRMPs. For the joint information brought together in the FRMP from Risk Management Authorities, the Environment Agency proposes that the scope will need to include:

1. a high level assessment at the river basin district scale of all objectives and measures brought together in the draft FRMP
2. a detailed assessment at a more local scale of any new measures or changes to measures in existing plans where they may have significant effects on the wider environment

As the lead for the FRMP, the Environment Agency will consider the effects of the plan at the catchment scale to ensure that we consider how any nationally designated environmental features would be affected. We consider it more appropriate that local designations are considered at lower tiers of planning or within projects.

We will refine our approach to SEA by taking into consideration the views of statutory bodies in response to scoping letters and will continue to work with them on this.

### A high level assessment of the FRMP for each RBD

The high level assessment covering the RBD will consist of:

- a summary of baseline information covering environmental and social indicators of current status and trends for the Northumbria RBD, and we will take into account any significant changes that might influence decisions that had been taken in previous plans. See Annex 4.
- a summary of other policies and plans that will have an influence on the objectives of the FRMP or will be influenced by it. See Annex 3.
- a high level assessment of the appropriate objectives, measures and actions included in the FRMP

### Detailed assessment of flood risk management measures

Risk Management Authorities will be responsible for considering if the high-level assessment of the whole FRMP is sufficient for the information they are proposing in the FRMP or if further more detailed assessment is required. As part of this consideration, a scoping exercise may be applied to any changes to a measure or action drawn from an existing plan and to any new measures included in the FRMP, for example from an analysis of communities at risk. This would identify whether such measures are likely to have significant environmental effect and will need a more detailed environmental assessment. The results of the first stage of the scoping exercise undertaken on Environment Agency information is set out in Table A2, Annex 2.

## How the SEA high level and detailed assessment relate to the FRMP content

Table 2 outlines the content of the draft FRMP and describes the parts of the FRMP that will be included in the SEA.

**Table 2: Proposed scope of the assessment**

<b>Content of the FRMP</b>	<b>Will it be considered in the high level SEA i.e. for the whole plan?</b>	<b>Will a more detailed assessment be required i.e. at the measure level?</b>
<b>Flood risk maps</b>	No, this provides factual information	No
<b>Flood risk management objectives</b>	Yes, we will assess the likely impacts of our objectives. This will be a high-level assessment at a river basin district scale.	No
<b>Flood risk management measures</b>	Yes, we will provide a summary of the significant environmental effects and use this to help identify cumulative impacts.	A scoping exercise will be undertaken to consider whether measures are likely to have significant environmental effects and consider existing evidence. If significant environmental effects are likely then a more detailed assessment will be carried out. If significant environmental effects are not likely then they will not be included in the assessment. The scoping exercise will be clearly documented in the Environmental Report.
<b>Flood Risk Area FRMP</b>	Yes, we will provide a summary of the significant environmental effects and use this to help identify cumulative impacts.	Plan owner to decide.

### Other policies and plans

We have set out the plans that we consider to be relevant to the River Basin District in Annex 3 to this document. We will be producing an Environmental Report to be published with the draft Flood Risk Management Plan, 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.

### Habitats Regulations Assessment

We will undertake a Habitats Regulations Assessment (HRA) as the FRMP is developed. At this stage, it is likely that HRAs undertaken for existing plans will be used to provide information for an HRA for the FRMP at the River Basin District scale. We will discuss HRA requirements with Natural England and Natural Resources Wales as the FRMP is formulated.

### **Water Framework Directive Assessment**

The FRMP will be closely aligned with the River Basin Management Plan. As the plans are both being prepared at the river basin district scale and following the same timescales, we will use much of the same information (environmental baseline and contextual information) for the SEAs. Opportunities for the FRMP to contribute to WFD objectives will be explored as part of the FRMP preparation process and will be highlighted in the Environmental Report.

WFD compliance assessment requirements will be incorporated into the SEA and reported in the Environmental Report.

### **The SEA Environmental Report and draft FRMP**

The SEA process will deliver an Environmental Report to be published with the draft FRMP for consultation (from September to December 2014). It will describe the environmental baseline of the river basin district, explain how the environmental assessment was carried out, identify the environmental impacts of the plan along with mitigation measures and set out our proposals for monitoring.

### **Statement of Environmental Particulars and Final FRMP**

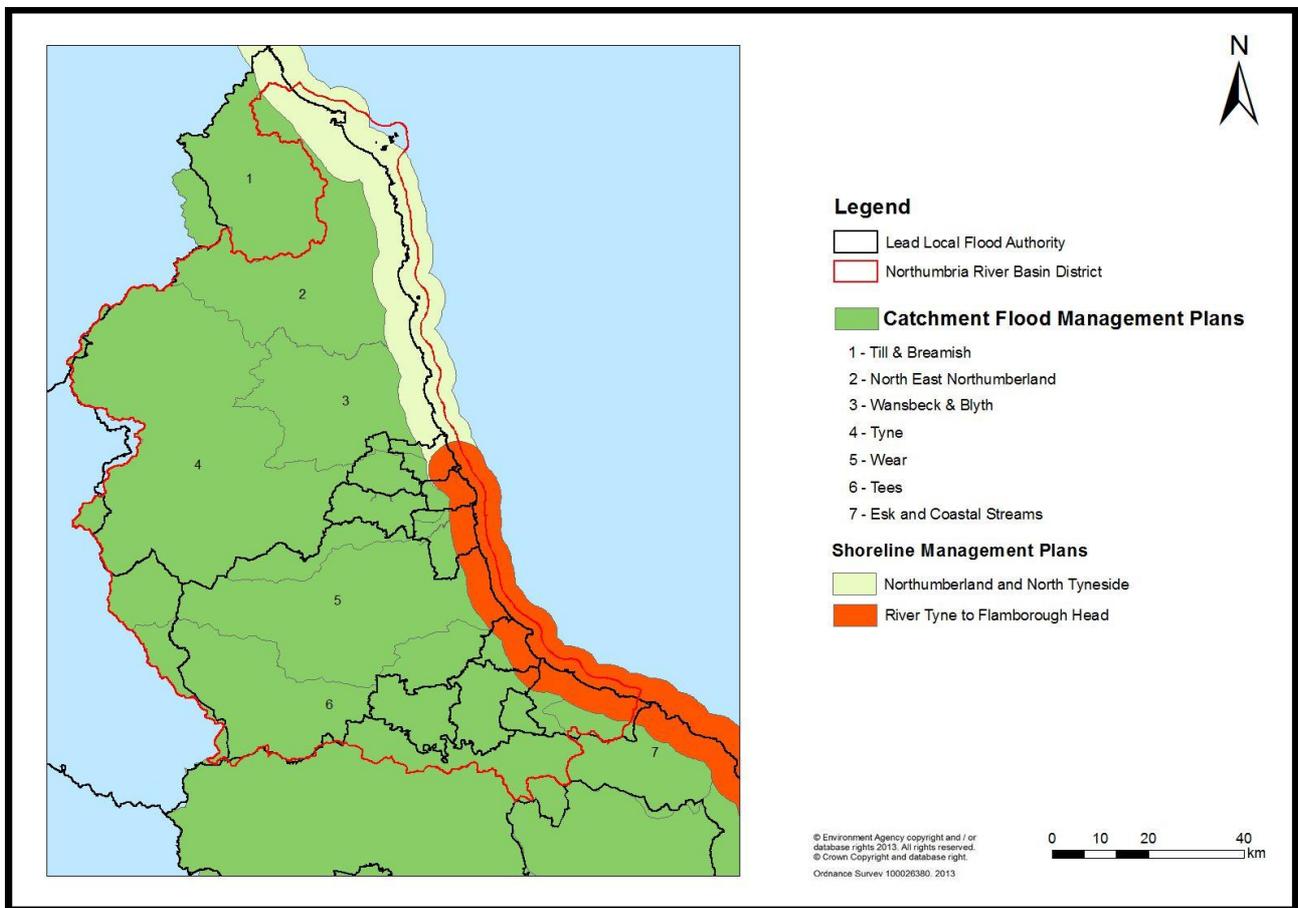
Feedback from consultation on the draft FRMP and Environmental Report will be reviewed and taken into account by the Environment Agency and the LLFAs contributing to the FRMP. The draft FRMP will then be finalised and published alongside a Statement of Environmental Particulars that will include how feedback on the draft plan and Environmental Report have been taken into account and how environmental impacts will be monitored.

# References

1. [http://ec.europa.eu/environment/water/flood\\_risk/](http://ec.europa.eu/environment/water/flood_risk/)
2. <http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/research/planning/125459.aspx>
3. <https://www.gov.uk/flood-risk-management-information-for-flood-risk-management-authorities-asset-owners-and-local-authorities>
4. <http://www.legislation.gov.uk/ukpga/2010/29/contents>
5. <https://www.gov.uk/government/publications/national-flood-and-coastal-erosion-risk-management-strategy-for-england>
5. <http://wales.gov.uk/topics/environmentcountryside/epq/flooding/nationalstrategy/strategy/?lang=en>
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18. <https://www.gov.uk/government/publications/national-flood-and-coastal-erosion-risk-management-strategy-for-england>
19. <http://www.legislation.gov.uk/uksi/2004/1633/contents/made>

# Annex 1: A summary of information for inclusion in the Flood Risk Management Plan

This annex sets out the information that will be drawn from other flood and coastal erosion risk management plans in order to develop the FRMP. Of particular relevance are the Catchment Flood Management Plans (CFMPs) and Shoreline Management Plans (SMPs) that have been developed for the whole of England and Wales. Figure 3 shows which of these plans are relevant for the River Basin District.



**Figure 3: CFMPs and SMPs in Northumbria River Basin District**

Proportionate measures for managing flood risk from reservoirs are likely to comprise the preparation of on-site and off-site Reservoir Plans. In some cases, such plans have already been developed and the FRMP will aim to broadly set out if these measures are already established and propose where such measures need to be developed by reservoir owners and Local Resilience Forums (details will be subject to further discussion from security services).

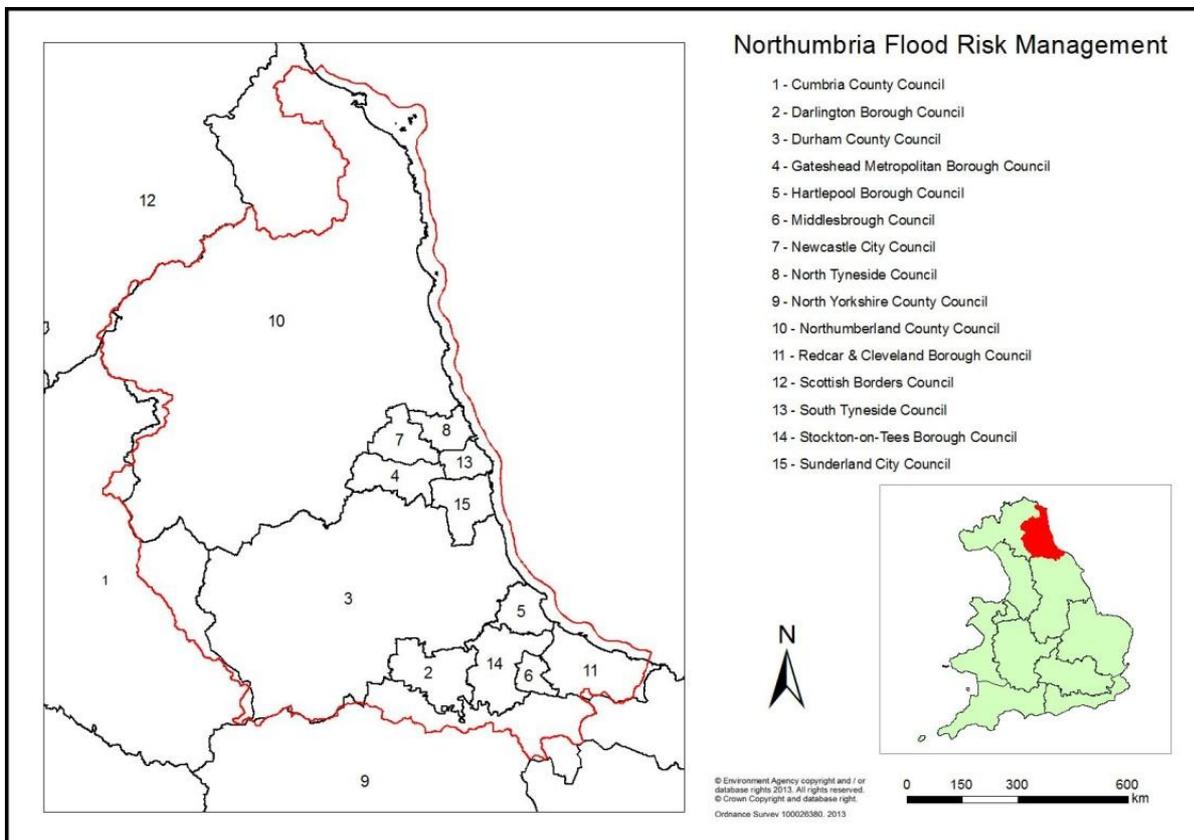
Table A1 lists the plans that we are specifically drawing on to develop the FRMP and where previous consultation has been undertaken. They also show, if environmental assessment has been undertaken and any assessment related to the Habitats Regulations.

Table A2 shows the current understanding regarding the progress of the LLFAs Local Flood Risk Management Strategies

Importantly, both tables also show if the information being used is for statutory purposes (used to fulfil a legal requirement of the FRMP), or voluntarily by the RMA to help present a more complete picture of flood and coastal erosion risk for the river basin district.

All Lead Local Authorities within the River Basin District are currently developing their Flood Risk Management Strategies which outline proposals to manage local flood risk. While none of this information will be included within the draft FRMP there is a intention to include information from the Flood Risk Management Strategies in the final FRMP where we can subject to the FRMS having being consulted on and also subjected to the appropriate environmental assessments, including Habitats Regulations where needed, have been completed. Contact details for the lead authorities are also included in the table so that the public can contact the relevant authorities should they want further information about specific plans.

Of particular importance for FRMPs and Local FRM Strategies are the Lead Local Flood Authorities (see figure 4 below)



**Figure 4: LLFAs in Northumbria River Basin District**

Table A1. Information compiled by the Environment Agency related to flooding from rivers, the sea and reservoirs, and by local authorities related to coastal erosion risk management

No. on CFMP / SMP map	Title of plan used to develop draft FRMP	Sources of risk drawn from plan	Status of information in FRMP (statutory or voluntary)	Comments on proposed changes to the information contained in the original plan for inclusion in the FRMP	Was an Environmental Assessment of the plan undertaken?	Was a Habitats Regulations Assessment undertaken?	Was an Appropriate Assessment (under the Habitats Regulations) undertaken?	Was compensatory habitat needed (and a case agreed with the relevant Minister(s))?	Publication date of final plan	Lead Authority (Who to contact for further information)
Information from the following Catchment Flood Management Plans:										
1	North East Northumberland	Flooding from main rivers	statutory: this information informs the statutory requirements for Flood Risk Management Plans under the Flood Risk Regulations	The measures within the existing CFMP cover all sources of flood risk. It is proposed that the measures relating to those sources of flood risk covered by the the FRMP will be updated and transferred to the FRMP. Those measures covering other sources of flooding will remain within the CFMP and may be considered as part of the local flood risk strategies	Yes, a voluntary Environmental Report was prepared to accompany the draft plan and consulted on at the same time.	Yes	Yes	No	2012	Environment Agency: Contact: National Customer Contact Centre on: 03708 506 506 or email: enquiries@environment-agency.gov.uk
2	Wansbeck and Blyth					Yes	Yes	No	2012	
3	Tyne					Yes	Yes	No	2012	
4	Wear					Yes	Yes	No	2012	
5	Tees					Yes	Yes	No	2012	
6	Esk					Yes	Yes	No	2012	
Information from the following Inland, coastal and estuary strategies and plans										
	Tees Estuary Strategy	Flooding from Main River	statutory: this information informs the statutory requirements for Flood Risk Management Plans under the Flood Risk Regulations	Most of the measures within the plan were incorporated within the Tees CFMP and will be taken from that plan					2009	Environment Agency: Contact: National Customer Contact Centre on: 03708 506 506 or email: enquiries@environment-agency.gov.uk

No. on CFMP / SMP map	Title of plan used to develop draft FRMP	Sources of risk drawn from plan	Status of information in FRMP (statutory or voluntary)	Comments on proposed changes to the information contained in the original plan for inclusion in the FRMP	Was an Environmental Assessment of the plan undertaken?	Was a Habitats Regulations Assessment undertaken?	Was an Appropriate Assessment (under the Habitats Regulations) undertaken?	Was compensatory habitat needed (and a case agreed with the relevant Minister(s))?	Publication date of final plan	Lead Authority (Who to contact for further information)		
Information from the following Shoreline Management Plans:												
	Scottish Border to the River Tyne	Flooding from the sea	statutory: this information informs the statutory requirements for Flood Risk Management Plans under the Flood Risk Regulations	The measures within the SMP relevant to flooding will be taken forward into the FRMP. However, within the area these are limited					xxx date	Environment Agency: Contact: National Customer Contact Centre on: 03708 506 506 or email: enquiries@environment-agency.gov.uk You may also wish to contact the relevant groups that lead on the development of SMPs (see below)		
	River Tyne to Flamborough Head											xxx date
Information from the following Shoreline Management Plans:												
	Scottish Border to the River Tyne	Coastal erosion risk	voluntary: this information may be included in the FRMP on a voluntary basis in order to provide a more complete picture of flood and coastal erosion risk management in the Northumbria River Basin District. The information should not be considered to form part of the statutory FRMP developed to meet the requirements for Flood Risk Management Plans under the Flood Risk Regulations	The measure taken forward to the FRMP will be those which also impact on flood risk. The SMP will remain in place as the source of coastal management actions					xxx date	Coastal Groups: Contact: List relevant contacts for each SMP		
	River Tyne to Flamborough Head											xxx date
												xxx date
												xxx date
												xxx date

Table B1. Information compiled by Lead Local Flood Authorities related to 'local' sources of flooding (ie flooding surface water, groundwater and ordinary watercourses)

Number on LLFA map	Lead Local Flood Authority	Sources of risk drawn from plan	Within a Flood Risk Area identified in the PFRA? (Yes/No)	Is local flood risk information included in Northumbria RBD FRMP?	Status of information in FRMP (statutory or voluntary)	Local Strategy progress (as of 31 March 2014)	Comments on proposed changes to the information contained in the original plan for inclusion in the FRMP	Lead Authority (Who to contact for further information)
10	Northumberland CC	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Northumberland County Council. FCERM@northumberland.gov.uk
8	North Tyneside MBC	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	Public consultation on strategy in progress or complete		North Tyneside Council
7	Newcastle City Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Newcastle City Council flood.management@newcastle.gov.uk
4	Gateshead MBC	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Gateshead Council www.gateshead.gov.uk
13	South Tyneside Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		South Tyneside Council environmental.h@southtyneside.gov.uk
15	City of Sunderland Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		City of Sunderland Council
3	Durham County Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Durham County Council
5	Hartlepool Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Hartlepool Council
14	Stockton Borough Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Stockton Borough Council

Number on LLFA map	Lead Local Flood Authority	Sources of risk drawn from plan	Within a Flood Risk Area identified in the PFRA? (Yes/No)	Is local flood risk information included in Northumbria RBD FRMP?	Status of information in FRMP (statutory or voluntary)	Local Strategy progress (as of 31 March 2014)	Comments on proposed changes to the information contained in the original plan for inclusion in the FRMP	Lead Authority (Who to contact for further information)
2	Darlington Borough Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Darlington Borough Council
6	Middlesbrough Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	Summary of strategy published		Middlesbrough Council
1	Cumbria County Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Cumbria County Council
11	Redcar and Cleveland Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Redcar and Cleveland Council
9	North Yorkshire County Council	surface water from Local FRM Strategy	No	Yes	voluntary	In progress	review and include relevant information from their Local FRM Strategy and SWMP	North Yorkshire County Council

# Annex 2 Results of SEA screening and scoping process

Table A2 below presents a summary of the Strategic Environmental Assessment (SEA) screening and scoping outcomes in relation to the requirement for a detailed SEA assessment. Screening and scoping is an ongoing process, and as such Table A2 is subject to future change. Note that all actions will be scoped in to the cumulative SEA.

**Table A2: Summary of the SEA screening/scoping outcomes**

Plan	Status	Level of change	Screening/scoping outcome
<b>North East Northumberland CFMPs</b>	Retained - Actions applicable to Main Rivers will be transitioned to FRMP, but actions relating to other sources of flooding will be retained There are 78 actions within the CFMP across all the policy units. Of these 8 are outside the scope of the FRMP and will be retained within the CFMP	It is expected that the 70 actions will be updated. It is unlikely that any of the changes would be significant to warrant changes to policy intent. Some will have been completed and will be removed from the FRMP	Actions that are to be updated are unlikely to result in a major change in policy intent and therefore the plan has been screened in. However, the actions to be changed are in relation to preparedness measures and therefore have been scoped out.
<b>Wansbeck and Blyth CFMP</b>	Retained Actions applicable to Main Rivers will be transitioned to FRMP, but actions relating to other sources of flooding will be retained There are 86 actions within the CFMP across all the policy units. Of these 14 are outside the scope of the FRMP and will be retained within the CFMP	It is expected that the 72 actions will be updated. It is unlikely that any of the changes would be significant to warrant changes to policy intent. Some will have been completed and will be removed from the FRMP	Actions that are to be updated are unlikely to result in a major change in policy intent and therefore the plan has been screened in. However, the actions to be changed are in relation to preparedness measures and therefore have been scoped out.
<b>Tyne CFMP</b>	Retained Actions applicable to Main Rivers will be transitioned to FRMP, but actions relating to other sources of flooding will be retained There are 191 actions within the CFMP across all the policy units. Of these 46 are outside the scope of the FRMP and will be retained within the CFMP	It is expected that the 145 actions will be updated. It is unlikely that any of the changes would be significant to warrant changes to policy intent. Some will have been completed and will be removed from the FRMP	Actions that are to be updated are unlikely to result in a major change in policy intent and therefore the plan has been screened in. However, the actions to be changed are in relation to preparedness measures and therefore have been scoped out.

<p><b>Wear CFMP</b></p>	<p>Retained</p> <p>Actions applicable to Main Rivers will be transitioned to FRMP, but actions relating to other sources of flooding will be retained There are 150 actions within the CFMP across all the policy units. Of these 33 are outside the scope of the FRMP and will be retained within the CFMP</p>	<p>It is expected that the 117 actions will be updated. It is unlikely that any of the changes would be significant to warrant changes to policy intent. Some will have been completed and will be removed from the FRMP</p>	<p>Actions that are to be updated are unlikely to result in a major change in policy intent and therefore the plan has been screened in. However, the actions to be changed are in relation to preparedness measures and therefore have been scoped out.</p>
<p><b>Tees CFMP</b></p>	<p>Retained</p> <p>Actions applicable to Main Rivers will be transitioned to FRMP, but actions relating to other sources of flooding will be retained There are 231 actions within the CFMP across all the policy units. Of these 47 are outside the scope of the FRMP and will be retained within the CFMP</p>	<p>It is expected that the 184 actions will be updated. It is unlikely that any of the changes would be significant to warrant changes to policy intent. Some will have been completed and will be removed from the FRMP</p>	<p>Actions that are to be updated are unlikely to result in a major change in policy intent and therefore the plan has been screened in. However, the actions to be changed are in relation to preparedness measures and therefore have been scoped out.</p>
<p><b>Esk CFMP</b></p>	<p>Retained</p> <p>Only a small part of this CFMP fall within the Northumbria FRMP</p> <p>Actions applicable will be transitioned to FRMP, but actions relating to other sources of flooding will be retained There are 32 actions within the CFMP across all the policy units within Northumbria FRMP. Of these 9 are outside the scope of the FRMP and will be retained within the CFMP</p>	<p>It is expected that the 23 actions will be updated. It is unlikely that any of the changes would be significant to warrant changes to policy intent. Some will have been completed and will be removed from the FRMP</p>	<p>Actions that are to be updated are unlikely to result in a major change in policy intent and therefore the plan has been screened in. However, the actions to be changed are in relation to preparedness measures and therefore have been scoped out.</p>
<p><b>Northumberland and Tyne SMP</b></p>	<p>Retained</p> <p>Most actions related to erosion and as such will be retained</p>	<p>Actions related to flood risk will be transferred to FRMP but will not change policy intent along coast</p>	
<p><b>Tyne to Falborough Head SMP</b></p>	<p>Retained</p> <p>Most actions related to erosion and as such will be retained</p>	<p>Actions related to flood risk will be transferred to FRMP but will not change policy intent along coast</p>	

# Annex 3: Policies, plans and programmes to be considered by the Strategic Environmental Assessment

Table A3 sets out the national plans, policies and programmes and Table B3 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 A3: 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 (CLG)	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 RBD, we have concentrated on those plans that are similar in scale to the River Basin Management Plan or are likely to directly impact on the catchments within the RBD. 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 RBD, 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 RBD.

**Table B3: Plans, policies and programmes relevant to the Northumbria RBD**

<b>Policy / Plan / Programme</b>	<b>Published by</b>	<b>Year</b>
Core Strategies	Local authorities	Various
Minerals and Waste Plans	Local authorities	Various
Northumberland and North Tyneside Shoreline Management Plan	Various	2009
River Tyne to Flamborough Head Shoreline Management Plan	Various	2007
North East Catchment Abstraction Management Strategies (4)	Environment Agency	2013
Catchment Flood Risk Management Plans	Environment Agency	Various
Coastal and Flood Risk Management Strategies	Various	Various
Regional Transport Plans	Local authorities	Various
Yorkshire and North East Region Drought Plan	Environment Agency	2012
Water resources strategy: Regional Action Plan for North East Region	Environment Agency	2009
Salmon Action Plans (Tees, Tyne, Wear and Coquet)	Environment Agency	2008/ 2009
Eel Management Plan: Northumbria River Basin District	Defra	2010
Heritage at Risk 2012: North East	English Heritage	2012
The North Pennines AONB Management Plan 2009-2014	The North Pennines AONB Partnership	2009
Northumberland Coast AONB and Berwickshire and North Northumberland Coast EMS Management Plan 2009-2014	Northumberland Coast AONB Partnership & Berwickshire and North Northumberland Coast EMS Management Group	2009
Tees Valley Green Infrastructure Strategy	Tees Valley Joint Strategy Unit	2008
Action for Wildlife: Durham Biodiversity Action Plan	Durham Biodiversity Partnership	1999
Tees Valley Biodiversity Action Plan	Tees Valley Biodiversity Partnership	1999
Newcastle and North Tyneside Biodiversity Action Plan	Newcastle and North Tyneside BAP Steering Group	2005
Northumberland National Park Biodiversity Action Plan	Northumberland National Park Authority	2005
Northumberland Biodiversity Action Plan	Northumberland Biodiversity Steering	2000

	Group	
Water Resources Management Plan 2010-2035	Northumbrian Water	2010
Northumbrian Water Drought Plan	Northumbrian Water	2013

# Annex 4: Environmental Baseline Summary to be considered by the Strategic Environmental Assessment

The SEA regulations set out a number of environmental factors to be considered during the assessment. In this FRMP assessment we want to focus on those effects that are likely to be significant, whether positive or negative at the scale of the plan which is for the river basin district. The following table sets out the environmental topics referred to in the regulations along with key baseline information for the river basin district and indicates whether we intend to consider it within the high level assessment

**Table A4: Range of environmental topics for consideration in the high level assessment**

Environmental topic	Baseline facts and figures	To be considered by the high level assessment?
<b>Biodiversity, flora and fauna</b>	<ul style="list-style-type: none"> <li>• Waterbodies and wetlands in the River Basin District (RBD) support a number of protected species including Otter, water Vole and native White Clawed Crayfish.</li> <li>• Invasive species are present in many catchments including floating pennywort, Japanese Knotweed and Himalayan balsam</li> <li>• 16 Special Areas of Conservation (SAC), 7 Special Protection Areas (SPA) and 5 Ramsar Sites, with some of these sites dependent on water quality and / or geomorphological processes</li> <li>• Northumbria contains numerous salmonid fisheries, including the Tyne, Wansbeck and Till</li> <li>•</li> </ul>	Yes
<b>Population and human health</b>	<ul style="list-style-type: none"> <li>• Predominantly rural RBD</li> <li>• 2.5 million inhabitants, an ageing population and one of the slowest growing populations</li> <li>• 34% of areas are classified as within the 20% most deprived in England</li> <li>• Life expectancy is below the national average</li> <li>• 80% of the population live in the urban conurbations in the Tyne and Wear and Tees Lowlands</li> <li>• Economic output per capita is lower than other English regions at 77% of the UK average</li> <li>• Chemical and Manmade fibres industry accounts for around 22% of the economic output, this is located primarily to the south of the region around the Tees estuary</li> <li>• Flood risk is highest in urban areas with 9600</li> </ul>	Yes

	<p>commercial and residential properties at risk in the Tees catchment, 7950 in the Tyne, 4700 in the Wear and 3900 in Northumberland.</p> <ul style="list-style-type: none"> <li>• There are significant areas at risk of flooding along the east coast</li> </ul>	
<b>Soil</b>	<ul style="list-style-type: none"> <li>• bedrock geology consists of Devonian and Silurian igneous granite and lava flows and carboniferous desimentary rocks. Notable amongst these are the coal measures for which the area is well known</li> <li>• Principle aquifers are the fell Sandstone, Sherwood sandstone and Magnesium Limestone</li> <li>• There are 261 abstraction licenses (104 from surface water sources and 157 from groundwater sources)</li> <li>• Most abstraction is used for public water supply, with other uses including agriculture and industrial</li> <li>• The exception to this pattern is the Tees catchment where 95% of the abstracted water is used for power generation</li> <li>• There is an extensive history of mineral extraction, resulting in a legacy of spoil heaps, abandoned mine workings and associated water quality issues. The southern area of the river basin district has left the greatest legacy of contaminated land</li> </ul>	Yes
<b>Water</b>	<ul style="list-style-type: none"> <li>• The river basin district covers an area of 9,029km<sup>2</sup></li> <li>• The coastline extends from Berwick upon Tweed in the North to the North York Moors.</li> <li>• There are 4 catchments - Northumberland Rivers, Tyne, Wear and Tees and these drain an area of land from the upland watersheds of the Cheviot hills, North Pennines, Yorkshire Dales and North York Moors into the North sea</li> <li>• The Till river restoration strategy is at the implementation stage- seeking to improve the condition of these SSSIs, which have been in decline due to physical modification and land use.</li> <li>• Due to the nature of the uplands, there are some rapid response catchments in the district, such as Belford, Rothbury and</li> <li>• There are several man made reservoirs for water supply, including Kielder Water and Derwent reservoir</li> <li>• Physical modification of waterbodies has occurred throughout the catchment to reduce flood risk, improve land drainage and facilitate urban development.</li> <li>•</li> </ul>	Yes
<b>Air</b>	<ul style="list-style-type: none"> <li>• While individual actions may have small localised impact on air quality, at a strategic level it is very unlikely that the Flood Risk Management Plan would have a significant effect on air quality within the river</li> </ul>	No

	basin district.	
<b>Climatic factors</b>	<ul style="list-style-type: none"> <li>UKCIP predicts under medium emissions scenario (2050's) rainfall will change from a decrease of 30% to an increase of 1%, and in winter increase by between 1 and 24%. Mean winter temperatures could rise by 1.1°C - 3.1°C and summer mean temperatures by 1.2°C - 4.1°C. These changes could result in decreased water availability and an increase in the number of people and properties being at risk from flooding</li> </ul>	Yes
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>Infrastructure includes strategic road and rail routes, such as the A19 east coast mainline and 2 regional airports.</li> <li>Teesport on the river Tees estuary is one of the largest deep ports handling around 50 million tonnes of cargo annually. There are smaller ports at Port of Tyne, Blyth, Seaham, Hartlepool and Sunderland</li> <li>Significant energy generation facilities include a nuclear power station at Hartlepool</li> <li>There are approximately 135 km of flood defences within the catchment, as well as significant flood storage facilities such as at West Auckland (Gaunless) and Hexham.</li> <li></li> </ul>	Yes
<b>Cultural heritage</b>	<ul style="list-style-type: none"> <li>Northumbria is culturally rich and contains 2 world heritage sites (Hadrians Wall and Durham cathedral and Castle)</li> <li>187 scheduled ancient monuments</li> <li>Registered historic parks and gardens, registered battlefields</li> <li>Thousands of listed buildings and structures associated with past water uses, such as Mills and Weirs</li> <li>Many riverside communities are within conservation areas, such as Morpeth, Alnwick and Stanhope</li> </ul>	Yes
<b>Landscape</b>	<ul style="list-style-type: none"> <li>Northumberland has an extensive rights of way network, with many located next to rivers and along the coast</li> <li>Notable routes include the Transpennine trail, the coast to coast and Hadrian's Wall path</li> <li>The RBD is home to the Northumberland Coast Area of Outstanding Natural Beauty (AONB), the North Pennines AONB, the Northumberland national park and part of the North York Moors National Park</li> <li>Angling and water based recreation is popular in the RBD</li> <li>There are 33 designated bathing water beaches, although not all are achieving good bathing water quality standards</li> </ul>	Yes

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