



Managing the risk of flooding in the English Catchments of the Solway Tweed 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 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:

The Floods Directive requires reporting at a river basin district scale. There are therefore particular arrangements to ensure coordination for the river basin districts which cross the border between England and Scotland. This is addressed by the Flood Risk (Cross Border Areas) Regulations 2010 which amend the Flood Risk Regulations 2009 and, in the case of the Solway Tweed RBD, the role of the Cross Border Advisory Group. The Flood Risk (Cross Border Areas) Regulations establishes the Cross Border Map (see adjacent figure) which identifies the English and Scottish Cross Border Areas.

For further information:

2010 No. 1102 Environmental Protection. The Flood Risk (Cross Border Areas) Regulation 2010.

<http://www.legislation.gov.uk/ukxi/2010/1102/contents/made>

This scoping report covers that part of the Solway Tweed River Basin Catchment which lies within England. Primarily the Eden and Till Catchments.

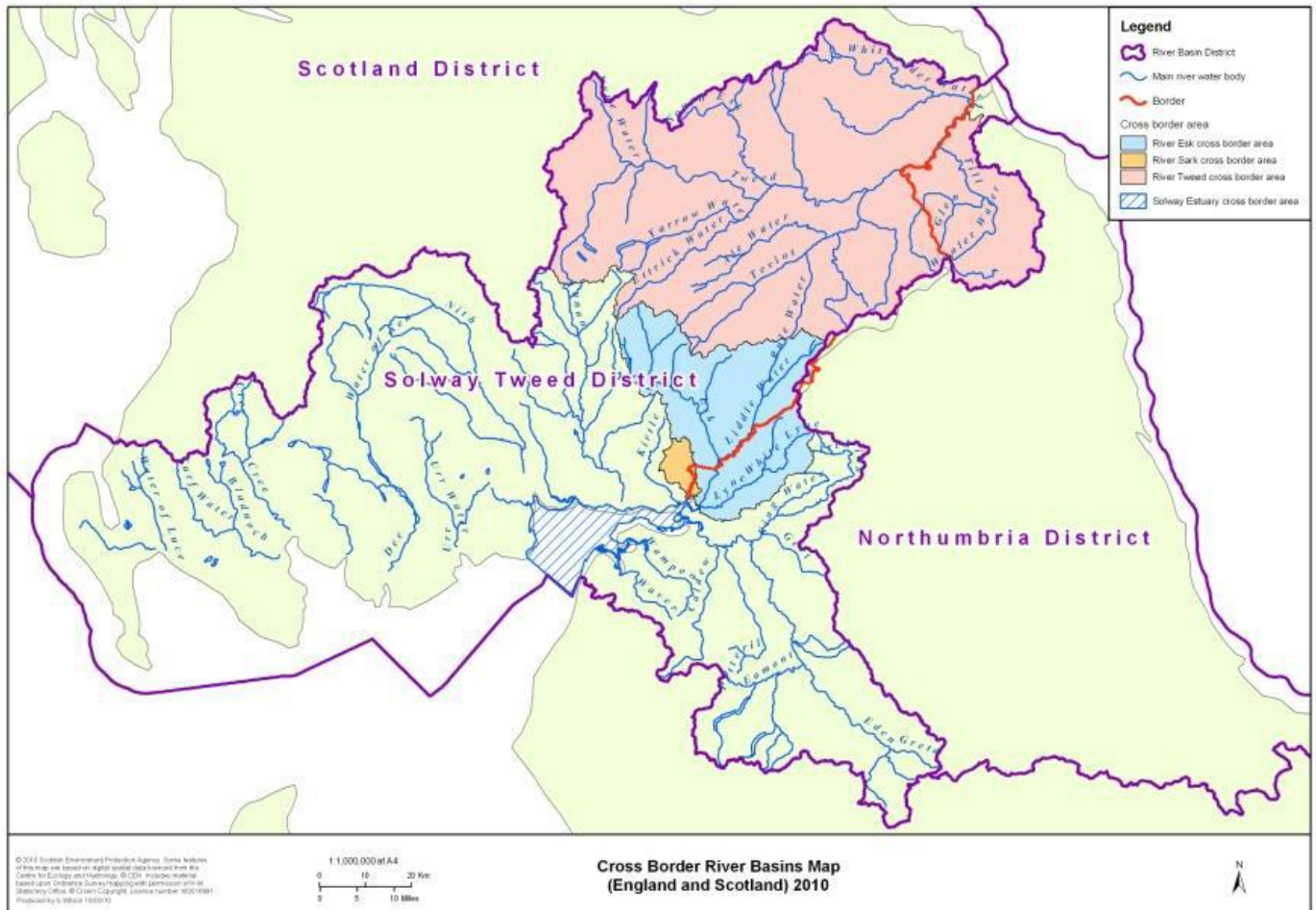


Figure A. Cross-Border Areas of the Solway-Tweed river basin district

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 and Lead Local Flood Authorities are carrying out on those draft plans.

The Environment Agency will be consulting on a draft flood risk management plan for the English Catchments of the Solway and Tweed RBD that sets out the objectives and measures we are proposing to manage flood risk. The draft plan will include:

- flooding issues for main rivers, the sea and reservoirs across the English catchments of the RBD

Consultation on the draft FRMP will be from September 2014 until June 2015 to align with SEPAs consultation. 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.

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](#)⁶ on the approach to developing Flood Risk Management Plans in England and Wales considered options for delivering FRMPs. See the [findings from that consultation](#)⁷. 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](#)⁹.

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
The National Flood and Coastal Erosion Risk Management Strategy for England ¹⁸	The approach to managing flood and coastal erosion risk in England.	Statutory requirement under the Flood and Water Management Act 2010.	Environment Agency.
Flood Risk Management Plans ¹⁰ (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.
Local Flood Risk Management Strategy ¹¹	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.
Surface Water Management Plans ¹² (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.
Catchment Flood Management Plans ¹³ (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

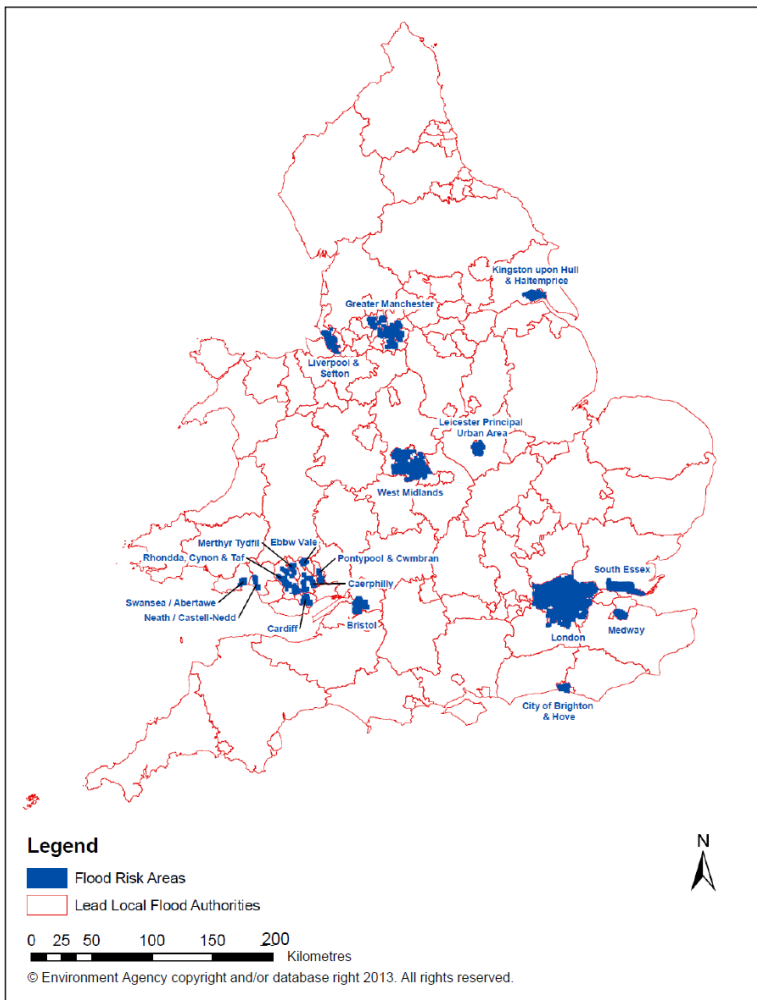
Shoreline Management Plans ¹⁴ (SMPs)	<p>Current and future flood and coastal erosion risk management along the coastline.</p> <p>These plans set out preferred policies for the coastline of England and Wales.</p>	<p>Voluntary plans.</p> <p>Second round of SMPs published in 2010-13.</p>	<p>Coastal Groups.</p>
Other river, estuary and coastal investment strategies ¹⁵	<p>Outline investment proposals for flood and coastal erosion risk management. Prepared to support an investment proposal for funding.</p>	<p>Voluntary plans.</p>	<p>Operating authorities.</p>
Water Level Management Plans (WLMPs)	<p>Approach to managing water levels in environmentally sensitive areas. These plans are developed to enable agreement between different users of water.</p>	<p>Voluntary plans.</p>	<p>Drainage Boards, other operating authorities and land owners</p>
Reservoir Flood Plans ¹⁶	<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>	<p>Voluntary plans.</p>	<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>
Long-Term Investment Strategy ¹⁷	<p>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.</p>	<p>Voluntary plans.</p>	<p>Environment Agency.</p>

3. 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 (ie from surface water, groundwater and ordinary watercourses) for the 10 Flood Risk Areas¹ 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

¹ 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](#)).

4. What that means for English Catchment of the Solway Tweed 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.

Some LLFAs outside significant Flood Risk Areas have chosen to prepare FRMPs jointly with the Environment Agency, on a voluntary basis. These LLFAs are using their Local FRM Strategies and sharing a more complete picture of flood and coastal erosion risk management by including flooding from all sources. However, Cumbria County Council and Northumberland County Council will not provide information for consideration for the draft FRMP because they have not yet completed their Local FRM Strategies.

Figure 2 below shows the English LLFAs within Solway Tweed river basin district (RBD), and Box 3 outlines the scope of the FRMP for the English catchments within the Solway Tweed RBD.

Cross-Border Areas of the Solway-Tweed river basin district

The Floods Directive requires reporting at a river basin district scale. There are therefore particular arrangements to ensure coordination for the river basin districts (RBDs) which cross the border between England and Scotland (the Solway Tweed and Northumbrian river basin districts).

This is addressed by the Flood Risk (Cross Border Areas) Regulations 2010 which amend the Flood Risk Regulations 2009 and, in the case of the Solway Tweed RBD, the role of the Cross Border Advisory Group.

The Flood Risk (Cross Border Areas) Regulations establishes the Cross Border Map (see figure A) which identifies the English and Scottish Cross Border Areas.

The Rivers Esk and Sark flow in a southerly direction from Scotland across the border into England before entering the sea in the Solway Firth. At present there are no known significant cross border flood risk issues along these main rivers. The River Esk and its tributary the Liddel form the England Scotland border up to the border with Northumberland. At present there are no known cross border local flood risk issues. The River Till catchment covers the northern part of Northumberland and drains northerly to the River Tweed at Cornhill where the Scottish / England border runs along the centreline of the River Tweed.

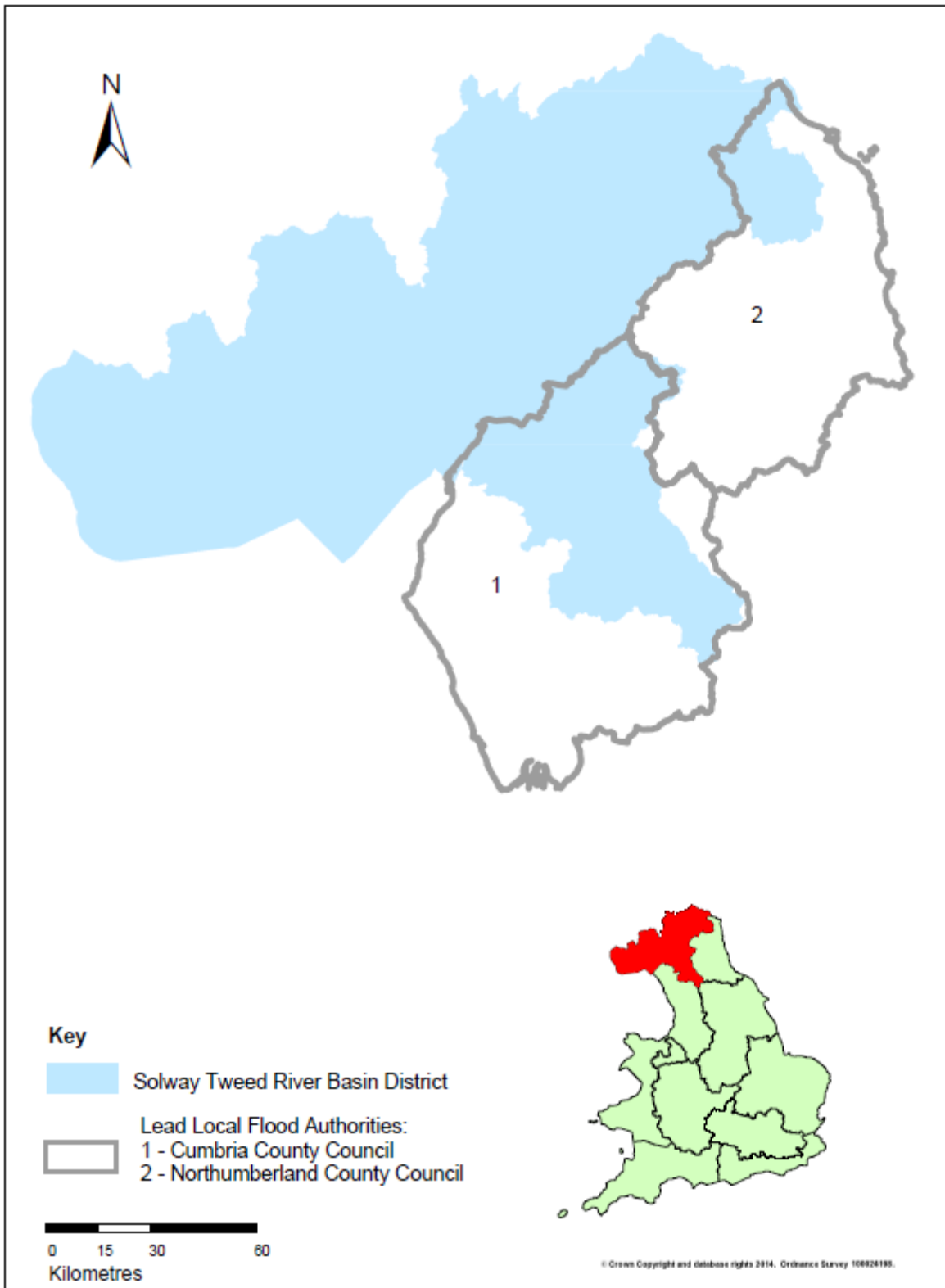


Figure 2: Lead Local Flood Authorities in Solway Tweed River Basin District

In developing Flood Risk Management Plans, we would also like 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.

Annex 1 lists the plans and strategies that have been drawn from to develop the draft FRMP Solway Tweed RBD, and the dates of previous consultation.

Box 3. FRMPs in Solway Tweed RBD being prepared and consulted on

For Solway Tweed 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:

Consult from September 2014 to December 2014 on the draft FRMP and we are working with the Scottish Environment Protection Agency to set out when consultation will be co-ordinated with consultation on draft strategies for the Solway Tweed in Scotland.

For the English Catchments within the Solway Tweed RBD the draft FRMP will cover:

- flooding from main rivers the sea and reservoirs for the RBD (as a statutory requirement)

5. 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](#)¹⁹.

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 English catchments of the Solway Tweed 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 3 outlines the content of the draft FRMP and describes the parts of the FRMP that will be included in the SEA.

Table 3: Proposed scope of the assessment

Content of the FRMP	Will it be considered in the high level SEA i.e. for the whole plan?	Will a more detailed assessment be required i.e. at the measure level?
Flood risk maps	No, this provides factual information	No
Flood risk management objectives	Yes, we will assess the likely impacts of our objectives. This will be a high-level assessment at a river basin district scale.	No
Flood risk management measures	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.
Flood Risk Area FRMP	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/
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>
6. <https://consult.environment-agency.gov.uk/portal/ho/flood/plans/approach>
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8. <http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?topic=floodmap#x=357683&y=355134&scale=2>
9. <https://www.gov.uk/government/policies/improving-water-quality>
10. <http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/research/planning/135520.aspx>
11. http://www.local.gov.uk/local-flood-risk-management/-/journal_content/56/10180/3618366/ARTICLE
12. <https://www.gov.uk/government/publications/surface-water-management-plan-technical-guidance>
13. <https://www.gov.uk/government/collections/catchment-flood-management-plans>
14. <https://www.gov.uk/government/publications/shoreline-management-plans-smpps>
15. <https://www.gov.uk/government/collections/flood-risk-management-current-schemes-and-strategies>
16. <https://www.gov.uk/reservoirs-a-guide-for-owners-and-operators>
17. <https://www.gov.uk/government/publications/flood-and-coastal-risk-management-in-england-long-term-investment>
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.

Tables A1 and A2 list the plans that risk management authorities are specifically drawing on and where previous consultation has been undertaken. They also show, if environmental assessment has been undertaken and any assessment related to the Habitats Regulations. The table also highlights the major changes we propose to make (if any) to those plans as we use the information to develop FRMPs.

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.

Of particular importance for FRMPs and Local FRM Strategies are the Lead Local Flood Authorities (see figure 4 below). We also welcome inclusion of objectives and measures developed by other risk management authorities, such as Water and Sewerage Companies.

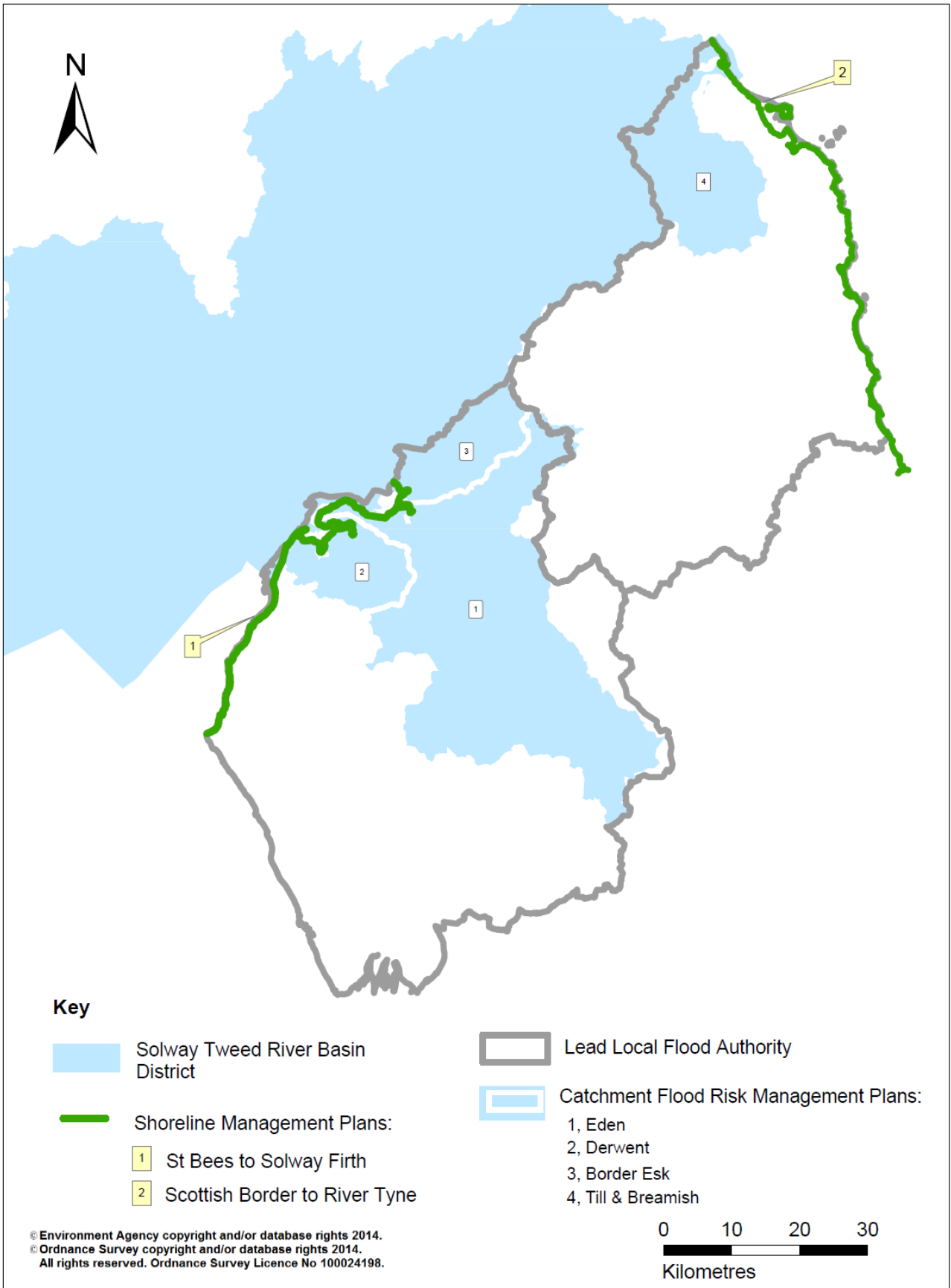


Figure 3: CFMPs and SMPs in the Solway Tweed River Basin District

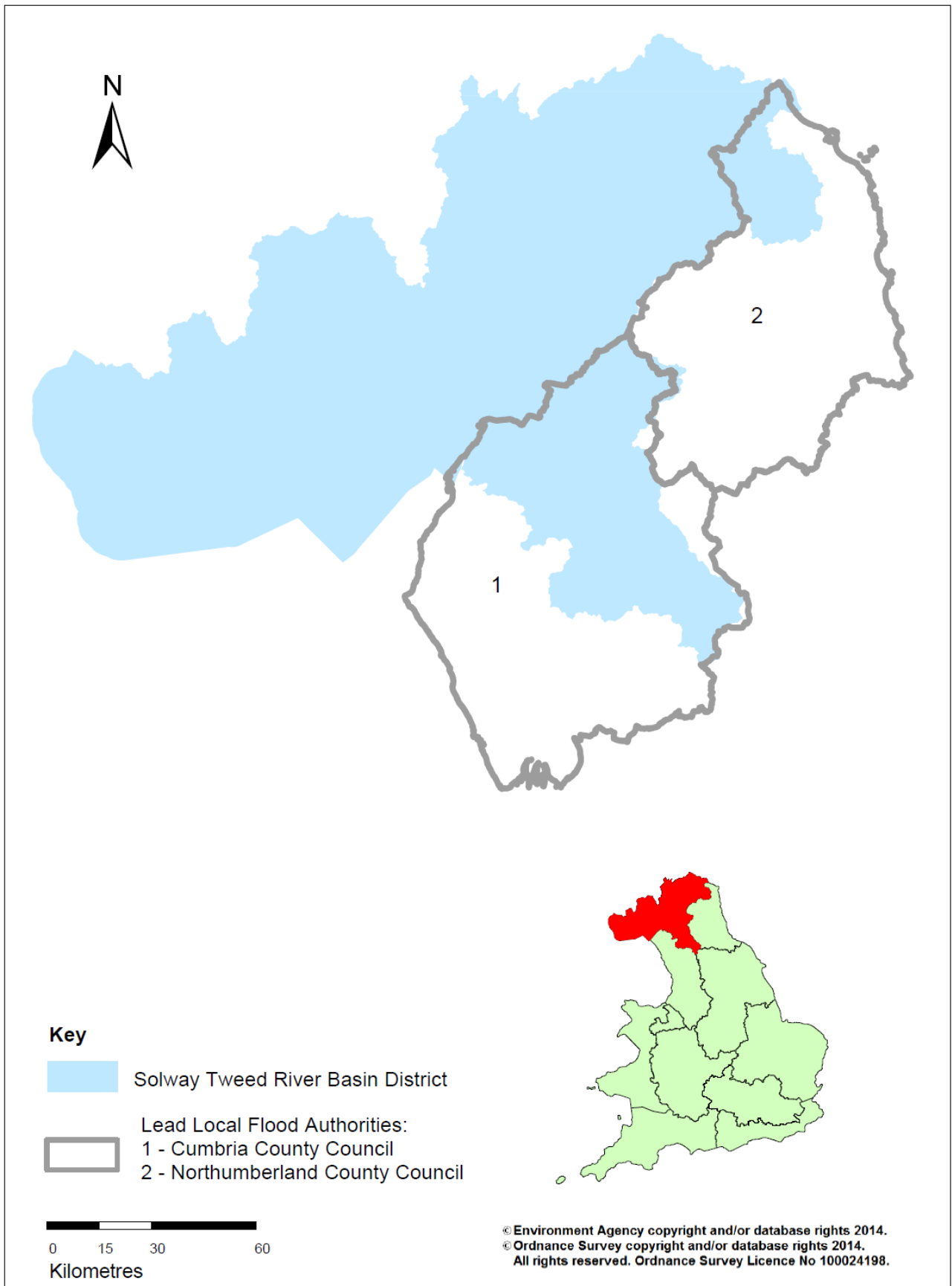


Figure 4: LLFAs in Solway Tweed River Basin District

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	Source 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	Dates of consultation on draft plan	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	Derwent	Flooding from main rivers	Statutory: this information informs the statutory requirements for Flood Risk Management Plans under the Flood Risk Regulations	We will retain the CFMP Policy Units and agreed strategic direction for management of flood risk (current and future). We will take forward any CFMP actions that are still appropriate and relevant and are yet to be delivered. We will supplement the transitioned CFMP actions with more specific community level actions that are targeted at those communities of greatest risk.	2008	Yes	Yes	Yes	No Compensatory habitat was required	Dec-09	Environment Agency: Contact: National Customer Contact Centre on: 03708 506 506 or email: enquiries@environment-agency.gov.uk
2	Eden									2012	
3	Border Esk										
4	Till and Breamish										
Information from the following Shoreline Management Plans											
1	North West and North Wales	Flooding from the sea	Statutory: this information informs the statutory requirements for Flood Risk Management Plans under the Flood Risk Regulations	We will not be making changes to the existing plan. We will retain the SMP Policy Units and agreed strategic direction for the management of the coast. The Shoreline Management Plans and associated action plans will remain as plans in their own right but we will bring in agreed actions in relation to flooding from the sea where they correspond with those communities of greatest risk from flooding.	2010	Yes	Yes	Yes	IROPI awaiting DEFRA sign off	Awaiting sign off	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)
2	Scottish Border to the River Tyne				2008	Yes	Yes	Yes	2009		

No. on CFMP / SMP map	Title of plan used to develop draft FRMP	Source s 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	Dates of consultation on draft plan	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											
1	North West and North Wales	Coastal erosion risk	Voluntary: this information will be included in the FRMP on a voluntary basis and should not be considered to form part of the statutory FRMP.	We will not be making changes to the existing plan. We will retain the SMP Policy Units and agreed strategic direct for the management of the coast. The Shoreline Management Plans and associated action plans will remain as plans in their own right but we will bring in agreed actions in relation to flooding from the sea where they correspond with those communities of greatest risk from flooding.	2010	Yes	Yes	Yes	Yes (case awaiting agreement from Welsh Government, Defra agreement in place)	Awaiting sign-off	Blackpool Borough Council General Enquiries on: 01253 477477 or email:customer.first@blackpool.gov.uk
2	Scottish Border to the River Tyne				2008	Yes	Yes	Yes		2009	North Tyneside MBC

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 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
1	Cumbria County Council	Local Risks to include surface water and ordinary watercourses	No	Not in draft FRMP	voluntary	In progress		Cumbria County Council

Annex 2 Results of SEA screening and scoping process

Table A2 provides the results of an early review of the proposed Environment Agency information for the FRMP. It identifies whether the objectives/measures/actions included are from existing plans and are likely to change as they are brought into the FRMP. It also identifies if new objectives/measures/actions are being proposed. This is important because it determines whether such information is adequately covered by existing SEA reports or if this information requires a further detailed level of environmental assessment (note all objectives/measures/actions will be scoped into the high level environmental assessment). SEA scoping is an ongoing process and table A2 is subject to future change.

Table A2: Summary of the SEA screening/scoping outcomes

Plan or Community at Risk	Level of changes for FRMP	Outcome of plan review	Initial SEA scoping results
Border Esk CFMP	There will be no change from the current actions	retained	Scoped into the high level assessment only
Eden CFMP	There will be some level of change from the current actions	retained	Changed actions are in relation to preparedness and so will be scoped out of detailed assessment. All actions will be scoped into the high level assessment.
Till and Breamish CFMP	It is expected that the 30 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	Retained	Changed actions are in relation to preparedness and so will be scoped out of detailed assessment. All actions will be scoped into the high level assessment.
River Till River Restoration	Actions from the strategy are likely to	Retained UNCLASSIFIED	Scoped into the high level assessment only

Strategy	remain largely unchanged		
St Bees Head to River Sark Shoreline Management Plan	All actions retained	Retained	Scoped into the high level assessment only
Scottish Borders to River Tyne SMP	Actions related to flood risk will be transferred to FRMP but will not change policy intent along the coast	Retained	Scoped into the high level assessment only

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 Solway Tweed RBD

Policy / Plan / Programme	Published by	Year
Core Strategies	Northumberland and Cumbria County Councils	Various
Minerals and Waste Plans	Local authorities	Various
Northumberland and North Tyneside Shoreline Management Plan	Various	2009
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
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
Northumberland National Park Biodiversity Action Plan	Northumberland National Park Authority	2005
Northumberland Biodiversity Action Plan	Northumberland Biodiversity Steering Group	2000
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?
Biodiversity, flora and fauna	<ul style="list-style-type: none"> • Waterbodies and wetlands in the River Basin District (RBD) support a number of protected species including Otter and Water Vole and Native White Clawed Crayfish • Invasive species are present in many catchments including floating pennywort, Japanese Knotweed and Himalayan balsam • 205 Special Areas of Conservation (SAC), 3 Special Protection Areas (SPA) and 3 Ramsar Sites, with some of these sites dependent on water quality and / or geomorphological processes • The River Tweed and its tributaries are one of the UKs most important salmonid fisheries. 	Yes
Population and human health	<ul style="list-style-type: none"> • Predominantly rural RBD • 270000 inhabitants, an ageing population and one of the slowest growing populations • Agriculture and Tourism are significant economic activities • Flood risk is generally low being highest in urban areas with 433 commercial and residential properties at risk in the Till and Lower Tweed 	Yes
Soil	<ul style="list-style-type: none"> • the geology ranges from hard granite rocks in the Cheviots to younger carboniferous rocks and glacial/alluvial deposits in the valley lowlands Principle aquifers are the fell Sandstone • Most abstraction is used for public water supply, with other uses including agriculture and industrial • Throughout most of the Till valley lowlands, soils are 	Yes

	<p>deep, well-drained loam and sand.</p> <ul style="list-style-type: none"> • At the upstream end of the catchment, Millstone Grit is particularly characteristic of the higher moorland areas. From Kirkby Stephen to Carlisle, the valley floor is dominated by sandstone and mudstones to the western side of the Eden and limestones of the Carboniferous series to the east and around Carlisle, forming an extensive outcrop. • In the western area, contributing to the River Eamont flows, the high ground is dominated by altered metamorphic rocks and slate. • Two main soil types predominate within the Eden and Esk catchments; well drained permeable sandy or loamy soils in the area of the River Eden and a band to the west which is mainly clayey or loamy over clayey soils with the possibility of an impermeable layer at shallow depth. 	
Water	<ul style="list-style-type: none"> • The River Till and Breamish covers an area of 794km² • The Eden catchment covers an area of 1158 km² • The coastline extends a short distance north and south from Berwick upon Tweed • There are 3 catchments - Till, Border Esk and Eden draining the northern areas of Northumberland and Cumbria • 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. • Physical modification of waterbodies has occurred throughout the catchment to reduce flood risk, improve land drainage and facilitate urban development. 	Yes
Air	<ul style="list-style-type: none"> • 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 basin district. 	No
Climatic factors	<ul style="list-style-type: none"> • 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 	Yes
Infrastructure	<ul style="list-style-type: none"> • Infrastructure includes strategic road and rail routes, such as the A1 M6 and East and West coast mainline 	Yes

	<ul style="list-style-type: none"> • There is a port at Tweedmouth exporting predominantly grain and roadstone • There are approximately 75 km of flood defences within the Till catchment, protecting large rural areas • Only around 3% of these defences protect urban areas in the Till catchment <p>There are 63km of flood defences within the Eden catchment.</p>	
Cultural heritage	<ul style="list-style-type: none"> • Both Northumberland and Cumbria are culturally rich. There is one World Heritage Site within the Solway Tweed River basin - Hadrian's Wall. • 907 scheduled ancient monuments • 5 Registered historic parks and gardens, 4 registered battlefields • Many listed buildings and structures associated with past water uses, such as Mills and Weirs • Many riverside communities are within conservation areas, such as Berwick, Tweedmouth and Wooler 	Yes
Landscape	<ul style="list-style-type: none"> • Both Cumbria and Northumberland have an extensive rights of way network, with many located next to rivers and along the coast • The RBD is home to the Northumberland Coast Area of Outstanding Natural Beauty (AONB), the North Pennines AONB, the Northumberland national park and the north eastern part of the Lake District National Park. • Angling and water based recreation is popular in the RBD 	Yes

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