



Local Flood and Water Management Strategy (LFWMS)

**Interim Strategic Environmental Assessment
(SEA) Environmental Report**

Hampshire County Council

November 2019

Document Control

Document Information

Document Identification	EIA/LFWMS/SEA/ER/V4
Document Name	Interim Strategic Environmental Assessment Environmental Report LFWMS
Project Name	Hampshire Local Flood Risk Management Strategy SEA
Client	Hampshire County Council
Document Author	Hampshire County Council EIA Team
Document Version	V4
Document Status	Interim
Date Released	

Document Edit History

Version	Date	Additions/Modifications	Prepared/Revised by
V1	2/11/17	Draft	Wendy Phillips
V2	16/11/17	Final	Wendy Phillips
V3	24/4/018	Revised	Wendy Phillips
V4	27/11/19	Update Final revised based on updated strategy	Wendy Phillips

Document Peer Review History

Date	Name	Job Title	Comments
31/10/17	HW	Senior EIA Project Officer	Incorporated into the text of final version
20/11/17	HW	Senior EIA Project Officer	Incorporated
16/5/18	LT	Manager EIA Team	Approved for release
03/12/19	LT	Manager EIA Team	Approved for release

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Non-Technical Summary

Introduction

The following Non-Technical Summary outlines the conclusions of the Strategic Environmental Assessment (SEA) undertaken as part of the review of Hampshire County Council's Local Flood and Water Management Strategy (LFWMS), fulfilling the requirements of the SEA Directive as follows.

The Strategic Environmental Assessment Directive¹ requires: a non-technical summary of the information provided under the above headings (annex 1j).

The new strategy which covers the period 2020 to 2027 replaces the current flood risk management strategy which was adopted in 2013.

Purpose of this assessment

When preparing a LFWMS, it is a statutory requirement to carry out a SEA to identify any potentially significant environmental effects arising from the implementation of the strategy. SEA is an integrated, systematic appraisal of the potential environmental impacts of policies, plans, strategies and programmes during the development of the Plan before they are approved; ensuring that the implications for the environment have been fully and transparently considered. It considers issues such as biodiversity, population, human health, flora and fauna, soils, water, air, climate, material assets, heritage, landscape and the interactions between these factors.

SEA aims to make a plan more sustainable and more responsive to its environmental effects by identifying the plans significant impacts and ways of minimising its negative effects.

The SEA has been undertaken by Hampshire County Council's Environmental Impact Assessment Team.

This Interim Environmental Report presents the findings of the SEA of the draft LFWMS and they should be read in conjunction.

Background to the Hampshire Local Flood Risk Management Strategy Review

Hampshire County Council as the Lead Local Flood Authority working in partnership with the District Councils is required to produce a LFWMS under the Flood and Water Management Act 2010.

Hampshire's first LFWMS was adopted in 2013; since this document was produced the knowledge of the broad nature and extent of flood risk across Hampshire has grown. HCC has worked closely

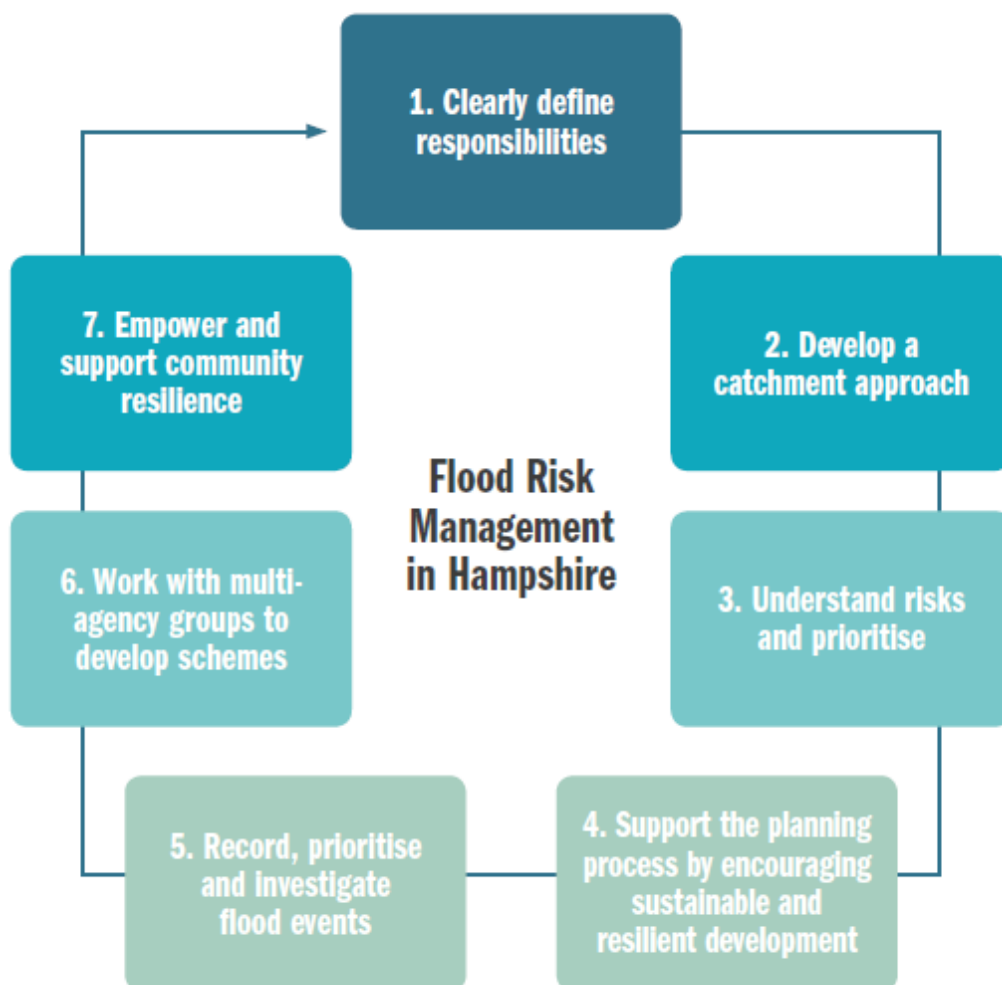
¹ Directive 2001/42/EC

with other Flood Risk Management Authorities, local communities, residents and partners and increased our understanding of Sustainable Drainage Systems. HCC also recognises the multi-source nature of flooding and the significant role that natural geology and topography play in flood risk management.

On this basis it was decided that the 2013 LFWMS be revised in order to allow a catchment approach to flood risk management, enabling the plan to be based on natural river catchment areas rather than local authority administrative boundaries.

The vision of this revised LFWMS is to *'create a safer, more resilient Hampshire'*.

In order to achieve this vision HCC has produced a framework of seven policies, through which robust flood mitigation plans can be managed. The seven policies have been illustrated below.



Each of these policies has a series of objectives which document the steps HCC will take to achieve its vision.

Summary of the Strategic Environmental Assessment Process

SEA is a staged process, which ensures that the potential environmental effects of a policy or plan are identified during the development of the plan. It provides a framework through which to consult upon the proposed environmental effects and to update or improve upon the plan, before it is adopted. The stages of SEA can be summarised as follows:

- Stage A: Setting the context, establishing the baseline and deciding on the scope of the assessment. A Scoping Report is produced at this stage.
- Stage B: Developing and refining options assessing effects.
- Stage C: Preparing the Environmental Report (this Interim SEA report).
- Stage D: Consulting on the draft plan.
- Stage E: Monitoring significant effects of implementing the plan.

The first stage of the SEA (Stage A) involved preparation and circulation of a Scoping Report for consultation (April / May 2017). The Scoping Report identified key plans, policies and programmes of relevance to the strategy. It also set out the baseline environment, any existing sustainability issues, and the future baseline scenario without the Plan. The Scoping exercise identified some key themes across the Plan area that need to be assessed in the SEA and scoped out issues where significant effects were not anticipated.

Following the Scoping exercise, a process of developing and refining the options (taking into account Consultee comments) commenced (Stage B). This document (Interim SEA Report) has been prepared as part of 'Stage C' and can also be referred to as the (draft) 'Environmental Report'. This will be released for consultation and the opportunity for comment prior to the final revisions to the LFWMS and the final Environmental Report.

Developing the SEA Framework

The SEA framework is made up of a number of SEA Objectives which are used to test the objectives, policies and options of the JMWP against. The SEA Objectives have been developed based on the review of plans, programmes and the baseline information, and are as follows:

1). To conserve and enhance the biodiversity, flora and fauna of Hampshire including natural habitat and protected species
2). To maintain and improve ground and surface water quality in Hampshire
3). Protect and enhance landscape character, local distinctiveness and historic environment of Hampshire
4). Limit vulnerability to potential predicted flooding caused by climate change by adapting new and existing development to the impacts of climate change
5). To maintain and protect soil quality

6). To improve the health and well being of the population
7). Minimise adverse impacts of local flood risk on key infrastructure, land assets and properties
8). Protect and enhance open spaces, recreational areas and rights of way and improve accessibility for everyone
9). Reduce and manage the risk of flooding and resulting detriment to public well-being, the economy and the environment
10). Minimise adverse effects on water hydromorphology, natural processes and aquatic environment
11). Minimise adverse effects on water resource availability
12). Engage with local communities, improve and support community level flood response and recovery, by improving the understanding, preparedness and response of the local community to flooding

The Appraisal Process

The aspects of the plan which have been subject to the SEA appraisal process include:

- The vision;
- the seven policies and the associated objectives;
- the Catchment Flood Risk Management Approach aims;
- the overall Catchment Management Approach; and
- the Catchment Flood Risk Management Approach prioritisation process.

With respect to alternative policy options given, only a limited range of options were considered. This included business as usual i.e. continuation of the existing plan, no plan and a new plan based on catchment areas (including the initial draft). The policies were developed and refined as an iterative process.

The assessment of environmental effects was qualitative and informed by professional judgement and experience with other SEAs, as well as an assessment of national, regional and local trends.

Colour coding has been used to ensure the impacts are visually apparent at a glance, as shown below:

Symbol	Explanation of the Effect
+	Positive: will result in positive impact on the objective
0	Neutral: Neutral or negligible effect on the objective
-	Negative: Option will result on a negative impact on the objective
?	Unknown: The relationship is unknown, or there is not enough information to make an assessment

Summary of SEA Findings Policies and Objectives

The assessment noted that in general, the policies and objectives of the LFWMS have a neutral or positive effect when compared against the SEA objectives.

No significant negative effects were identified.

The assessment suggests that the policies and objectives have taken into consideration potential environment effects and many of the policies scored positively against the relevant SEA objectives. All of the seven policies were found to have at least one positive effect.

In particular Policy 2 'to develop catchment approach' scored positive for three SEA objectives with respect to improving public wellbeing, empowering the community and protecting the aquatic environment.

The SEA objective 12 'Engage with local communities, improve and support community level flood response and recovery, by improving the understanding, preparedness and response of the local community to flooding' was well represented and five of the seven policies were found to have a positive effect.

It is noted that most of the SEA objectives (SEA objectives 1, 2, 3, 5, 8 and 11) were not found to not positively or negatively represented in any of the seven policies and the effects for these SEA objectives were considered either neutral or not enough information was available on which to make an assessment.

At glance total / combined effects of the LFWMS policies and objectives

Flood and Water Management Principle	SEA Objectives											
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing & economy	10 Aquatic Environment	11 Water resources	12 Community
1)Clearly Define Responsibilities	0	0	0	0	0	0	0	0	0	0	0	+
2)Develop a Catchment Approach	0	0	0	0	0	0	0	0	+	0	0	0
3)Understand risks and prioritise	0	0	0	0	0	+	+	0	+	0	0	0
4)Support Planning Process by encouraging Sustainable and Resilient Development	0	0	0	+	0	0	0	0	+	0	0	0
5)Record, Prioritise and Investigate Flood Events	0	0	0	0	0	0	0	0	0	0	0	+
6)Work with Multi-Agency Groups to Develop Schemes	0	0	0	0	0	+	0	0	+	0	0	+
7)Empower and Support community resilience	0	0	0	0	0	0	0	0	0	0	0	+

Specific strengths of the LFWMS objectives (including those identified as having significant positive effects) include:

- Prioritising vulnerable areas at risk of flooding based on the number of properties at risk and vulnerability of residents (SEA objective 9).
- The commitment to working on a catchment basis provides opportunities for a more natural and joined up approach to flood risk management working across administrative boundaries and one which recognises that flooding incidents are often due to a mix of several sources.
- This approach will also facilitate local decisions to be made on flood risk management which will benefit the maximum number of Hampshire residents thereby having a significant positive effect on the quality of life of Hampshire's residents (SEA objective 6).
- The inclusion of reporting incidents and using this information to develop action plans and recommendations shows a joined up long term approach which will benefit the public with respect to flooding (SEA objective 12).
- Acknowledgement of the importance of effectively liaising with all other flood authorities beyond HCCs administrative boundaries. Although this is not a specific SEA objective it will have a positive effect on many of the SEA objectives.
- Committing to supporting and encouraging the drainage hierarchy, SUDs and appropriate mitigation its role as a statutory consultee.

No negative effects were identified and on this basis no specific mitigation measures are required. However, potential areas of improvement and consideration for refining the LFWMS objectives are provided as follows²:

- It would be beneficial if the LFWMS objectives more clearly differentiated between the statutory requirements and the policies which will form the framework for developing future schemes.
- It is noted that the LFWMS policies and objective do not contain any commitment to supporting the protection and / or improvement of the natural or historic environment (biodiversity, soil, water quality, heritage etc.). Although it is acknowledged that this is not a primary function of the LFWMS it would be beneficial to include the concept of striking a balance between the need to manage the risks of flooding, whilst protecting the quality of life for communities, and the quality and diversity of environmental assets and also recognising that flood mitigation scheme can represent opportunities for environmental enhancements. There is an opportunity for positive impacts on a number of the SEA objectives if this gap is specifically addressed within a LFWMS objective.

² It is noted that the recommended amendments may be considered to form part of the alternative options (refer Section 3.7).

- Although the plan makes reference to and describes the natural flood management hierarchy (HCC will ensure a stepped approach to flood risk management with a preference for more natural methods above harder engineering measures). Consideration could be given to formalising the commitment via a specific objective within principle 2 'developing a catchment approach'. This would strengthen the principle.
- With respect to policy 7 'empower and support community resilience', it would be beneficial to specify the ways that HCC shall raise awareness and improve communication consultation to ensure that sectors of the community more vulnerable to flooding such as the elderly or those living in deprived areas can access information and support about flood risk.
- It would be prudent to include a mechanism to ensure the LFWMS is an iterative process which can respond to changes in the environment, specifically with respect to climate change.

Catchment Management Approach Assessment Summary

The catchment management approach has the potential to have significant positive effects across many of the SEA objectives. However, it was noted that not enough information was provided in order to appropriately assess many of the SEA objectives.

Specific strengths of the catchment management approach (including significant positive effects) include:

- The commitment to natural flood management solutions and the formalisation of the flood management hierarchy which is considered to have a significant positive effect on the aquatic environment potentially resulting in the enhancement of natural process and improvements in the aquatic environment. The flood management hierarchy may indirectly have many positive benefits with respect to biodiversity, surface and groundwater over the medium and long term.
- The acknowledgment that water resources do not respect administrative boundaries has the potential to indirectly positively impact a number of the SEA objectives.
- The specific commitment to empower local residents will have a significant positive effect resulting in early engagement and participation with the community (SEA objective 12).

Potential areas of improvement, with respect to the catchment management aims include the inclusion of an additional aim formalising the development of catchment management action plans on a priority basis.

As the catchment management plans form an integral part of the LFWMS it would be beneficial to add specific criteria or objectives that all Catchment Management Plans should adhere to. These could include:

- Formally committing to the flood management hierarchy thereby embedding its use within the LFWMS.
- Adopting a joint approach to development of the Catchment Management Plans and working with partners beyond the HCC administrative boundaries where applicable in those catchments extending outside of the plan area.
- Specifically requiring that opportunities to enhance and protect the natural and historic environment are sought.
- Including a provision for local community empowerment including the timing and mechanisms for taking action.
- Including a requirement for the plans to be subject to Habitat Risk Assessment (where appropriate).

Consideration could be given to the provision of a template for the catchment management plans.

Catchment Management Prioritisation Assessment Summary

It is noted that the criteria used to prioritise the development of the catchment management plans was weighted, allowing the determination of how much influence each criterion has on the final result. This SEA was not able to assess the impact of the weighting however, the overall criteria have been assessed in order to establish whether there were any gaps in the assessment and to identify potential areas of improvement.

The SEA of the prioritisation criteria assessment determined that the criteria were well represented with respect to objectives 4, 6, 7 and 9. However, the criteria used for the prioritisation omitted potential environmental impacts associated with biodiversity, water quality, heritage and landscape.

Consideration could be given to the addition of criteria which reflects potential opportunities to protect and enhance the natural and cultural environment.

Limitations and Difficulties

It is of note that the LFWMS is itself a high level, overarching document which lacks specific policies and / or actions. The LFWMS does not identify specific sites/ areas targeted for flood management neither does it compare different flood management options against each other and as such it is difficult to define the likely environmental effects of implementing the plan and to assess cumulative effects. However, the LFWMS should define the work of the Lead Local Flood Authority and provide a framework to guide the detail of the Catchment Management Plans and Action Plans.

Further, it is noted that parts of the LFWMS relates to statutory functions to which SEA is not applicable.

Instead the SEA has focused on ensuring that environmental issues are fully integrated into the plan and the decision making processes thereby promoting sustainable development through all of the subsequent plans and decisions which are made as a result.

Proposed monitoring

This Interim SEA Report provides some suggested monitoring measures for each SA/SEA Objective. These simple, effective and measurable, indicators will aid the future monitoring of the Plan.

Concluding Statement

The LFWMS shows many aspects of good planning, and has been developed and informed by a sound evidence base, up-to-date baseline data and complies with relevant national and local planning policy. The assessment did not identify any significant negative effects of the plan. Given the high level nature of the LFWMS and the fact that the LFWMS does not contain specific details about schemes, it was not possible to provide specific mitigation measures to reduce or off set specific potential adverse effects of the LFWMS however, mitigation measures considered ways to proactively maximise positive effects via the inclusion of new provisions and / or changes / amendments to the existing provisions. It would be beneficial if the LFWMS objectives more clearly differentiated between the statutory requirements and the policies which will form the framework for developing future schemes.

1 Introduction

1.1 Purpose of the Assessment

- 1.1.1 Hampshire County Council (HCC) as the Lead Local Flood Authority (LLFA) for Hampshire has a responsibility to produce a Local Flood and Water Management Strategy (LFWMS) under the requirements of the Flood & Water Management Act 2010. The current LFWMS³ which was adopted in 2013 has been reviewed and updated to provide an overall strategic approach to the management of flood risk in Hampshire which incorporates community engagement, a catchment management approach and the principles of Sustainable Drainage Systems (SuDs) in new developments.
- 1.1.2 When preparing a flood management plan, it is a statutory requirement to conduct a strategic environmental assessment (SEA)⁴ in accordance with the Strategic Environmental Assessment (SEA) Directive⁵, (The Directive) and the SEA Regulations which implement the Directive into UK law (The Regulations)⁶.
- 1.1.3 Article 3 (2) of the SEA Directive makes SEA mandatory for plans and programs which are preferred for agriculture, forestry, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use, and which set the framework for future development consent for projects listed in Annex I and II of the Environmental Impact Assessment (EIA) Directive (2014/52/EU)⁷; and which in view of the likely effects on sites, have been determined to require an assessment pursuant to Article 6 or 7 of the Habitats Directive (92/43/EEC)⁸.
- 1.1.4 Due to the scale of the changes proposed in the updated LFWMS and the potential for significant environmental effects it was considered appropriate to update the SEA.
- 1.1.5 The objective of the SEA is to ‘provide for high level protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development⁹.’

³ LFRMS, July 2013

⁴ Commonly referred to as Strategic Environmental Assessment (SEA).

⁵ European Directive 2001/42/EC ‘on the assessment of the effects of certain plans and programmes on the environment’.

⁶ Environmental Assessment of Plans and Programmes Regulations, 2004

⁷ Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment

⁸ Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

⁹ SEA Directive, STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) AND EX-ANTE EVALUATION FOR THE EMFF OPERATIONAL PROGRAMMES (OP)

1.1.6 The SEA:

- Identifies, describes and evaluates the predicted significant environmental effects of implementing the LFWMS;
- Identifies actions to prevent, reduce or as fully as possible offset any adverse effects;
- Allows the environmental effects of alternative flood risk management approaches and mitigation measures to be considered;
- Provides an early and effective opportunity to engage in preparation of the LFWMS through consultation; and
- Monitors the implementation of the plan to identify any unforeseen environmental effects and take remedial action where necessary.

1.1.7 SEA is the systematic appraisal of the potential environmental impacts of policies, plans, strategies and programmes before they are approved.

1.1.8 This interim report will show how objectives, policies and options have been identified and appraised. This report constitutes the Interim Report (first version) which will be subject to consultation after which time a revised Environmental Report will be prepared.

1.1.9 The SEA meets all the requirements of the Strategic Environmental Directive. These are signposted throughout the document.

1.2 The SEA Process

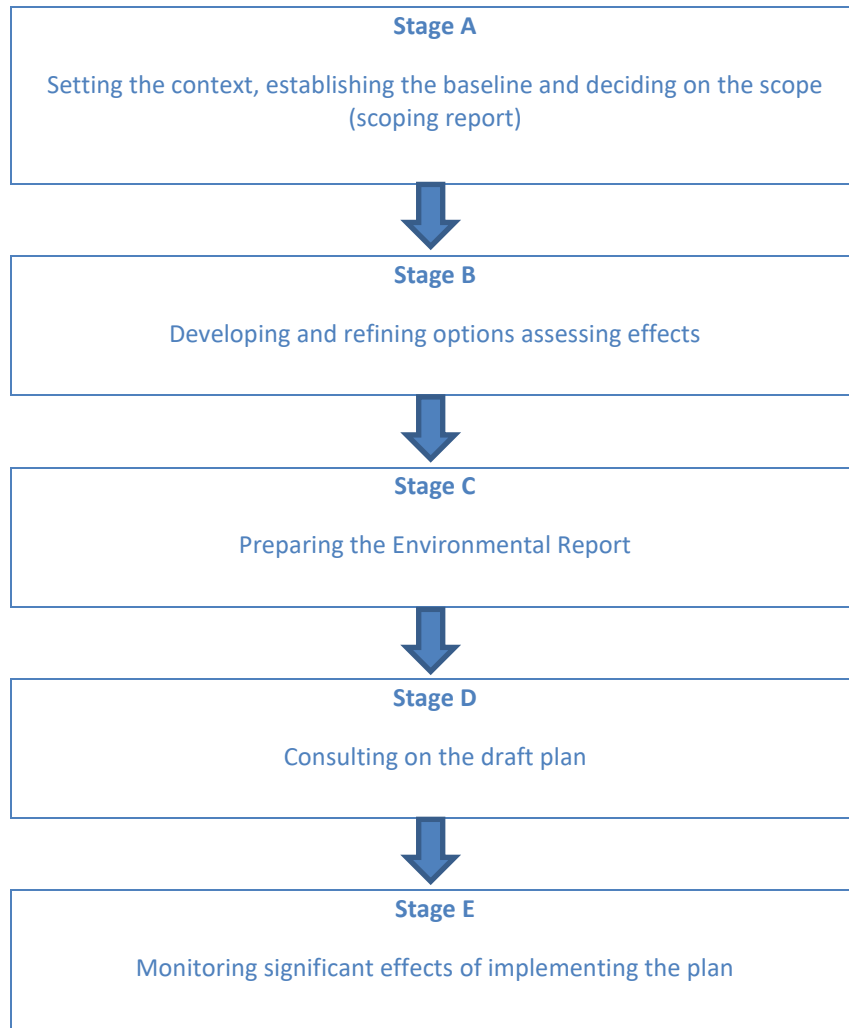
1.2.1 SEA is an integrated, systematic appraisal of the potential environmental impacts of policies, plans, strategies and programmes during the development of the Plan before they are approved, ensuring that implications for the environment are fully and transparently considered before those final decisions are taken. SEA aims to make a plan more sustainable and more responsive to its environmental effects by identifying the plan's significant impacts and ways of minimising its negative effects¹⁰.

1.2.2 The approach for undertaking the SEA has been based on 'Strategic Environmental Assessment Improving the effectiveness and efficiency of SEA/SA for land use plans, RTPI Practice Advice, January 2018'.

1.2.3 The stages of the SEA process are set out in Figure 1.1.

¹⁰ Strategic Environmental Assessment, Improving the effectiveness and efficiency of SEA/SA for land use plans, RTPI, January 2018

Figure 1.1 SEA Stages



1.2.4 Stage A of the process (scoping) was carried out in January 2017 and a SEA Scoping Report¹¹ was submitted for consultation in February 2017. An updated Scoping Report was then issued in November 2017. Further details on the scoping process are provided in Chapter 2 of this report.

1.2.5 This report documents Stage B and fulfils the requirement of Stages C and D. Table 1.1 sets out the tasks involved in each of the stages outlined in Figure 1.1 and how they relate to the preparation of the LFWMS. This interim report will be submitted for consultation (Stage D).

¹¹ Draft Strategic Environmental Assessment Scoping Report, February 2017' (Scoping Report)

Table 1.1: Stages in the LFWMS and SEA Process

SEA Stages and Tasks ¹²	Deliverable
LFWMS Pre planning	
<p>Stage A: Setting the context, establishing the baseline and deciding on the scope</p> <p>A1: identifying other relevant policies, plans and programmes, and sustainability objectives</p> <p>A2: collecting baseline information</p> <p>A3: identifying sustainability issues and problems</p> <p>A4: developing the SEA Framework</p> <p>A5: consulting on the scope of the SEA</p>	<p>Scoping Report (2017), Appendix A</p>
LFWMS Production	
<p>Stage B: Developing and refining options assessing effects</p> <p>B1: testing the plans objectives of the SEA framework</p> <p>B2: developing and refining the option</p> <p>B3: predicting the effects</p> <p>B4: evaluating the effects</p> <p>B5: considering ways of mitigating adverse effect and maximising beneficial effects</p> <p>B6: proposing measures to monitor the significant effects of implementing the LFWMS</p>	<p>Interim SEA Report</p>
<p>Stage C: Preparing the Environmental Report</p> <p>C1: preparing the Report</p>	<p>Revised Interim SEA Report</p>

¹² Tasks as Defined in 'A Practical Guide to the Strategic Environmental Assessment Directive, September 2005'

SEA Stages and Tasks ¹²	Deliverable
Stage D: Consulting on the draft plan D1: consultation on the preferred approach and accompany SEA report D2: consultation on pre submission plan and accompanying SEA report	
LFWMS Public Consultation and Internal Approval	
D3: appraising significant changes resulting from representations	Update Final SEA Report
LFWMS Adoption	
Stage E: Monitoring significant effects of implementing the plan E1: Finalising aims and methods of monitoring E2: Responding to adverse effects	Monitoring Reports

1.3 Meeting the requirements of the SEA Directive

1.3.1 The SEA Directive sets out certain requirements for the environmental report (Stage C) which must be followed. This report includes all the information that must be included in the environmental report. An SEA roadmap is provided as Table 1.2, demonstrating how this report complies with the Directive, and the specific requirements of the Directive are also highlighted at the beginning of each chapter.

Table 1.2: SEA Roadmap

Task	Where covered
(a) An outline of the contents; and main objectives of the plan or program; and the relationship with other relevant plans and programmes.	Contents page Section 1.4 Section 2.2
b) the relevant aspects of the current state of the environment and likely evolution thereafter without implementation of the plan or program.	Section 2.3 Scoping report and baseline report

c) the environmental characteristics of areas likely to be significantly affected.	Section 2.3 Scoping report and baseline report
d) any existing environmental problems which are relevant to the plan or program including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (The Birds Directive) and 92/43/EEC (the Habitats Directive).	Section 2.3
(e) the environmental protection objectives, established at international community or member state level which are relevant to the plan or program and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 2.2
(f) the likely significant effects on the environment, including on issues such as: Biodiversity; Population; human health; fauna, flora; soil; water; air; climate factors; material assets; cultural heritage including architectural and archaeological heritage; landscape; and the interrelationship between the above factors.	Section 3.1
(g) the measures envisaged to prevent, reduce, and as fully as possible offset any significant adverse effects on the environment of implementing the plan or program.	Section 3.1
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know how) encountered in complying the required information.	Section 2.6 and 3.2
(i) A description of the measures envisaged concerning monitoring in accordance with Article 10.	Section 3.6
(j) a non technical summary of the information provided under the above headings.	Non technical summary at the front of the report

1.4 Habitats Regulations Assessment (HRA)

1.4.1 Due to the potential for the LFWMS to have significant effects on sites of international nature conservation importance (Ramsar sites and Natura 2000 sites, Special Areas of Conservation (SACs), Special Protection Areas (SPAs))and Site of Special Scientific Interest

(SSSi) in the Hampshire area, a Habitats Regulations Assessment (HRA) is being carried out in parallel with this SEA. The HRA is required under the EU Habitats Directive (EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora) and the EU Birds Directive 2009/147/EC (on the Conservation of Wild Birds), and the transposing U.K. Regulations (The Conservation of Habitats and Species (Amendment) Regulations 2012, SI No. 1927). Baseline data collection on international sites for the HRA has been integrated with the SEA process.

- 1.4.2 The HRA screening stage has concluded that there will be no significant effects on any international sites; therefore no further work required for the LFWMS. Further HRA will need to be undertaken for individual catchment management plans and schemes to determine potentially significant effects on international sites. This should include consideration of international sites that were not considered to be affected at strategic level.

1.5 Background to the Hampshire LFWMS

- 1.5.1 The Flood & Water Management Act 2010 requires the Environment Agency to develop, maintain and apply a National Flood and Coastal Erosion Risk Management Strategy. Similarly, the LLFA is required to develop a LFWMS for its area. The LLFA's strategy must specify:

- risk management authorities within that area;
- their flood and coastal erosion risk management functions and objectives for managing flood risk;
- measures proposed to achieve those objectives;
- how and when the measures are expected to be implemented;
- costs, benefits and funding sources;
- assessment of local flood risk;
- how and when the strategy is to be reviewed; and
- how the strategy contributes to the wider environmental objectives.

- 1.5.2 HCC's existing Local Flood Risk Management System (LFRMS)¹³ was adopted on the 23 July 2013 and comprises the following documents:

- Hampshire Local Flood Risk Management Summary (the Summary);
- Hampshire Local Flood Risk Management Strategy, July 2013 (Main Strategy);
- Hampshire Local Flood Risk Management Strategy Document 3 – Action Plan, May 2013 (Action Plan); and
- Strategic Environmental Assessment Report (SEA), 2012.

- 1.5.3 Hampshire's first Local Flood Risk Management Strategy (LFRMS)¹³ was adopted in 2013. Since this document was produced the knowledge of the broad nature and extent of flood risk across Hampshire has grown. HCC have worked closely with other Flood Risk Management Authorities, local communities, residents and partners and increased our understanding of Sustainable Drainage Systems. The County Council also recognises the multi-source nature of flooding and the significant role that natural geology and topography play in flood risk management.
- 1.5.4 On this basis it was decided that the 2013 LFRMS (now LFWMS) be revised in order to allow a catchment approach to flood risk management, enabling the plan to be based on natural river catchment areas rather than local authority administrative boundaries.
- 1.5.5 The vision of the revised LFRMS¹³ is 'To create a safer more resilient Hampshire'.
- 1.5.6 In order to achieve this vision HCC has produced a framework of seven policies, through which robust flood mitigation plans can be managed. The seven policies have been illustrated in Figure 1.2.
- 1.5.7 Each of these policies has a series of objectives which document the steps HCC will take to achieve its vision provided in Table 1.3.
- 1.5.8 The new LFWMS will replace the 2013 strategy and cover the time period 2020 to 2026.

¹³ It is noted that the document name has been amended from Local Flood Risk Management Strategy to Local Flood and Water Management Strategy.

Figure 1.2: Summary of the Seven Policies of Flood Risk Management in Hampshire

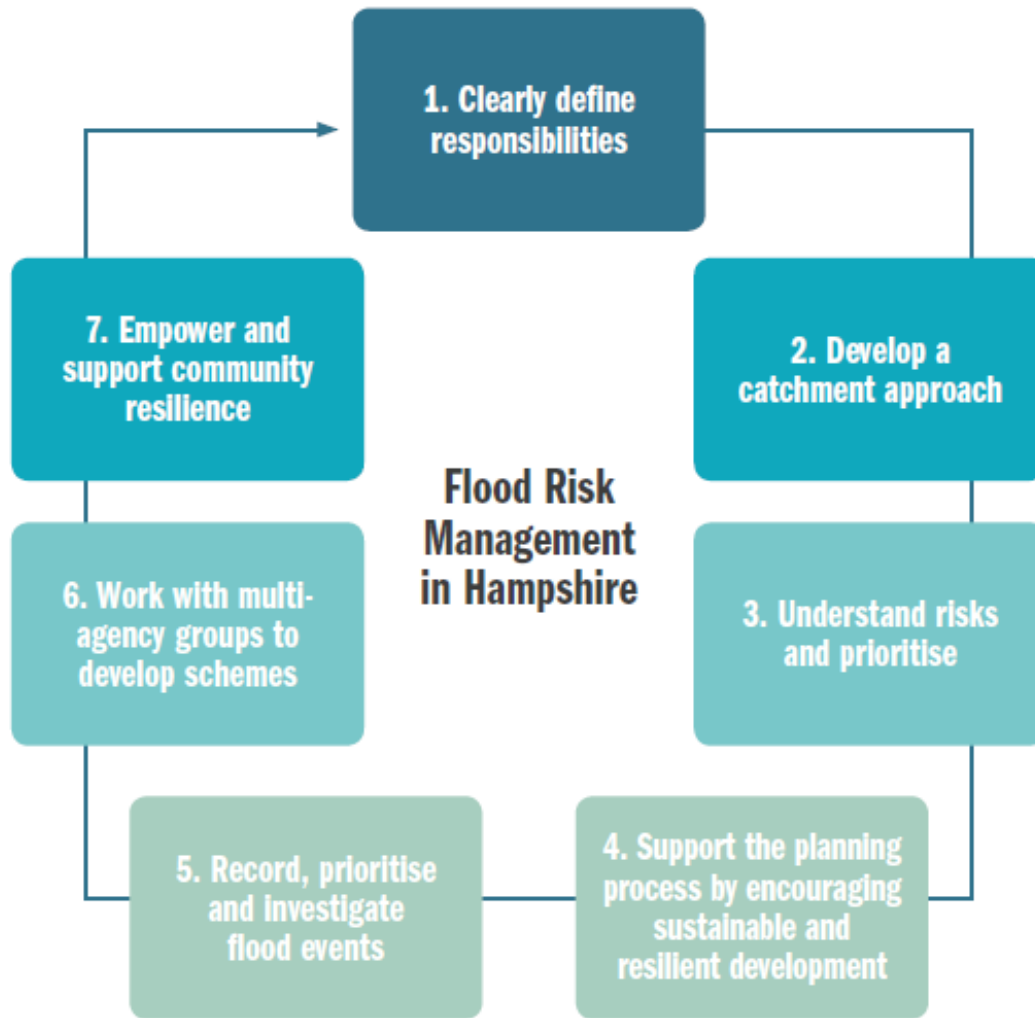


Table 1.3: Policies and Actions of Flood Management in Hampshire

Policy	Objective
1) To ensure collaboration and successful flood risk management HCC will undertake effective partnership working	1A Lobby central government and the Environment Agency to ensure that Hampshire’s specific flood risk challenges are recognised and appropriate national funding mechanism re in place. 1B Lead the Hampshire Strategic Flood Risk Management Partnership Board to shape flood risk management strategy with all relevant partners. 1C Lead the Hampshire Flood Risk management technical group to coordinate flood alleviation activity across the region.

Policy	Objective
	<p>1D Improve information available to the public on the Councils website regarding flood risk responsibility.</p> <p>1E Update this strategy as required by the Environment Agency</p>
<p>2) To better understand the risks associated with the movement of water HCC will develop a catchment approach to flood and water management</p>	<p>2A Develop 18 prioritised river catchment-based flood managed plans across Hampshire.</p> <p>2B Record and monitor flood risk data by river catchment area.</p> <p>2C Develop catchment based working groups for flood alleviation schemes.</p>
<p>3) To help protect communities that are most vulnerable to flooding, HCC will continue to identify risks and develop clear priorities</p>	<p>1A Utilise a risk based approach applying a risk matrix and knowledge of historic flooding in each catchment.</p> <p>3B Undertake a prioritisation exercise based on numbers of properties at risk; vulnerability of residents and susceptibility of critical infrastructure along with other socio economic factors for each of the 18 catchment based flood risk management plans.</p> <p>3C Improve flood data collection, recording and sharing to better identify 'at risk' areas.</p> <p>3D Use this improved data collection to inform an updated Surface Water Management Asset register.</p>
<p>4) To ensure successful and sustainable growth HCC will support the planning process by encouraging resilient development</p>	<p>4A Encourage the development of robust flood risk management policies within the local planning authorities local plans.</p> <p>4B Require developments to utilise sustainable drainage systems and the drainage hierarchy based on current best practice and industry standards for water quality and quantity.</p> <p>4C Encourage development which demonstrates an understanding of environmental sensitivity and provides appropriate mitigation.</p> <p>4D Require development to demonstrate a net environmental gain in local flood risk management.</p> <p>4E Ensure that works to ordinary watercourses are only consented where there is no increased flood risk and enforce against unconsented works where appropriate.</p>

Policy	Objective
	4F Work with the Environment Agency, Local Planning Authorities and other partners to develop skills and capabilities to advise developers on how adaptive approaches should inform strategic local plans and enable climate resilient places.
5) To increase knowledge and understanding of flood events HCC will record, prioritise and investigate instances of flooding.	<p>5A record and respond to all instances of flooding from any source reported to us.</p> <p>5B properties flood investigation work according to our published prioritisation schedule.</p> <p>5C Liaise with highway authorities to investigate highway flooding.</p> <p>5D Undertaken formal investigations for significant flooding events.</p>
6) To reduce flood risk in vulnerable areas HCC will work with Multi Agency Groups to develop flood alleviation schemes.	<p>6A Continue to work in partnership to deliver the Councils Flood Risk and Coastal Defence programme.</p> <p>6B Encourage the development and implementation of innovative flood alleviation measures and a flexible policy approach from partner organisations.</p> <p>6C Work to maximise the available funding for national and local sources including the private sector, and enable investment in schemes to contribute positively to local economic regeneration and sustainable growth.</p> <p>6D Continue to attend and contribute to other multi agency group meetings concerning flood risk across Hampshire and the South of England including regional Flood and Coastal Committee meetings.</p> <p>6E Work with other risk management authorities to set up new multi agency groups where appropriate for emerging flood alleviation schemes.</p> <p>6F Work with coast protection authorities and the environment agency on the refresh of shoreline management plans to ensure that these take into account of local circumstances, infrastructure and assets, and that there is full recognition of the costs and benefits of proposed; adaptive approaches' such as reversal of the hold the line policies.</p>
7) To improve adaptation to and recovery from flood events HCC will encourage and	7A Increase the number of community flood action and emergency flood action plans.

Policy	Objective
support community resilience.	<p>7B Produce guidance in the form of action plans and recommendations from flood investigation reports to inform communities of the best action to take.</p> <p>7C Improve online guidance on funding sources and support available from charities such as the National Flood Forum.</p>

1.5.9 The study area for this LFWMS is the area within the administrative boundary of HCC. Hampshire is made up of 11 District and Borough authorities; Basingstoke and Deane, East Hampshire, Eastleigh, Fareham, Gosport, Hart, Havant, New Forest, Rushmoor, Test Valley, and Winchester City. Although the geographic county of Hampshire includes the cities of Portsmouth and Southampton, these districts are unitary authorities and LLFAs in their own right, as is the Isle of Wight Council. Therefore, this LFWMS does not cover these areas.

1.5.10 Figure 1.3 shows the administrative areas of Hampshire County Council that are covered by the LFWMS for Hampshire. The individual catchment areas within HCC are shown in Figure 1.4.

Figure 1.3: The Administrative Boundaries of Hampshire County Council (Area covered by Hampshire LFWMS)

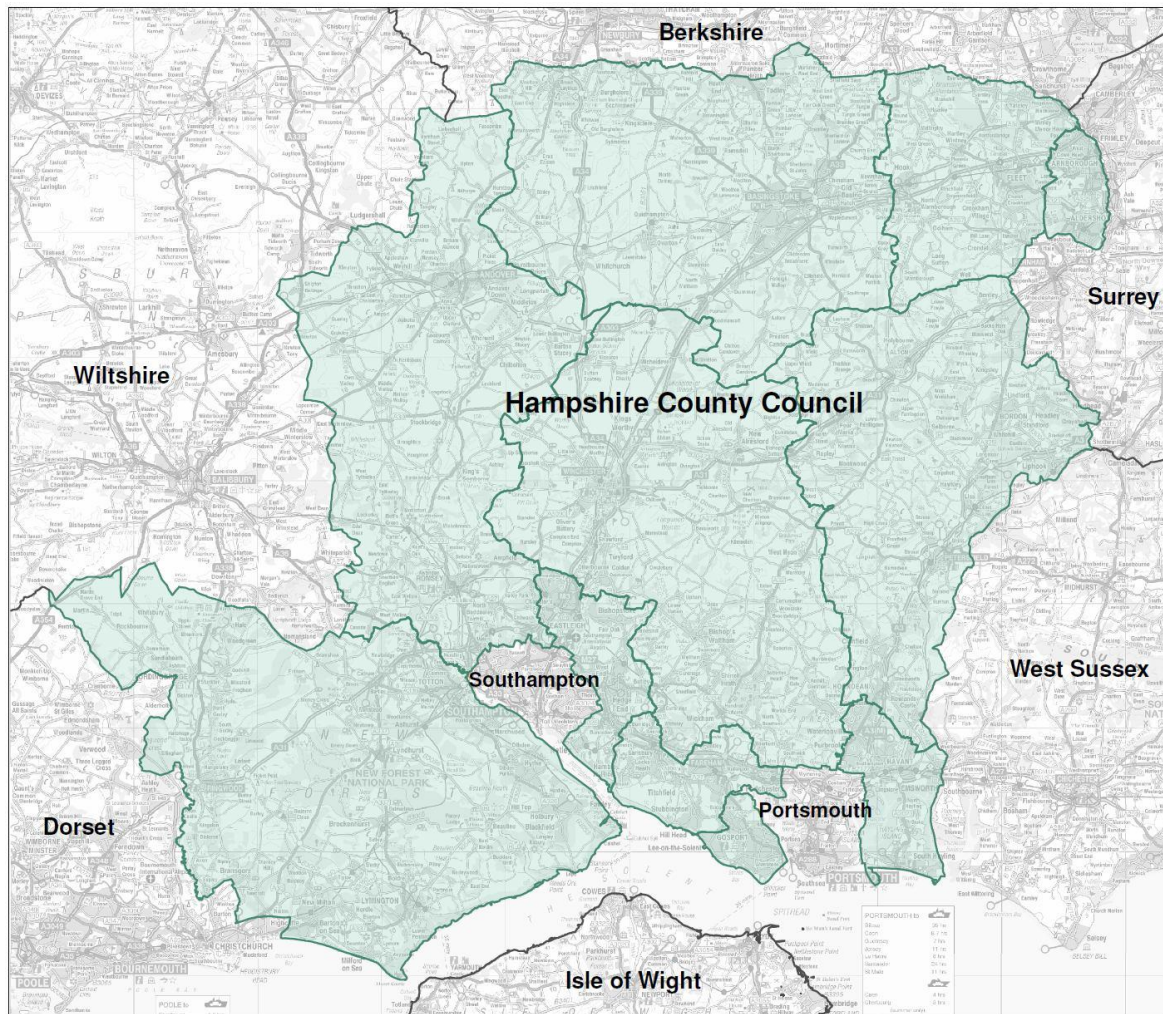


Figure 1.4: Hampshire River Catchment Areas



1.5.11 HCC has a vision to create a safer, more resilient Hampshire by:

- Avoiding risks and managing water resources through effective planning and design;
- Preventing future flooding by reducing or removing existing risks;
- Adapting to flood risk in order to minimise the impact and enable normal life to return as soon as possible;
- Enabling communities to be better prepared to react to flood events and recover more easily; and
- Adopting effective practices that are sustainable and affordable now and in the future.

1.5.12 The proposed update principally changes how the existing LFRMS is structured. The 'Action Plan' within the current Strategy sets out proposed flood risk management plans on an administrative Ward-by-Ward basis.

1.5.13 Since becoming LLFA, HCC has collated and assessed significant historic data on surface water flood events across each district and used Department of Environment Farming and Rural Affairs (DEFRA) and Environment Agency (EA) mapping data for each region. This process highlighted that mapping flood risk by district margins caused several issues, as water does not respect administrative boundaries. Therefore, as HCC are best placed

to make local decisions on flood risk management which benefit the maximum number of Hampshire residents, they have decided to manage flood risk based upon the river catchment areas in Hampshire.

- 1.5.14 The catchment area within which a community lies is its most significant factor in determining the amount or likelihood of flooding. Catchment topography and shape determine the time taken for rain to reach the river, while catchment size, soil type, and development determine the amount of water to reach the river.

2 Stage A: Scoping Appraisal Findings

2.1 Introduction

2.1.1 Tasks A1 – A4 of the SEA process involve gathering evidence to help set the context and objectives, establish the environmental baseline and decide on the scope of the SEA.

2.1.2 The evidence was used to develop a set of suitable objectives against which the sustainability effects of the LFWMS can be assessed. The following sections provide a summary of the policy context, the relevant aspects of the current state of the environment and any existing environmental problems as required in the SEA Directive. Further details may be found in the SEA Scoping Report and Appendix 2.

2.2 Task A1: Review of Plans, Policies and Programmes

2.2.1 The SEA Directive requirement for Task A1 is as follows:

Under the SEA Directive the Environmental Report should include: An outline of the contents; and main objectives of the plan or program¹⁴; and the relationship with other relevant plans and programmes (Annex 1a).

‘the environmental protection objectives, established at international, community or member states level, which are relevant to the plan or program and the way those objectives and any environmental considerations have been taken into account during its preparation’ (Annex 1e).

2.2.2 A review was undertaken of other relevant international, national, regional and local policies, plans, programmes, and strategies to identify their implications for the LFWMS. Appendix 1 provides a summary of the relevant plans and policies and identifies how these policies have been considered in the SEA appraisal framework. This is not a definitive list of plans and programmes and focuses on only those which are likely to influence the LFWMS. The detailed assessment of plans, policies and programmes is provided in the Scoping Report.

2.2.3 The key links and themes identified in the review of the plans, policies and programmes can be broadly summarised into the following:

- Ensuring no harm is caused to nature conservation and cultural heritage sites designated nationally and locally.
- Sustainable management of flood risk for people, homes and businesses, help safeguard community groups from unaffordable rises in surface water drainage charges and protect water supplies to the consumer and vital infrastructure.

¹⁴ Refer section 1.5.

- Groundwater and surface water management is based on a catchment approach.
- Protecting and enhancing the open spaces and recreational opportunities (Areas of Outstanding Natural Beauty, National Parks).
- Make improvements to the transport system which will benefit people living and working in Hampshire.
- Balance the management of coastal flooding and erosion risks, with natural processes, and the consequences of climate change.

2.3 Task A2: Environmental Context (Establishing the Baseline and Future Baseline Environment)

2.3.1 The collection of the baseline information on the environment within the plan area is a key component of the SEA process and a legal requirement under the SEA Directive. The baseline information provides a basis for predicting and monitoring effects and identifying sustainability problems.

2.3.2 The SEA Directive's requirements for Task A2 are as follows.

In accordance with the SEA Directive the Environmental Report should include: the relevant aspects of the current state of the environment and likely evolution thereafter without implementation of the plan or program (Annex 1b); and the environmental characteristics of areas likely to be significantly affected (Annex 1c).

2.3.3 Baseline information was compiled for the Scoping Report¹⁵. Information was collected from a number of sources, notably Geographical Information Systems (GIS), Ordnance Survey, Environment Agency and Natural England. Current information was used where possible¹⁶, however only information readily available could be used.

2.3.4 Information was collected on the following topics:

- Population and Human Health;
- Material Assets (land use, transport, waste and minerals);
- Biodiversity flora and fauna;
- Soil Geology and Geomorphology;
- Water;
- Climate Change and Air Quality;

¹⁵ Strategic Environmental Assessment, LFRMS, April 2017 (Scoping Report)

¹⁶ As of April 2017, please refer to section 2.5 limitations for further details.

- Cultural, architectural and archaeological heritage; and
- Landscape and Visual Amenity.

2.3.5 The baseline provides a basis for understanding the environment and sustainability issues in Hampshire. It helps to identify any environmental problems and ways to potentially resolve them. It is an important stage of the Strategic Environment Assessment and ensures the process is based on sound evidence and assists in predicting and monitoring the likely effects of the plan. The main messages from the baseline review are summarised in Appendix 2 (the full assessment is provided in the Scoping Report).

2.4 Task A3 Sustainability Issues

2.4.1 Task A3 draws evidence gathered in Tasks A1 and 2 to identify environmental issues which will form the basis for a robust SEA. The SEA Directive Requirement for Task A3 is as follows:

The SEA Directives States the Environmental Report should include: any existing environmental problems which are relevant to the plan or program including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (The Birds Directive) and 92/43/EEC (the Habitats Directive) (Annex 1d).

2.4.2 A summary of the key sustainability issues of relevance to the LFWMS is provided in Table 2.1. Further details are provided in the SEA Scoping Report.

Table 2.1: Summary of Key Sustainability Issues

Population
Increase in population and longevity. High proportion of elderly people.
Increased demand for new developments within the Plan Area.
Hampshire has one of the lowest levels of social deprivation, a significant proportion of these deprived areas are located in one area (Havant).
Hampshire is predominantly rural and over a third of Hampshire is within National Parks or AONB.
Material Assets
The transport network in Hampshire provides a gateway to the major ports of Southampton and Portsmouth, to Southampton airport and also provides a route to London.
Traffic congestion is forecast to increase substantially.

<p>With an increase in population there will be an increase pressure for development in areas not subject to flooding and this may put a strain on agricultural land.</p>
<p>Sewer pipes and highway drains have often become combined with culverted non-main rivers over time and the precise role and function of such watercourses may not always be readily understood, making management strategies complicated.</p>
<p>Biodiversity</p>
<p>Habitat loss and fragmentation from the pressures of increases in population density.</p>
<p>Nutrient enrichment affecting river and coastal water quality.</p>
<p>Habitats and species may be damaged by sediment or pollutants in flood water or by the actions of flood water.</p>
<p>Changing climate which could lead to lowering of groundwater, impacting stream flows.</p>
<p>Effects of existing abstraction for water supply, and potential increases associated with pressures of new developments.</p>
<p>Soils, Geology & Geomorphology</p>
<p>Increases in development will mean use of previously undeveloped land and increased pressure on agricultural resources.</p>
<p>Water</p>
<p>The upward trend in water consumption per head due to changes in social habits e.g. increased use of dishwashers, and an increase in the number of smaller households puts increasing pressure on supplies and local water resources.</p>
<p>The potential for increasing water supply in Hampshire is limited: for example, the amount of water abstracted from rivers in South Hampshire must be reduced in accordance with the EU Habitats Directive Review of Consents in order to protect species and their habitats, it is considered unlikely that the environment can provide more water for abstraction.</p>
<p>Potential impacts to water quality or the hydrological regime of aquatic habitats from development.</p>
<p>The Plan Area has a complex surface water and groundwater system and many areas are designated Flood Zone 3.</p>

<p>More than half of Hampshire’s coast is defended, the undefended coast is characterised by mudflats and sandy cliffs which are soft and prone to erosion. A large number of existing defences are coming to the end of their residual life and decisions with regard to their upgrade or replacement will need to be made over the next few years.</p>
<p>Climate</p>
<p>There are particular pressures in the south east of England as these parts are the driest and also the most heavily populated. The pressures are increased due to the future projected population increase and the effects of climate change.</p>
<p>Climate change is likely to increase pressure on soil. An increase in soil erosion is likely, due to increased wind speeds, rising sea levels and increased flooding events.</p>
<p>Climate change and increased CO2 emissions can lead to increased precipitation which in turn will increase the risk of inland surface water flooding.</p>
<p>Hampshire’s coastline could experience increased coastal flooding with sea level rise, extreme weather and tidal surges.</p>
<p>Historic Environment</p>
<p>There are over 600 archaeological sites which have scheduled status.</p>
<p>Some historic structures have a role within water and flood management – management of historic structures and their role on flood control.</p>
<p>Current pressures to cultural heritage can include flooding and sea level rise, construction activities (including vibration), air pollution, land use changes or alterations leading to adverse effects on historic sites and their settings.</p>
<p>Landscape</p>
<p>There are two National Parks:</p> <ul style="list-style-type: none"> • New Forest – covers 14% of Hampshire (calculated from HCC GIS 16.01.17). The New Forest is a diverse and complex landscape comprising unenclosed ancient woodland, enclosures, open heaths and lawns, mires and ponds, back-up grazing land, coastal plain landscapes and scattered villages and dwellings; and • South Downs – covers 15% of Hampshire (calculated from HCC GIS 16.01.17) and combines diverse landscape of heritage coast, nature reserves, historic monuments and conservation areas with bustling market towns, villages and small farms.

Increases in population are putting increased pressure on recreational areas.
<p>The county also has the following AONBs:</p> <ul style="list-style-type: none"> • Cranborne Chase and West Wiltshire Downs; • North Wessex Downs; and • Chichester Harbour.

2.5 Limitations

2.5.1 The information presented in this report is the result of a desk-based review of publicly available data and no formal requests for records, data or information have been made. HCC cannot be held liable for third party information.

2.5.2 The review reflects the data available at the time the Scoping Report which was compiled (April 2017). In light of the fact that a considerable time period has passed since the baseline scoping was compiled a high level review has been undertaken of the key sustainability issues provided in Table 2.1 to ensure that they remain relevant and up to date.

2.5.3 Climate change, contamination, development and agricultural practices result in an overall net loss in soils in the UK. However, it is of note that there is no specific data on soils available for the Plan Area.

2.6 Task A4: Developing the SEA Framework

2.6.1 The SEA Directive requirements for Task A4 are as follows:

<p>The SEA Directive requires ‘a description of how the assessment was undertaken including any difficulties (such as technical deficiency or lack of know how) encountered in compiling the required information (Annex 1h).</p>

2.3 The SEA framework (used to assess the policies and objectives of the strategy) is made up of a number of environmental (SEA) objectives which are relevant to the potential environmental effects of the LFWMS. The SEA objectives have been developed from the review of policies, plans and programmes and the baseline information compiled as part of the Scoping process. They also reflect the specific environmental topic areas to be addressed as required by the SEA Directive. It is noted that air quality and noise were scoped out of the assessment (for further details refer to the Scoping Report).

2.4 Table 2.2 sets out the SEA objectives the assessment criteria and possible indicators identified for the Plan Area. These objectives have been subject to consultation as part of the scoping process.

Table 2.2: SEA Framework Objectives

SEA Objectives
1). To conserve and enhance the biodiversity, flora and fauna of Hampshire including natural habitat and protected species.
2). To maintain and improve ground and surface water quality in Hampshire.
3). Protect and enhance landscape character, local distinctiveness and historic environment of Hampshire.
4). Limit vulnerability to potential predicted flooding of climate change by adapting new and existing development to the impacts of climate change.
5). To maintain and protect soil quality.
6). To improve the health and wellbeing of the population.
7). Minimise adverse impacts of local flood risk on key infrastructure, land assets and properties.
8). Protect and enhance open spaces, recreational areas and rights of way and improve accessibility for everyone.
9). Reduce and manage the risk of flooding and resulting detriment to public well-being, the economy and the environment.
10). Minimise adverse effects on water hydromorphology, natural processes and aquatic environment.
11). Minimise adverse effects on water resource availability.
12). Engage with local communities, improve and support community level flood response and recovery, by improving the understanding, preparedness and response of the local community to flooding.

2.7 Methodology

2.7.1 The objective of this SEA is to assess the potential impacts of the strategy in order to inform and influence the plan and facilitate discussions regarding alternative approaches which will be evaluated in light of their potential impacts including cumulative, synergistic and indirect environmental effects on the different SEA topics. For this reason each issue has not be given a ranking, rating or numerical score.

2.7.2 The assessment of environmental effects was qualitative and informed by professional judgement and experience with other SEAs, as well as an assessment of national, regional and local trends. In some cases, the assessment has drawn upon mapping data to identify areas of potential pressure, for example flood risk or presence of environmental designations.

2.7.3 The LFWMS objectives have been assessed for likely effect. Table 2.3 was used to evaluate how the environment would be affected either positively or negatively. If there is a low level of confidence about the direction of an effect or the probability of occurrence, the effect will be scored as unknown. Colour coding has been used to ensure the impacts are visually apparent at a glance.

Table 2.3: Assessment Criteria

Symbol	Explanation of the Effect
+	Positive: will result in a positive impact on the objective.
0	Negligible: Neutral or negligible effect on the objective.
-	Negative: Option will result on a negative impact on the objective.
?	Unknown: The relationship is unknown, or there is not enough information to make an assessment with respect to either positive or negative effects.

2.7.4 The determination of significance of the predicted effects has been aided through the use of the general criteria set out in Table 2.4. These are not definitive and are subject to professional opinion.

Table 2.4: Determining Significance (SEA Objectives)

SEA Objective	Assessment Criteria	Significant positive effects will occur from:	Significant negative effects will occur from:
1. To conserve and enhance the biodiversity, flora and fauna of Hampshire including natural habitat and protected species.	Does the Plan seek to protect and enhance nationally or locally designated sites? Does the Plan seek to enhance biodiversity,	Actively enhances international/ local site and the ecological networks that link them.	Results in the loss of degradation of local site and the ecological networks that link them.

SEA Objective	Assessment Criteria	Significant positive effects will occur from:	Significant negative effects will occur from:
	ecological networks and habitat connectivity?		
2. To maintain and improve ground and surface water quality in Hampshire.	<p>Does the Plan seek to protect water resources in particular potable reserves and source protection zones (surface and groundwater, quantity and quality)?</p> <p>Does the Plan seek to minimise adverse effects on water hydromorphology, natural processes and aquatic environment?</p>	Improves the status of surface waters.	Resulting in the deterioration of surface waters particularly where this may lead to failure of the objectives of the water framework directive.
3. Protect and enhance landscape character, local distinctiveness and historic environment of Hampshire.	<p>Does the Plan seek to conserve the fabric and setting of the landscape character?</p> <p>Does the Plan seek to conserve designated aspects of the historic environment (including archaeological deposits)?</p>	Actively enhances the special qualities and / or protects the landscape and cultural heritage.	Results in the degradation and / or loss of cultural heritage and landscape character and setting.
4. Limit vulnerability to potential predicted flooding from (?) climate change	Does the Plan consider	Ensuring all developments include appropriate adaptations	Results in inappropriate development vulnerable to the

SEA Objective	Assessment Criteria	Significant positive effects will occur from:	Significant negative effects will occur from:
effects(?) by adapting new and existing development to the impacts of climate change.	contamination issues?	providing protection from climate change.	impacts of climate change.
5. To maintain and protect soil quality.	Options protect high quality land and minimise erosion. Does the Plan take into consideration soil function, type and classification (safeguarding Best and Most Versatile Grades 1, 2 and 3a)?	Does the Plan take into consideration soil function, type and classification (safeguarding Best and Most Versatile Grades 1, 2 and 3a)? Does the Plan consider contamination issues?	Results in increased erosion and loss of productive soils.
6. To improve the health and well being of the population.	Does the Plan seek protect and enhance amenity?	Residents will benefit from less flooding. The LFWMS will identify and integrate the special needs of people that are particularly vulnerable to flooding.	Residents will not see any benefits from reduced flooding/ potentially more residents at risk of flooding. LFWMS ignores the special needs of people that are particularly vulnerable to flooding.
7. Minimise adverse impacts of local flood risk on key infrastructure, land assets and properties.	Does the Plan seek to ensure sites do not negatively impact sensitive receptors such as residential	An improvement in transport access and protection of key assets.	A reduction in transport access and failure to protect key assets.

SEA Objective	Assessment Criteria	Significant positive effects will occur from:	Significant negative effects will occur from:
	dwellings, schools and hospitals?		
8. Protect and enhance open spaces, recreational areas and rights of way and improve accessibility for everyone.	Does the Plan seek protect and enhance amenity?	High confidence that the LFWMS will improve access to/ the condition of the provision of public rights of way and access.	High confidence that the LFWMS will reduce provision of public rights of way and access.
9. Reduce and manage the risk of flooding and resulting detriment to public well-being, the economy and the environment.	Does the Plan seek to minimise the risk of flooding on the public and sensitive receptors?	Decreases the risk of flooding on the public?	Increases the risk of flooding on the public.
10. Minimise adverse effects on water hydromorphology, natural processes and aquatic environment.	Does the plan promote the natural flood management hierarchy?	Actively results in the enhancement of natural processes and improvements to the aquatic environment.	Results in destruction of the aquatic environment.
11. Minimise adverse effects on water resource availability.	Does the Plan seek to protect water resources in particular potable reserves and source protection zones (surface and groundwater, quantity and quality)?	Makes more water available for public water abstraction.	Makes less water available for abstraction.
12. Engage with local communities, improve and support	Does the plan facilitate active	Results in active early engagement and participation	Results in disconnection with the communities and

SEA Objective	Assessment Criteria	Significant positive effects will occur from:	Significant negative effects will occur from:
community level flood response and recovery, by improving the understanding, preparedness and response of the local community to flooding.	engagement with appropriate parties?	with the community. Facilitates the community to be prepared for flooding.	surrounding counties.

2.7.5 Although each objective is directly linked to the issues as outlined in the Directive each objective may have indirect or subtle influence on the other issues. This is depicted in Table 2.5. It has been assumed that inherently the LFWMS would likely lead to better climate change adaptation and resilience, through reduced flood risk. In general, none of the draft objectives have been deemed to be in direct conflict with one another.

Table 2.5: SEA Directive Issues in Relation to the SEA Objectives

SEA Directive Topic	Direct Impact (SEA objective number)	Indirect / Subtle (SEA objective number)
Biodiversity	1	2, 5, 8, 10
Population	6	4, 7, 8, 9, 12
Human Health	6	4, 7, 9, 12
Fauna	1	2, 5, 8, 10
Flora	1	2, 5, 8, 10
Soil	5	
Water	2, 10, 11	
Air/Noise	Scoped Out	
Climatic Factors	4	

Material Assets	7	
Cultural Heritage	3	
Landscape	3	
Interrelationships	9	

2.7.6 A proforma has been used which included commentary as to the reasoning for the effect (refer Table 2.6). The SEA Regulations require that consideration should be given to whether the effects are short, medium, long terms, synergist, cumulative or secondary. Where possible this has been recorded in the column 'comments /effects (refer Table 2.6).

Table 2.6 Proforma for Assessment of LFWMS Policies and Objectives

	SA Objectives												Comments/ Effect and Potential Improvements
Flood and Water Management Policy /Objective	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Material Assets	8 Accessibility	9 Flooding	10 Water Environment	11 Water Resources	12 Communities	

2.7.7 The compatibility of the objectives / policies will be assessed to ensure the full impact of the LFWMS is understood. Table 2.6 will be used to assess the interaction of the effects (in combination).

2.7.8 A Quality Assurance Checklist has been completed to ensure the assessment meets the requirements of the SEA Directive (Appendix 4).

2.8 Task A5 Consulting on the Scope of the SEA

2.8.1 The SEA Directive requirements for consultation on the scope of the SEA assessment are as follows:

2.8.2 A Draft Scoping Report was provided to Statutory Consultees (Natural England, Thames Water and Historic England, Environment Agency) in April 2017 to allow them to express their views on the scope of SEA for the emerging LFWMS. Following the scoping consultation period, responses received were considered and a revised SEA Scoping Report¹⁷ was completed and reissued in November 2017. A summary table outlining the responses received from Natural England in May 2017¹⁸ and how these have been addressed is provided in Table 2.7. No other comments were received from the other consultees.

2.8.3 To enable other stakeholders to continue to contribute to the LFWMS, there is a period of formal consultation where this Interim Environmental Report and the draft LFWMS will be made available to the public and consultation bodies so that it might facilitate informed consultation responses on both documents.

Table 2.7 Summary of consultation responses

Natural England (NE) Response	How addressed
One typo was noted ANOB / AONB	Correction amended
We are naturally pleased to see historic landscape character, scheduled monuments, Registered Historic Parks and Gardens, listed buildings, conservation areas and other known and unknown features of archaeological and/or heritage interest as being scoped in. Registered Historic Battlefields, of which there is one in Hampshire (the site of the Battle of Cheriton) (as recognised in paragraph 4.2.7) and Protected Wrecks (such as	Registered historic battles fields and wrecks added to scope.

¹⁷ Strategic Environmental Assessment Scoping Report, November 2017'(Scoping Report)

¹⁸ Only Natural England provided a response.

<p>those of the Grace Dieu and Holigost in the River Hamble) should be added to this list.</p>	
<p>We therefore suggest that designated heritage assets, including Registered Historic Parks and Gardens, on or just outside the boundary of the LFWMS area be scoped in insofar as their setting extends into the area. The “Heritage Environmental Record” should be the “Historic Environment Record”.</p>	<p>Added to scope</p>
<p>We also support SEA Objective 3 in principle, but we would suggest separating landscape character and historic heritage – both are issues worthy of consideration in their own right and conflating the two may mask impacts on one or the other. We would also suggest that “historic built heritage” be the “historic environment”- this is a recognised phrase and encompasses more than built heritage.</p>	<p>Historic built heritage amended to historic environment within the SEA objectives.</p> <p>A decision was made not to provide separate objectives for landscape and cultural heritage as aspects are interlinked for example the setting of cultural heritage assets.</p>
<p>We would expect the Scoping Report to set out sub-objectives (or “decision-making criteria”) and indicators or measures, examples of which can be found in our advice on SEAs and the historic environment.</p>	<p>This is noted, however given the high level of the assessment and the LFWMS, sub objectives were not considered workable/practical. Criteria have been used in the assessment process to determine the significance of effects for each of the SEA objectives.</p>
<p>There are two Protected Wrecks in the River Hamble: the Holigost and the Grace Dieu. “English Heritage Parks and Gardens” should be “Registered Historic Parks and Gardens”.</p>	<p>Noted and added</p>
<p>We agree with the statement in paragraph 7.4 that an increase in flood risk could have detrimental impacts on heritage assets, but it should also be recognised that without the Plan, the potential threat to heritage assets from insensitive flood defence or management works could be increased. We welcome the recognition in paragraph 7.5 that alterations to hydrological regimes could adversely affect waterlogged deposits.</p>	<p>Amendments made to relevant section regarding evolution without the plan.</p>

3 Stage B: Developing and Refining Options and Assessing Effects

3.1 Introduction

3.1.1 Tasks B1 – B5 involve appraisal of the LFWMS against the SEA framework developed as part of the scoping process, and utilising the review of plans and programmes and baseline environmental information in Stage A.

3.1.2 This chapter sets out the findings of the appraisal of the:

- Vision;
- Seven policies and the objectives supporting these;
- Catchment management approach; and
- Catchment management prioritization.

3.1.3 The appraisal seeks to identify significant effects as required by the SEA Directive and sets out mitigation measures (potential improvements) as detailed below. Given the high level nature of the strategy mitigation measures identified are in the form of general recommendations, amendments or points for consideration, rather than measures designed to counter specific effects.

The SEA Directive requires: ‘the likely significant effects on the environment, including on issues such as: Biodiversity; population; human health; fauna, flora; soil; water; air; climate factors; material assets; cultural heritage including architectural and archaeological heritage; landscape; and the interrelationship between the above factors’ (annex 1f).

‘the measures envisages to prevent, reduce and as fully possible offset any significant adverse effects on the environment of implementing the plan or program to be included in the environmental report (Annex 1g).

3.2 Assessment of the LFWMS

3.2.1 HCC as LLFA for Hampshire is required under legislation to:

- Prepare and maintain a strategy for local flood risk management in Hampshire;
- Act as a coordinating body for views and activity of other local flood risk management authorities and communities;
- Maintain a register of flood risk management assets;
- Investigate significant local flooding incidents and publish the results of such investigations;

- Comment on, as part of the planning process, the design, building and operation of Sustainable Drainage Systems (SuDS) for all major planning applications in Hampshire; and
 - Issue consents for altering, removing or replacing certain structures or features on ordinary watercourses.
- 3.2.2 These form the overall aim of the LFWMS however; as these are legal responsibilities no alternatives need to be provided.
- 3.2.3 The aspects of the draft LFWMS which have been subject to the SEA appraisal process include:
- the overall LFWMS policies and objectives (Section 3.4, Appendix 3, Table 3.1 of this report);
 - the overall Catchment Management Approach (Section 3.5, Appendix 3, Table 3.2 of this report); and
 - the Catchment Flood Risk Management Approach prioritisation process (Section 3.6, Appendix 3, Table 3.3 of this report).

Although the legal responsibilities would not specifically be subject to SEA, owing to the fact that the statutory and non-statutory requirements have been combined within the policies and objectives, for completeness they have been assessed together.

3.3 Tasks B1, 3 and 5: Testing the Plan against the SEA objectives

- 3.3.1 The LFWMS comprises a framework of seven policies each with a series of objectives that provide the context and strategic direction with respect to flood risk management and provide the framework for policy development in the Catchment Plans. Developing good project objectives is the backbone of all good plans. The policies and the objectives have been compared against the SEA objectives in order to assess the potential effects and to understand how the objective considers and protects the environment. The appraisal is documented in Appendix 3, Table 3.1.
- 3.3.2 The assessment explores the policies and objectives themselves in order to ensure the principles of sustainability are fully integrated into the LFWMS. The aim of this process is to help refine the LFWMS objectives where necessary and identify potential areas of conflict.
- 3.3.3 In addition to the objectives a key aspect of the LFWMS is the 'catchment management approach'. This approach has also been assessed against the SEA objectives. The LFWMS includes an outline of how the catchment approach will be implemented via the development of Catchment and Action Plans for each of the 18 catchments within the plan area. The LFWMS includes a list of the catchments in priority order. The method used to develop the list of prioritisations is briefly described in the LFWMS however, further details regarding prioritisation of the Catchment Plans is provided in technical note,

Prioritisation Tool Criteria, 26 Aug 2016, Atkins¹⁹ (catchment prioritisation criteria). As the Catchment Plans are integral to the LFWMS the prioritisation criteria has also been assessed against the SEA objectives.

- 3.3.4 Given the high level nature of the LFWMS and the fact that the LFWMS does not contain specific details about schemes, it was not possible to provide specific mitigation measures to reduce or off set specific potential adverse effects of the LFWMS however, mitigation measures considered ways to proactively avoid adverse effects via the inclusion of new provisions and / or changes / amendments to the existing provisions. These measures are described in Tables 3.2 and 3.3.

3.4 Task B2 Developing Strategic Alternatives

- 3.4.1 The SEA Directive's requirement for Task B2 is as follows:

In accordance with the SEA Directive the Environmental Report should include an outline of the reasons for selecting the alternatives dealt with (Annex 1h).

- 3.4.2 This section considers the environmental effects of any reasonable alternatives.

- 3.4.3 With respect to alternative policy options given only a limited range of options were considered. This included business as usual i.e. continuation of the existing plan, no plan and a new plan based on catchment areas.

No plan or program

- 3.4.4 Given that it is a statutory requirement under the Flood Management Act for the LLFA to maintain a strategy for local flood risk management in Hampshire, it is not a reasonable option to not develop a plan and as such, this option has not been considered further.

Business as usual

- 3.4.5 The business as usual option effectively means a continuation of the existing flood management plan as an alternative to preparing a new one. The existing flood management plan²⁰ was developed in 2013 however, although this existing plan meets the statutory requirements for a flood plan this plan was based on administrative ward boundaries and does not recognise the multi-source nature of flooding and the significant role that natural geology and topography play in flood risk management. On this basis it was determined that an updated plan was required and as such business as usual was not considered a reasonable alternative.

¹⁹ Prioritisation Tool Criteria, 26 Aug 2016, Atkins

²⁰ Hampshire Local Flood Risk Management Strategy, July 2013 (Main Strategy)

Updated Plan Based on Catchments

3.4.6 The updated plan option means preparing a new plan based on upon the river catchment areas in Hampshire. The catchment area within which a community lies is its most significant factor in determining the amount or likelihood of flooding. Catchment topography and shape determine the time taken for rain to reach the river, while catchment size, soil type, and development determine the amount of water to reach the river.

Formulation of Policies

3.4.7 The policies which underlie the new updated plan were formulated via:

- Consultation with statutory consultees;
- Consultation with specialists internally within HCC;
- Consultation with other parties including neighbouring councils; and
- Previous work undertaken on the existing flood management plan.

3.4.8 An initial draft of the LFWMS was prepared in April 2017. This draft was assessed against the SEA objectives, the results of the assessment are provided in Table 3.1, Appendix 3. The primary conclusion of the assessment of the first draft was 'It would help in understanding the status of the objectives if they could be more clearly signposted within the LFWMS by giving them a reference e.g. Principle 1, and also an explanation/objectives provided as to how they should be used'. The recommendations were provided to HCC Flood and Water Management Team. Subsequently in March 2018 a second draft of the LFWMS including revised policies (no longer referred to as principles) and objectives were provided this was further refined culminating in the revised draft plan in November 2019, this revised draft plan was assessed against the SEA objectives and the results of which are presented in this Interim Report (Table 3.2, Appendix 3).

3.4.9 Throughout the SEA, provision has been made to the consideration of alternative wording and to the inclusion of additional reasonable objectives within the strategy.

3.4.10 The next stage in the process is for the Draft LFWMS to be issued for public consultation with this Interim Environmental Report.

3.5 Summary of LFWMS Policies and Objectives Assessment Findings

3.5.1 The assessment noted that in general, the objectives of the LFWMS have a neutral or positive effect when compared against the SEA objectives.

3.5.2 No significant negative effects were identified (refer Table 3.2 and Appendix 3).

3.5.3 The assessment suggests that the policies and objectives have taken into consideration potential environment effects and many of the policies scored positively against the

relevant SEA objectives. All of the seven policies were found to have at least one positive effect.

- 3.5.4 In particular Policy 2 'to develop catchment approach' scored positive for three SEA objectives with respect to improving public wellbeing, empowering the community and protecting the aquatic environment.
- 3.5.5 The SEA objective 12 'Engage with local communities, improve and support community level flood response and recovery, by improving the understanding, preparedness and response of the local community to flooding' was well represented and five of the seven policies were found to have a positive effect.
- 3.5.6 It is noted that most of the SEA objectives (SEA objectives 1, 2, 3, 5, 8 and 11) were not found to not positively or negatively represented in any of the seven policies and the effects for these SEA objectives were considered either neutral or not enough information was available on which to make an assessment.

Table 3.1: At glance total / combined effects of the LFWMS policies and objectives (preferred)

Flood and Water Management Principle	SEA Objectives											
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing & economy	10 Aquatic Environment	11 Water resources	12 Community
1)Clearly Define Responsibilities	0	0	0	0	0	0	0	0	0	0	0	+
2)Develop a Catchment Approach	0	0	0	0	0	0	0	0	+	0	0	0
3)Understand risks and prioritise	0	0	0	0	0	+	+	0	+	0	0	0
4)Support Planning Process by encouraging Sustainable and Resilient Development	0	0	0	+	0	0	0	0	+	0	0	0
5)Record, Prioritise and Investigate Flood Events	0	0	0	0	0	0	0	0	0	0	0	+
6)Work with Multi-Agency Groups to Develop Schemes	0	0	0	0	0	+	0	0	+	0	0	+
7)Empower and Support community resilience	0	0	0	0	0	0	0	0	0	0	0	+

3.5.7 Specific strengths of the LFWMS policies (including those identified as having significant positive effects) include:

- Prioritising vulnerable areas at risk of flooding based on the number of properties at risk and vulnerability of residents (SEA objective 9).
- The commitment to working on a catchment basis provides opportunities for a more natural and joined up approach to flood risk management working across administrative boundaries and one which recognises that flooding incidents are often due to a mix of several sources.
- This approach will also facilitate local decisions to be made on flood risk management which will benefit the maximum number of Hampshire residents thereby having a significant positive effect on the quality of life of Hampshire's residents (SEA objective 6).
- The specific inclusion of engagement of local communities which is considered key to ensuring the success of the plan (SEA objective 12). This will result in a significant positive effect with respect to early engagement and participation.
- Commitment to investigate, record and monitor flooding enable risks to be better understood within the communities (SEA objective 12).
- The inclusion of reporting incidents and using this information to develop action plans and recommendations shows a joined up long term approach which will benefit the public with respect to flooding (SEA objective 12).
- Committing to supporting and encouraging the drainage hierarchy, SUDs and appropriate mitigation its role as a statutory consultee (SEA objective 7).

3.5.8 No negative effects were identified and on this basis no specific mitigation measures are required. However, potential areas of improvement and consideration for refining the LFWMS objectives are provided as follows²¹:

- It would be beneficial if the LFWMS objectives more clearly differentiated between the statutory requirements and the policies which will form the framework for developing future schemes.
- It is noted that the LFWMS policies and objective do not contain any commitment to supporting the protection and / or improvement of the natural or historic environment (biodiversity, soil, water quality, heritage etc.). Although it is acknowledged that this is not a primary function of the LFWMS it would be beneficial to include the concept of striking a balance between the need to manage the risks of flooding, whilst protecting the quality of life for communities, and the quality and diversity of environmental assets and also recognising that flood mitigation scheme

²¹ It is noted that the recommended amendments may be considered to form part of the alternative options (refer Section 3.7).

can represent opportunities for environmental enhancements. There is an opportunity for positive impacts on a number of the SEA objectives if this gap is specifically addressed within a LFWMS objective.

- Although the plan makes reference to and describes the natural flood management hierarchy (HCC will ensure a stepped approach to flood risk management with a preference for more natural methods above harder engineering measures). Consideration could be given to formalising the commitment via a specific objective within principle 2 ‘developing a catchment approach’. This would strengthen the principle.
- With respect to policy 7 ‘empower and support community resilience’, it would be beneficial to specify the ways that HCC shall raise awareness and improve communication consultation to ensure that sectors of the community more vulnerable to flooding such as the elderly or those living in deprived areas can access information and support about flood risk.
- It would be prudent to include a mechanism to ensure the LFWMS is an iterative process which can respond to changes in the environment, specifically with respect to climate change (refer Section 3.8).

3.6 Catchment Management Approach Assessment Summary

3.6.1 The catchment management approach has the potential to have significant positive effects across many of the SEA objectives. However, it was noted that not enough information was provided in order to appropriately assess many of the SEA objectives (Refer Appendix 3, Table 3.3).

3.6.2 Specific strengths of the catchment management approach (including significant positive effects) include:

- The commitment to natural flood management solutions and the formalisation of the flood management hierarchy which is considered to have a significant positive effect on the aquatic environment, potentially resulting in the enhancement of natural process and improvements in the aquatic environment. The flood management hierarchy may indirectly have many positive benefits with respect to biodiversity, surface and groundwater. It is noted that the positive benefits this could bring about are not necessarily reflected in Appendix 3, Table 3.3 as not enough information was available.
- The acknowledgment that water resources do not respect administrative boundaries has the potential to indirectly positively impact a number of the SEA objectives.
- The specific commitment to empower local residents will have a significant positive effect resulting in early engagement and participation with the community (SEA objective 12).

- Formalising the development of catchment management action plans on a priority basis.

3.6.3 As the catchment management plans form an integral part of the LFWMS it would be beneficial to add specific criteria or objectives that all Catchment Management Plans should adhere to. These could include:

- Formally committing to the flood management hierarchy thereby embedding its use within the LFWMS.
- Adopting a joint approach to development of the Catchment Management Plans and working with partners beyond the HCC administrative boundaries where applicable in those catchments extending outside of the plan area.
- Specifically requiring that opportunities to enhance and protect the natural and historic environment are sought.
- Including a provision for local community empowerment including the timing and mechanisms for taking action.
- Including a requirement for the plans to be subject to Habitat Risk Assessment.

3.7 Catchment Management Prioritisation Assessment Summary

3.7.1 It is noted that the criteria used to prioritise the development of the catchment management plans was weighted, allowing the determination of how much influence each criterion has on the final result. This SEA was not able to assess the impact of the weighting however, the overall criteria have been assessed in order to establish whether there were any gaps in the assessment and to identify potential areas of improvement (refer Appendix 3, Table 3.3).

3.7.2 The SEA of the prioritisation criteria assessment determined that the criteria were well represented with respect to objectives 4, 6, 7 and 9. However, the criteria used for the prioritisation omitted potential environmental impacts associated with biodiversity, water quality, heritage and landscape.

3.7.3 Consideration could be given to the addition of criteria which reflects potential opportunities to protect and enhance the natural and cultural environment.

3.8 Task B6: Proposed Measures to Monitor Significant Effects of Implementing the plan

3.8.1 The specific requirements of the SEA Directive with respect to consideration of mitigation and monitoring measures are as follows.

A description of the measures envisaged concerning monitoring in accordance with Article 10 (Annex 1i).

3.8.2 Monitoring of the LFWMS will ensure that HCC continues to identify any environmental problems and issues that need resolving. The LFWMS should be reviewed every year, at which time there will be an opportunity to review and describe any changes to the environmental baseline from the implementation of the LFWMS, and, how HCC will work to mitigate any adverse effects identified.

3.8.3 Table 3.2 sets out a number of suggested indicators for monitoring the potential significant environmental effects for the implementation of the LFWMS.

Table 3.2 Possible Environmental Monitoring Indicators

SEA Objective	Monitoring Indicators
To conserve and enhance the biodiversity, flora and fauna of Hampshire including natural habitat and protected species.	Changes in condition of designated sites.
To maintain and improve ground and surface water quality in Hampshire.	Changes in chemical status of water bodies subject to flood alleviation.
Protect and enhance landscape character, local distinctiveness and historic environment of Hampshire.	Number of heritage assets which have experienced increase flood risk as a result of LFWMS activity.
Limit vulnerability to potential predicted flooding of climate change by adapting new and existing development to the impacts of climate change.	Number of new developments approved offering improvements/ mitigation to the current flood risk.
To improve the health and well-being of the population.	Number of sensitive receptors which have experienced either a reduced or increased risk of flood as a result of the LFWMS.
Minimise adverse impacts of local flood risk on key infrastructure, land assets and properties.	Number of communities that have experienced a change in transport accessibility due to the LFWMS.
Protect and enhance open spaces, recreational areas and rights of way and improve accessibility for everyone.	Area of green infrastructure provided in flood alleviation schemes. Changes to existing open spaces and recreational areas as a result of LFWMS activities.

Reduce and manage the risk of flooding and resulting detriment to public well-being, the economy and the environment.	Number of communities that experienced either an increase or decrease in flood risk due to LFWMS.
Minimise adverse effects on water hydromorphology, natural processes and aquatic environment.	Number of flood alleviation schemes which have followed the natural flood management hierarchy and avoided hard engineering methods.
Engage with local communities, improve and support community level flood response and recovery, by improving the understanding, preparedness and response of the local community to flooding.	Number of people accessing the website and attending community events.

3.8.4 It is noted that individual flood management schemes would be subject to Environmental Impact Assessment screening and the catchment management plans would be subject to HRA screening. Where the potential for significant effects are identified, EIA/HRA will be required. As a requirement of the EIA, monitoring of the success of any enhancement schemes that are implemented as a result of the LFWMS should also be undertaken, as well as monitoring of potential adverse effects would be required.

3.9 Difficulties and Limitations

3.9.1 With respect to the assessment of the catchment management plans, consideration was given as to whether these should be assessed against the SEA objectives. The following was noted:

- the prioritisation exercise was undertaken separately to the LFWMS (only a summary of the process is included in the LFWMS);
- the catchment prioritisation approach was undertaken on the basis of a cost benefit analysis;
- inadequate information was information was provided in order to appropriately assess a number of the objectives and in this regard, there is a gap in the data; and
- the assessment of the catchment management priorities was further complicated by the fact that the criteria were weighted. It is acknowledged that this weighting cannot be assessed as part of this SEA.

3.9.2 It was concluded that the catchment prioritisation was a key component of the LFWMS and assessing the criteria used for prioritisation against the SEA would have sustainability benefits in so far it highlighted gaps which potentially be addressed prior to finalisation of the catchment prioritisation. However, it is noted that it has limitations.

3.9.3 It is also noted that the structure of the LFWMS did not easily allow for the statutory and non statutory functions to be independently assessed.

Glossary

AONB: Area of Outstanding Natural Beauty

BAP: Biodiversity Action Plan

CFMP: Catchment Flood Management Plan

DEFRA: Department Environment Fisheries and Rural Affairs

EA: Environment Agency

FWMA: Flood Water Management Act

GIS: Geographical Information Systems

HCC: Hampshire County Council

HIS and HPI: Habitats and Species of Priority Importance

HRA: Habitats Risk Assessment

LFRMS: Local Flood Risk Management Strategy

LFWMS: Local Flood and water Management Strategy

LFA: Lead Local Flood Authority

LTP: Local Transport Plan

PUSH: Partnership for Urban South Hampshire

SAC: Special Areas of Conservation

SEA: Strategic Environmental Assessment

SFRA: Strategic Flood Risk Assessment

SPA: Special Protection Areas

SuDS: Sustainable Urban Drainage System

SWMP: Surface water management Plan

SMP: Site Management Plan

SINC: Sites of Importance for Nature Conservation

WFD: Water Framework Directive

Appendix 1: Summary of Plans, Polices and Programmes

Summary of Relevant International Legislation and Policies

International	Summary	Relevant SEA Objective
Flood and Water Management Act 2010	<p>The Act aims to provide better, more sustainable management of flood risk for people, homes and businesses, help safeguard community groups from unaffordable rises in surface water drainage charges and protect water supplies to the consumer.</p> <p>County or unitary authorities are now classed as lead local flood authorities (LLFAs) who have responsibilities for managing local flood risk. The responsibilities of a LLFA include:</p> <ul style="list-style-type: none"> • prepare and maintain a strategy for local flood risk management in their areas, coordinating views and activity with other local bodies and communities through public consultation and scrutiny, and delivery planning. • maintain a register of assets – these are physical features that have a significant effect on flooding in their area. • investigate significant local flooding incidents and publish the results of such investigations. • establish SuDS approval bodies (SABs) that will be responsible for the approval of design, build and adoption of SuDS. • issue consents for altering, removing or replacing certain structures or features on ordinary watercourses. 	Objectives 4, 7, 9, 11

International	Summary	Relevant SEA Objective
	<ul style="list-style-type: none"> play a lead role in emergency planning and recovery after a flood event. 	
National Flood and Coastal Erosion Risk Management Strategy for England 2011	<p>This strategy builds on existing approaches to flood and coastal risk management and promotes the use of a wide range of measures to manage risk. Risk should be managed in a coordinated way within catchments and along the coast and balance the needs of communities, the economy and the environment.</p> <p>This includes the development of local flood risk management strategies by LLFAs, as well as the EA's strategic overview of all sources of flooding and coastal erosion.</p>	Objective 9 and 10
Water Framework Directive (WFD)	<p>Relevantly the Water Framework requires Member States to:</p> <p>Define groundwater bodies within river basin districts to be designated and reported to the European Commission by Member States. They must classify them by analysing the pressures and impacts of human activity on the quality of groundwater with a view to identifying groundwater bodies presenting a risk of not achieving WFD environmental objectives. Member States were obliged to carry out this classification between 2004 and 2005 and report the results back to the European Commission.</p> <p>Establish registers of protected areas within each river basin districts for those groundwater areas or habitats and species directly dependent on water. The registers must include all bodies of water used for the extraction of drinking water and all protected areas covered under the following directives: the Bathing Water Directive 76/160/EEC, the vulnerable zones under the Nitrates Directive 91/676/EEC and the sensitive areas under the Urban Wastewater Directive 91/271/EEC, as well as areas designated for the protection of habitats and species including relevant Natura 2000 sites designated under Directives 92/43/EEC and 79/409/EEC. Registers shall be reviewed under the River Basin Management Plan updates.</p>	Objective 1, and 2

International	Summary	Relevant SEA Objective
	Set up a river basin management plan (RBMP) for each river basin district which must include a summary of pressures and impacts of human activity on groundwater status, a presentation in map form of monitoring results, a summary of the economic analysis of water use, a summary of protection programmes, control or remediation measures etc. The updated RBMPs were due by the end of 2015 and their review is expected every six years thereafter.	
The Town and Country Planning (Development Management Procedure) (England) Order 2015 and DCLG Circular 04/2006	<p>The Direction provides details regarding procedures where a local planning authority is minded to grant permission for major development in a flood risk area. The Direction requires the local planning authority to notify the Secretary of State of the application. As part of this consideration the Secretary of State will consider Flood Zones</p> <p>In this Direction –“flood risk area” means land in an area within –</p> <p>(a) Flood Zones 2 or 3; or</p> <p>(b) Flood Zone 1 which has critical drainage problems and which has been notified for the purposes of article 10 of the Order to the local planning authority by the Environment Agency.</p>	Objective 4, 7, 9
Land Drainage Act as amended by Flood and Water Management Act (FWMA)	<p>The purpose of ordinary watercourse regulation is to control certain activities that might have an adverse flooding impact.</p> <p>The FWMA transferred regulation from the Environment Agency to the local Authorities that will lead on ordinary watercourse consenting and enforcement.</p>	Objective 2, 4, 7 and 10

Summary of Relevant Regional and Local Plans and Policies

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
Hampshire Groundwater Management Plan 2013	Groundwater Management Plan specifically addresses groundwater flooding across the entire county, with a focus in groundwater flooding in the central Hampshire chalk catchments.	Objective 2, 4 and 9, 10
<p>Hampshire Surface Water Management Plan (SWMP) 2013</p> <p>Eastleigh SWMP</p> <p>Rushmoor SWMP</p>	<p>SWMP are being prepared for each of the 11 Districts of Hampshire. To date the SWMP for Eastleigh and Rushmoor have been finalised.</p> <p>The SWMPs describe the topography, geology and hydrology of the boroughs and describes other significant features which can impact on surface water flood risk. It collates and assesses historic data on surface water flood events and uses Defra / Environment Agency mapping data and projections to determine likely future flood risk taking into account the impacts of climate change.</p>	Objective 2, 7, 9 and 10
<p>Biodiversity Action Plan for Hampshire (reviewed 2010) and Local Biodiversity Action Plans (Basingstoke and Deane, Eastleigh, East Hants, Fareham, Rushmoor, Southampton, Test Valley, Winchester).</p>	<p>Local Biodiversity Action Plan aims to ensure that national targets are translated into effective action at the local level, and that important local features are also fully included in strategies for action.</p> <p>This Plan provides a strategy for action in two volumes: Volume 1, the strategic framework and main courses of action for biodiversity within the county. Volume 2, the detailed action plans required for priority habitats and species of priority concern in the county. Together with specific topics which influence biodiversity conservation, such as water management, education and awareness.</p> <p>It provides a platform for the Hampshire Biodiversity Partnership (formed to advance the conservation and enhancement of biodiversity in Hampshire) to take action from. The Partnership which embraces a wide range of organisations all</p>	Objective 1, 2, 10, 12

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
Now known as habitats and species of priority importance (HPI, HIS)	<p>working together for nature conservation, plays a vital role in stimulating and coordinating action, monitoring progress and reviewing priorities.</p> <p>Many Hampshire Authorities have also developed their own action plans these include: Basingstoke and Deane, Eastleigh, East Hants, Fareham, Rushmoor, Southampton, Test Valley, Winchester.</p>	
Areas of Outstanding Natural Beauty (AONB) Management Plans (North West Downs Area, East Hampshire Area, South Downs Management Plan, Cranborne Chase and West Wiltshire Downs, Chichester Harbour Area).	<p>The aim of the AONB designation is to conserve and enhance the natural beauty of the area’.</p> <p>In general terms the objectives of these management plans are to conserve and enhance the landscape character, habitats, species and tranquility of the AONB. To support tourism and public access. And to support the rural economy in ways that are sustainable.</p> <p>The AONBs in Hampshire are the North Wessex Downs, Cranborne Chase and West Wiltshire Downs and Chichester Harbour.</p>	Objective 1, 3, 8 and 9
South Downs National Park Partnership Management Plan 2014-2019.	Is an overarching five-year strategy for the management of the South Downs National Park. This plan is about influencing the nature of future change in ways which will leave the National Park in a better state for future generations to enjoy. It does provide a framework. The plan considers impacts from outside its boundary as well as from within and specifically mentions water flows or water use, traffic, economic activity or views to and from the area.	Objective 6, 8

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
New Forest National Park Management Plan (2010-2015)	<p>New Forest National Park Management Plan (2010-2015) sets out the overall Vision and approach for the area, seeking to tackle the major issues that affect the Park now, or are likely to influence it in the future. Above all it focuses attention on maintaining the New Forest as a special, distinctive and unique place for present and future generations.</p> <p>The two National Park purposes are:</p> <ul style="list-style-type: none"> • To conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park; and • To promote opportunities for the understanding and enjoyment of the special qualities of the area by the public. 	Objective 1, 3, 8 and 9
The Hampshire, Portsmouth and Southampton Minerals & Waste Local Plan 2013	<p>The Plan is based upon the principle of delivering sustainable minerals and waste development in Hampshire up to 2030. This means ensuring the right developments to maintain a reliable supply of minerals and excellent management of our waste, at the right time, whilst protecting the environment and our communities.</p>	Objective 7 and 4
Hampshire Local Transport Plan (2011-2031) and Transport Statements	<p>Hampshire County Council's new Local Transport Plan (LTP) was formally approved in 2011. The Plan looks to make improvements to the transport system which will benefit people living and working in Hampshire.</p> <p>The Plan sets out three main transport priorities:</p> <ul style="list-style-type: none"> • Priority 1: To support economic growth by ensuring the safety, soundness and efficiency of the transport network in Hampshire. 	Objective 7, 8 and 9

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
	<ul style="list-style-type: none"> • Priority 2: Provide a safe, well-maintained, and more resilient road network in Hampshire as the basic transport infrastructure of the county on which all forms of transport directly or indirectly depend, and the key to continued casualty reduction. • Priority 3: Manage traffic to maximise the efficiency of existing network capacity, improving journey time reliability and reducing emissions, thereby supporting the efficient and sustainable movement of people and goods. <p>Transport statements have been produced for all of the 11 District and boroughs.</p>	
<p>Hampshire Integrated Character Assessment - Landscape, Townscape and Seascape Character Assessment for Hampshire 2015</p>	<p>The plan identifies Landscape Character Areas which are geographically unique areas of the County. They are areas where a combination of factors such as topography, vegetation pattern, land use and cultural associations combine to create an area with a distinct, recognisable character. After the area is described, it is evaluated to draw out the key things affecting the landscape now and in the future and the effect of these 'forces for change' on its most important qualities. 23 of the larger settlements in Hampshire have been subject to Townscape Assessments, comprising Townscape Character Areas and Townscape Types.</p>	<p>Objective 3</p>
<p>Basingstoke and Deane, Strategic Flood Risk Assessment (updated 2012)</p>	<p>The SFRA provides an overview of all sources of flood risk (such as from rivers, surface water and ground water) throughout the Borough and also took into account the impact of climate change.</p> <p>It informed the preparation of the Local Plan (2011-2029) and is also used in the determination of planning applications to ensure that development is located in areas at lowest risk of flooding.</p> <p>SFRA makes the following summarised recommendations:</p>	<p>Objective 2, 4, 9</p>

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
	<ul style="list-style-type: none"> • Locate development in the areas of lowest flood risk. • Ensure the vulnerability of the land use is compatible with the level of risk. • Where an Exception Test is required, undertake a Level 2 SFRA which is more detailed. • Require FRAs and/or drainage information for development within and upstream of locally defined Critical Drainage Areas. • FRA's and Level 2 SFRAs should pay attention to the risk of groundwater flooding. • Apply measures to control and mitigate flood risk and where possible reduce flood risk. • Apply sustainable drainage techniques which should be designed to mimic natural systems that control runoff. • The plan includes various flood risk maps including historical flooding, surface water flood risk, risk from watercourses, percentage run off maps. 	
<p>East Hants Strategic Flood Risk Assessment 2008 and Proposed Submission Site Allocation Plan 2014</p>	<p>The objective of the Strategic Flood Risk Assessment is to inform the plan-making process of the Local Development Framework. In addition, the SFRA will allow the District Council to prepare appropriate policies for the management of flood risk within the Local Development Documents inform the sustainability appraisal so that flood risk is taken account of when considering options, and in the preparation of strategic land use policies:</p> <ul style="list-style-type: none"> • identify the level of detail required for site-specific Flood Risk Assessments (FRAs) in particular locations; and 	<p>Objective 4,</p>

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
	<ul style="list-style-type: none"> enable them to determine the acceptability of flood risk in relation to emergency planning capability. <p>It provides policy recommendations and guidance for the application of the Sequential Test, the preparation of flood risk assessments and the use of sustainable drainage systems, within the District Council's administrative boundary.</p> <p>The purpose of the Proposed Submission Site Allocation Plan is to demonstrate that sites to be allocated for development in areas of flood risk are appropriate in the context of the Sequential and Exception Tests.</p>	
Eastleigh Flood Risk Assessment Guidance Document 2016	Provides a flood risk overview includes the source of flood risk, vulnerability to climate change. It comprises various flooding maps.	Objective 4, 9
Fareham Strategic Flood Risk Assessment Guidance Document	Provides a flood risk overview includes the source of flood risk, vulnerability to climate change. It comprises various flooding maps.	Objective 4, 9
Blackwater Valley Strategic Flood Risk Assessment 2008	The document provides a strategy that provides a framework for the consistent consideration of flood risk in seeking to accommodate current practice and best available data for the lifetime of the planning process. It covers the Blackwater Valley and includes flood maps.	Objective 4, 9
Test Valley Borough Council Strategic Flood Risk Assessment for Local	To ensure flood risk is taken into account at all stages in the planning process. To avoid inappropriate development in area at risk of flooding. It includes flood zones and flood maps.	Objective 4, 9

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
Development Framework 2007		
Southampton Local Flood Risk Strategy 2014	<p>The objectives of the Strategy are to:</p> <ul style="list-style-type: none"> • Improve the knowledge and understanding of all sources of flood risk across the city. • Work in partnership with other authorities and stakeholders who have a role in flood risk management, including across administrative boundaries. • Identify ways to increase public awareness of flood risk across the city. • Identify ways of improving support for people at direct risk to promote appropriate and community level planning and action. • Ensure that planning decision are properly informed by flooding issues, so future development assists with reducing and mitigating flood risk. • Identify appropriate measures which reduce the likelihood of harm to people, damage to the economy and the environment, and assign a lead organisation to facilitate delivery. • Maintain, and improve where necessary, affordable and sustainable flood risk management infrastructure and systems to reduce flood risk. 	Objective 4, 9, 12

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
	<ul style="list-style-type: none"> Identify all available funding mechanisms to enable delivery of flood risk management interventions. 	
<p>Partnership for Urban South Hampshire (PUSH) Strategic Flood Risk Assessment (SFRA). Update Report 2016 (including updated mapping)</p>	<p>In 2007, a Strategic Flood Risk Assessment (SFRA) was commissioned by PUSH²². It was reviewed in 2012 and updated in 2016. The primary objective of the update is to inform and provide an evidence base for the:</p> <ul style="list-style-type: none"> preparation and evidence for the evolving PUSH South Hampshire Strategy to 2036. emerging Local Plans in respect of the development and of policies for the allocation of land for future development. Review of policies related to flood risk management for all Risk Management Authorities. It identifies flood risk from: <ul style="list-style-type: none"> Flood Risk Zones 3 and 2 of flooding from rivers and the sea (from the Environment Agency flood map). Identification of locations of flood risk from other local sources (including ordinary watercourses, surface water groundwater, sewers and reservoirs. Consideration of the impact of climate change upon flood risk within the PUSH area and mapping of these impacts where available. 	<p>Objective 4 and, 7, 9</p>

²² PUSH (Partnership for Urban South Hampshire) is a partnership dedicated to delivering sustainable, economic-led growth and regeneration to create a more prosperous, attractive South Hampshire & Isle of Wight offering a better quality of life for everyone who lives, works and spends their leisure time here.

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
	<ul style="list-style-type: none"> • Identification of existing flood risk management assets and the areas benefiting from a level of protection provided by such assets and potential consequences should they fail. <p>The SFRA also provides guidance for developers when undertaking a requisite site specific Flood Risk assessment and guidance to each of the local authorities in the partnership.</p>	
<p>Test and Itchen Catchment Flood Management Plan 2009 (CFMP)</p>	<p>CFMPs consider all types of inland flooding, from rivers, ground water, surface water and tidal flooding, but not flooding directly from the sea, (coastal flooding), which is covered in Shoreline Management Plans. They also take into account the likely impacts of climate change, the effects of how we use and manage the land, and how areas could be developed to meet our present day needs without compromising the ability of future generations to meet their own needs.</p> <p>This CFMP gives an overview of the flood risk in the Test and Itchen catchment and sets out our preferred plan for sustainable flood risk management over the next 50 to 100 years.</p> <p>The CFMP divides the Test and Itchen catchment into nine distinct sub-areas which have similar physical characteristics, sources of flooding and level of risk. The most appropriate approach to managing flood risk for each of the sub-areas is then identified and allocated a flood risk management policy.</p> <p>The selection of the appropriate policy, considers how social, economic and environmental objectives are affected by flood risk management activities.</p>	<p>Objective 4, 7, 9 and 10</p>
<p>South East Hampshire Catchment Flood</p>	<p>CFMPs consider all types of inland flooding, from rivers, ground water, surface water and tidal flooding, but not flooding directly from the sea, (coastal flooding), which is covered in Shoreline Management Plans. They also take into account the</p>	<p>Objective 4, 7 and 10</p>

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
<p>Management Plan (CFMP) 2009</p>	<p>likely impacts of climate change, the effects of how we use and manage the land, and how areas could be developed to meet our present day needs without compromising the ability of future generations to meet their own needs.</p> <p>This CFMP gives an overview of the flood risk in the South East Hampshire catchment and sets out our preferred plan for sustainable flood risk management over the next 50 to 100 years.</p> <p>The CFMP divides the South East Hampshire catchment into seven distinct sub-areas which have similar physical characteristics, sources of flooding and level of risk. The most appropriate approach to managing flood risk for each of the sub-areas is then identified and allocated a flood risk management policy.</p> <p>To selection of the appropriate policy, considers how social, economic and environmental objectives are affected by flood risk management activities.</p>	
<p>New Forest Catchment Flood Management Plan (CFMP) 2009</p>	<p>CFMPs consider all types of inland flooding, from rivers, ground water, surface water and tidal flooding, but not flooding directly from the sea, (coastal flooding), which is covered in Shoreline Management Plans. They also take into account the likely impacts of climate change, the effects of how we use and manage the land, and how areas could be developed to meet our present day needs without compromising the ability of future generations to meet their own needs.</p> <p>This CFMP gives an overview of the flood risk in the New Forest catchment and sets out our preferred plan for sustainable flood risk management over the next 50 to 100 years.</p> <p>The CFMP divides the New Forest catchment into seven distinct sub-areas which have similar physical characteristics, sources of flooding and level of risk. The most appropriate approach to managing flood risk for each of the sub-areas is then identified and allocated a flood risk management policy.</p>	<p>Objective 4, 7, 9 and 10</p>

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
	To selection of the appropriate policy, considers how social, economic and environmental objectives are affected by flood risk management activities.	
Itchen to Hamble Coastal Defence Strategy 2011	The Coastal Defence Strategy was commissioned by a partnership with Southampton City Council, Eastleigh Borough Council and Fareham Borough Council, for the sustainable management of coastal defences. The study frontage includes the east bank of the River Itchen as far upstream as Woodmill, the Weston, Netley and Hamble Le Rice frontage, and both banks of the River Hamble as far upstream as the Bursledon railway bridge. The strategy has been accepted by the Environment Agency.	Objective 9, 10
River Hamble to Portchester Castle Coastal Flood and Erosion Management Strategy 2014	The objective of this report is to provide an overview of coastal processes along the frontage between Portchester castle in Portsmouth Harbour to Burrige, on the east bank of the River Hamble Lower lying parts of the frontage are at risk of tidal flooding and/or wave overtopping, and parts of the open coast between Gosport and Hook Spit are potentially at threat of coastal erosion and to identify areas or physical features which could impact Strategy development or warrant further study.	Objective 5, 9, 10
Porchester to Emsworth Draft Costal Flood and Erosions Management Strategy (emerging)	<p>The strategy area includes the mainland frontage from Portchester Castle to Emsworth in Hampshire. The strategy makes recommendations to manage coastal flood and erosion risk in the:</p> <ul style="list-style-type: none"> • short term (0 – 20 years) • medium term (20 – 50 years) • long term (50 – 100 years) 	Objective 5 and 10

Local/ Regional Plans and Policies	Relevance / Summary	Relevant SEA Objective
	The strategy does not propose detailed schemes or guarantee funding.	
North Solent Shoreline Management Plan 2010	The North Solent Shoreline Management Plan (SMP) is the first revision to the Western Solent and Southampton Water SMP and the East Solent and Harbours SMP. The coastline covered by the Plan extends between Selsey Bill, in the east, and Hurst Spit, in the west, and includes Portsmouth, Langstone and Chichester Harbours. SMPs aim to balance the management of coastal flooding and erosion risks, with natural processes, and the consequences of climate change.	Objective 5, 9, 10
Southampton Flood & Erosion Risk Management Strategy 2013	<p>A non-statutory document focusing on the long term management of a 22km stretch of the city's coastline spanning from Woodmill to Redbridge.</p> <p>The strategy appraises a range of coastal defence options to determine the most beneficial and cost effective methods for managing risks such as flooding, erosion and sea level rise. Options identified range from major engineering projects which construct new, or improve existing defence structures, to minor works on individual properties to make them more resistant to flooding.</p>	Objective 4, 5, 9, 10
Catchment Abstraction Management Strategy's Test and Itchen (2013), East Hampshire (2013), Avon (2005)	Sets out the licensing decision framework for water abstraction and discharges, and seeks to improve river quality and flow, and groundwater resources.	Objective 2, 11

Appendix 2: Summary of Baseline Information

Summary of Baseline Information

Topic	Relevant Aspects and Issues	Evolution without the plan
<p>Population and Human Health</p>	<p>Hampshire is one of the largest Counties in England. It is predominantly rural and the population is widely distributed. Over a third of the county’s area is within National Parks or Areas of Outstanding Natural Beauty. The LFWMS considers the distribution of the population as it potentially increases the complexities associated with prioritisation of flood management. The rural nature of the county provides opportunities for the LFWMS, by means of green infrastructure and flood alleviation areas.</p> <p>Population and life expectancy are increasing and there are a number of significant planned residential developments which will have a significant affect on population numbers across Hampshire. Consideration of demographic projections is important when considering flood management. Areas of high population density create greater competition for suitable housing sites and puts pressure on sites which may be at risk of flooding. The LFWMS will consider ways to ensure a supply of safe housing, which is free from or resilient to flooding risk is needed to support growth and reduce social and economic exclusion.</p> <p>Although Hampshire has one of the lowest levels of social deprivation a significant proportion of these are located in one area (Havant). It is recognised that people in deprived neighbourhoods are disproportionately at risk from flooding, and are likely to be particularly hit hard from the social impacts. Vulnerable part of the</p>	<p>With people living longer and an increase in population it is inevitable that there will be increasing strain on public services, housing, natural resources and waste production. Population in the UK is increasing and it is predicted that the Hampshire population will increase by 6.9% between 2016 and 2022. In the absence of an appropriate LFWMS it is considered likely that a greater number of people would be considered to be potentially at risk from flooding.</p> <p>Climate change and rising sea levels and changing coastal processes will have an impact on population and have implications for the management of coastal areas in Hampshire, particularly for balancing the costs and benefits of flood defence.</p>

Topic	Relevant Aspects and Issues	Evolution without the plan
	<p>population such as the deprived elderly and disabled can also be disproportionately affected by flooding. Rural communities are also more affected.</p> <p>Predicted population increases means that a supply of safe housing which is free from or resilient to flooding risk is needed to support growth and reduce social and economic exclusion.</p> <p>Over a third of Hampshire is within National Parks or AONB, which provide opportunities for the LFWMS, by means of green infrastructure and flood alleviation areas but also restrictions on where development can go</p>	
<p>Material Assets</p>	<p>Hampshire has excellent road, rail and sea transport links, although some areas are prone to congestion, transport is an essential part of the infrastructure underpinning population, economic stability and growth across Hampshire.</p> <p>Critical infrastructure includes transport networks, water supplies and waste management infrastructure, energy supplies, schools and hospitals. A risk of flooding to any of these could potentially cause widespread disruption and damage the economy. There are many sites of critical infrastructure across the county that could be at risk, or may be at risk in the future and given pressures for considerable housing allocations in the pan area the pressure on critical infrastructure will increase.</p> <p>Should flood impact essential transport links not only does this impact the economy it can affect access to hospitals, medical facilities, schools and shops. Substations are also at risk and consequentially there is a risk of power cuts to homes and essential services. Waste Management facilities are at risk and need to</p>	<p>Hampshire’s critical infrastructure could potentially be at risk from flooding without proper management. Surface water flooding could have an impact on local transport links, affecting commuting, industry, rail and sea networks and population health. Impacting on essential transport links can affect access to hospitals, medical facilities, schools and shops. Substations, power stations and water pumping stations are also at risk and consequentially there is a risk of power cuts to homes and essential services.</p> <p>Waste Management facilities are at risk and need to be safeguarded and protected from flooding and risk of polluted runoff. Flood water has the possibility of contaminating water supply (reservoirs) and also affecting economic wellbeing. It is also predicted that there will an increase in flooding events as a result of climate change.</p>

Topic	Relevant Aspects and Issues	Evolution without the plan
	<p>be safeguarded and protected from flooding and risk of polluted runoff. Flood water has the possibility of contaminating water supply (reservoirs).</p> <p>Given the increased need for housing in the plan area, there is increased pressure on productive agricultural land.</p>	<p>In the absence of a LFWMS critical infrastructure may be at an increased risk of flooding which may indirectly affect the economy.</p>
<p>Biodiversity, Flora and Fauna</p>	<p>Hampshire has the greatest diversity of species of any county in England, with a varied landscape and a great diversity of habitats from ancient woodlands and wildflower meadows, to heathlands and chalk streams, to river valleys and coastal habitats. It also includes the New Forest which is the greatest area of semi wilderness left in lowland England.</p> <p>There are 20 sites of international importance covering three designation types within Hampshire. The sites include the following:</p> <ul style="list-style-type: none"> • Special Areas of Conservation (SAC): Butser Hill, East Hampshire Hangers, Emer Bog, Mottisfont Bats, River Itchen, Shortheath Common, Solent and Isle of Wight Lagoons, Solent Maritime, the New Forest and Woolmer Forest. Dorset Heathlands, River Avon and Salisbury Plain SACs also lay partly within Hampshire and partly in neighbouring counties. SAC's cover 32,222 hectares of the County (Source: HCC GIS data catalogue 11.01.17). • Special Protection Areas (SPA) and RAMSAR Sites: Avon Valley, Chichester and Langstone Harbours, Dorset Heathlands, New Forest, Portsmouth Harbour, Solent and Southampton Water have both designations. Porton Down, Salisbury plain, Thames Basin Heaths and Wealden Heaths Phase II have only an SPA designation. SPA and Ramsar sites cover 35,526 hectares 	<p>Some habitats are very sensitive to water flow regimes and changes in water quality, flooding can impact on habitats and species, some benefit from regular flooding, whereas others may be damaged by flood sediment and increases in pollution from flood water, such as highways pollution.</p> <p>In the absence of a LFWMS there is a potential risk of increased pollution of sensitive and vulnerable areas and habitat loss and degradation.</p>

Topic	Relevant Aspects and Issues	Evolution without the plan
	<p>and 30,726 hectares of the county respectively (Source: HCC GIS data catalogue 11.01.17).</p> <p>Sites of Special Scientific Interest (SSSIs) cover 14.5% of the county, about twice the national average. A further 9.1% of Hampshire is covered by Sites of Importance for Nature Conservation (SINCs).</p> <p>Some habitats are very sensitive to water flow regimes and changes in water quality, flooding can impact on habitats and species, some benefit from regular flooding, whereas others may be damaged by flood sediment and increases in pollution from flood water, such as highways pollution.</p> <p>There is increasing pressure on wetlands and fragmentation of semi-natural habitats from the pressures of increases in population density and pressures for considerable housing allocation which can affect ecological issues in many ways including loss of habitat and increased pressure from recreation visitors to designated sites.</p> <p>Other risks to biodiversity comprise:</p> <ul style="list-style-type: none"> • Nutrient enrichment affecting river and coastal water quality; • Over abstraction (surface and groundwater); • Habitats and species may be damaged by sediment or pollutants in flood water or by the actions of flood water; 	

Topic	Relevant Aspects and Issues	Evolution without the plan
	<ul style="list-style-type: none"> • Coastal erosion; and • Changing climate. 	
<p>Soil Geology and Geomorphology</p>	<p>Hampshire has five distinct geological blocks that define the land character and use of the County these comprise:</p> <p>A central block of chalk with varying degrees of clay with flint surface;</p> <p>North of the central chalk block, an area of tertiary sands and clays;</p> <p>To the east, the western end of the Weald, consisting of Upper Greensand, Gault Clay and Lower Greensand;</p> <p>To the south of the chalk, a broad band of tertiary sands and clays (forming the underlying strata of the New Forest); and</p> <p>A small area of chalk, representing part of the eastern edge of Cranborne Chase.</p> <p>Soils perform an important function and are a finite resource. Soil erosion is an increasing problem in Hampshire and throughout the UK through inappropriate land management or agricultural practices. Floodwater can also remove soil from areas, for example through surface water flash flooding. Hampshire soils are also under threat from development.</p>	<p>There is a range of pressures on Hampshire’s soils such as soil erosion, compaction, nutrient loss and pressures caused by developments. Climate change is likely to increase pressure on soil. An increase in soil erosion is likely to be due to increased wind speeds, rising sea levels and increased flooding events. With increasing development in the South East region and Hampshire, it is likely that threats to soil will increase as a result of soil compaction and soil sealing with impermeable construction materials such as tarmac and asphalt. This will prevent water filtering into the soil, increase surface run-off and promote soil erosion and the likelihood of flooding.</p> <p>In the absence of a plan soil erosion would be expected to increase.</p>

Topic	Relevant Aspects and Issues	Evolution without the plan
<p>Water</p>	<p>Hampshire has an outstanding freshwater environment, with more riverine and wetland sites of national importance for wildlife than any other county in England. Water resources in Hampshire depend on groundwater stored in the chalk aquifer of the Hampshire Downs. The River Test and Itchen also provide large quantities of water for the public by abstraction directly from the river or from groundwater. Water supply in Hampshire is usually of high quality.</p> <p>In the UK every person uses approximately 150 litres of water a day. According to south east water the average person in the south east uses 160 litres per day (domestic) which is greater than the national average.</p> <p>Significant pressures identified in the LFWMS area include abstraction and artificial flow regulation, diffuse and point pollution (from nitrates, organic pollution, pesticides and phosphate), commercial fisheries, non-native species, physical modification to the structure of water bodies, sediment and urban/transport pollution.</p> <p>The potential for increasing water supply in Hampshire is limited: for example, the amount of water abstracted from rivers in South Hampshire must be reduced in accordance with the EU Habitats Directive Review of Consents in order to protect species and their habitats, it is considered unlikely that the environment can provide more water for abstraction.</p> <p>The LFWMS will ensure that, by improving drainage and reducing flood risk in the county, the requirements of the Water Framework Directive are considered at all stages in the strategy, and that there are no adverse impacts on water quality or</p>	<p>In the absence of a plan the increase in flood risk could result in loss of service or contamination of supply and there is the potential that water quality will deteriorate.</p>

Topic	Relevant Aspects and Issues	Evolution without the plan
	<p>the hydrological regime of aquatic habitats. It also needs to ensure that drinking water quality, groundwater and human health are protected.</p> <p>Future population growth in Hampshire along with the likely increase in the number of smaller households will increase the overall demand for amount of water.</p>	
Climatic Factors	<p>The UK Climate Impacts Programme projections confirm that the UK is likely to experience:</p> <ul style="list-style-type: none"> • hotter/ drier summers; • warmer/wetter winters; • sea level rises; and • more weather extremes. <p>The County’s local commitments are set out in the ‘HCC Climate Local Commitments 2015/2016’ and comprise the following:</p> <ul style="list-style-type: none"> • By 2025 reduce carbon emissions from our estate and business by 40% from the 2010 baseline (131,800 tonnes). • Increase the resilience of the County Council and the wider community to risks around energy security and affordability, reduce carbon emissions 	<p>In the absence of a LFWMS climate change may have major impacts on the built infrastructure of Hampshire, such as roads, sewers, railways and buildings, and could cause damage to trees, plants and crops from drought and heavy rainfall intervals. Shorter, more intense rainfall could also have an impact on flooding and recharging aquifers in Hampshire. Whilst the extent of the changes and speed of progress remain unclear, current predictions indicate that sea level on the Hampshire Coast could rise by between 37cm and 108cm (Source: http://www3.hants.gov.uk/climatechange_commission_of_inquiry_booklet.pdf 2007 accessed 20.02.17) and average temperatures in the South East could go up by between 4.7 and 6.5 °C by 2080. Source: http://ukclimateprojections.metoffice.gov.uk/21708?projections=23829 Medium Emissions 90% probability of change winter and summer mean temperatures 20.02.17).</p>

Topic	Relevant Aspects and Issues	Evolution without the plan
	<p>and contribute to the creation of a sustainable and low carbon economy in Hampshire.</p> <ul style="list-style-type: none"> • Take action to ensure that HCC buildings, infrastructure and services are resilient to the impacts of a changing climate. • Work with Partners to build resilience across Hampshire to the impacts of a changing climate. 	
<p>Cultural, architectural and archaeological heritage</p>	<p>Hampshire has a rich and diverse historic environment formed by the physical evidence of all aspects of human activity from earliest prehistory to the late twentieth century. It includes archaeological sites, historic buildings, historic landscape and townscape, historic parks and gardens, battlefields and wrecks.</p> <p>The LFWMS will consider the following aspects associated with Hampshire’s cultural heritage:</p> <ul style="list-style-type: none"> • Flooding on heritage assets – damage to structures and archaeological sites. • Role of historic structures within water and flood management – management of historic structures and their role on flood control. • Impact of historic structures on water management – degree of potential constraints of an historic structure on water management/structure maintenance. 	<p>Increases in flood risk due to climate change could have detrimental impacts on heritage assets (listed buildings, conservation areas, scheduled monuments, historic parks and undesignated assets, including archaeological remains). These assets could be at greater risk in the future without an appropriate management strategy.</p> <p>It is also noted that without the Plan, the potential threat to heritage assets from insensitive flood defence or management works could be increased.</p>

Topic	Relevant Aspects and Issues	Evolution without the plan
	<ul style="list-style-type: none"> Impact of flood prevention and mitigation on the historic environment – physical impact of structures and construction on cultural heritage. 	
Landscape Visual Amenity	<p>The landscape of Hampshire can be characterised by four broad zones:</p> <ul style="list-style-type: none"> Hampshire Weald to the east; Hampshire Basin to the south; Wide band of Chalk across the centre; and Thames basin to the north. <p>Approximately half of Hampshire is covered by national landscape designations. There are two National Parks:</p> <ul style="list-style-type: none"> New Forest – covers 14% of Hampshire. The New Forest is a diverse and complex landscape comprising unenclosed ancient woodland, enclosures, open heaths and lawns, mires and ponds, back-up grazing land, coastal plain landscapes and scattered villages and dwellings. South Downs – covers 15% of Hampshire and combines diverse landscape pf heritage coast, nature reserves, historic monuments and conservation areas with bustling market towns, villages and small farms. 	<p>Flooding, coastal erosion and development have the potential to affect the landscape and visual aspects of Hampshire and alter water levels if not properly managed.</p>

Appendix 3: Assessment of Effects

Table 3.1 Flood and Water Management Vision Appraisal Assessment (alternative approach/ initial draft)

Flood and Water Management Objective	SEA Objectives												Comments, Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
<p>Vision Initial Draft</p> <p>Hampshire County Council, as Lead Local Flood Authority, aims to effectively manage flood risk within Hampshire by:</p> <ul style="list-style-type: none"> • Undertaking our responsibilities as LLFA according to the framework and policies set out in this document. • Working effectively with all other Flood Risk Management Authorities across relevant catchment areas. • Prioritising work on a catchment basis and directing resources to our highest priority areas. • Empower local residents and communities to take actions themselves to manage flood risk. 	?	0	?	?	0	+	+	?	+	?	?	+	<p>The vision commits to a priority approach and specifically states that resources will be directed to the highest priorities. This is reflected positively in SA objectives 6, 7 and 9 as it can be assumed that highest priorities would most likely include key infrastructure and assets such as key transport networks, hospitals, schools etc. indirectly positively impacting the well being and health of the general population and the economy over the long term.</p> <p>It is noted that the objective does not contain any commitment to the protection and / or improvement of the natural environment (biodiversity, water quality, heritage etc.) in this regard there is an opportunity to achieve positive impacts if this gap is addressed appropriately. Consideration could be given to amending the objective to include an additional statement with respect to seeking opportunities to improve and/ or enhance the environment. Thereby ensuring that the SA objectives associated with these aspects of the environment would potentially see a positive effect over the long term.</p> <p>Consideration may also be given to including a statement committing to a preference for working towards prioritising approaches to natural flood risk management. However, it is noted that these issues are expanded on within the catchment management approach (refer Table 3.2).</p> <p>The objective seeks to empower local communities and other parties involved in flood management which is reflected positively in SA objective 12. This commitment is considered key to the success of the long term strategy. It would be beneficial to include the ways in which local residential may be empowered, thereby increasing the robustness of the objective. For example early engagement and consultation.</p>

Flood and Water Management Objective	SEA Objectives												Comments, Effects and Potential Improvements	
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community		
<p>Vision Preferred Option</p> <p>To create a safer, more resilient Hampshire County Council Its priority is to protect people, homes businesses and key infrastructure by:</p> <ul style="list-style-type: none"> Avoiding risks and managing water resources through effective planning and design; Preventing future flooding by reducing or removing existing risks; Adapting to flood risk in order to minimise the impact and enable normal life to return as soon as possible. 	0	0	0	+	0	0	+	0	0	0	0	0	0	<p>The vision scores positively for objective 4 as it specifically includes reference to preventing future flooding and adapting to flood risk. It also scores positively for objective 7 as it includes reducing or removing risks.</p> <p>It is noted that the objective does not contain any commitment to the protection and / or improvement of the natural environment (biodiversity, water quality, heritage etc.) in this regard there is an opportunity to achieve positive impacts if this gap is addressed appropriately.</p> <p>It may be prudent to include an additional statement which acknowledges the need to strike a balance between the need to manage the risks of flooding, whilst protecting the quality of life for communities, the economy and the quality and diversity of environmental assets, by protecting and mitigating the environment and local communities from negative impacts.</p>

Table 3.2 Flood and Water Management Objective Appraisal Assessment (preferred Approach)

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
<p>1. Clearly Define Responsibilities (initial draft)</p> <p>In order to ensure clearly define roles and responsibilities for all risk management authorities across Hampshire, HCC will:</p> <ul style="list-style-type: none"> Continue to host the Hampshire Strategic Flood Risk Management Partnership Board to shape flood risk management strategy with all relevant partners; Continue to host the Hampshire Flood Risk Management Technical Delivery Group to coordinate flood alleviation activity across the region; and Improve information available to the public on the Council’s website regarding flood risk responsibility. 	0	0	0	0	0	0	0	0	0	0	0	+	<p>The principle and objectives do not have an effect on SEA objectives 1-11. The objectives are considered to facilitate active engagement with appropriate parties. The objectives include a multi agency approach which connects communities. Improvements to the website will positive impact the communities understanding, preparedness and response to local flooding over the long term.</p>
<p>1. Clearly Define Responsibilities (preferred)</p> <p>To ensure collaboration and successful flood risk management HCC will undertake effective partnership working:</p> <p>1A Lobby central government and the Environment Agency to ensure that Hampshire’s specific flood risk challenges are recognised and appropriate national funding mechanism re in place.</p>	0	0	0	0	0	0	0	0	0	0	0	0	<p>The principle and objectives do not have an effect on SEA objectives 1-12. The objectives are considered to facilitate active engagement with appropriate parties with respect to central government, EA etc; however, it no longer includes an approach which connects or expressly involves communities.</p> <p>Potential improvements could be the inclusion of an additional objective specifically addressing how the communities understanding, preparedness and response to local flooding over the long term will be improved which would result in positive score for SEA objective 12.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
<p>1B Lead the Hampshire Strategic Flood Risk Management Partnership Board to shape flood risk management strategy with all relevant partners.</p> <p>1C Lead the Hampshire Flood Risk management technical group to coordinate flood alleviation activity across the region.</p>													
<p>2.Develop a Catchment Approach (initial draft)</p> <p>In order to represent flood risk in a more realistic and accurate way, a catchment approach based on geographic river catchment boundaries will be adopted. To achieve this HCC will:</p> <ul style="list-style-type: none"> • Develop 18 prioritised river catchment based flood management plans across Hampshire. • Record and monitor flood risk data by river catchment area. • Develop catchment based working groups for flood alleviation schemes. • Ensure a stepped approach to measures to reduce flood risk in the catchment with a preference to natural flood risk management. 	0	0	0	0	0	0	0	0	+	+	0	0	<p>The objectives specifically make reference to a preference for natural flood risk management thereby promoting the natural flood hierarchy, potentially resulting in enhancement of natural processes to the aquatic environment. The preference for natural flood risk management may potentially have a secondary positive effect on SEA objective 1 with respect to biodiversity however, not enough information was available to give this objective a positive score as it does not the meet the assessment criteria.</p> <p>The development of catchment management plans are considered to decrease the risk of flooding on the public over the long term.</p>
<p>2.Develop a Catchment Approach (preferred option)</p>	0	0	0	0	0	0	0	0	+	0	0	0	<p>Although the objectives include development of working groups which will result in active participation with appropriate parties is does not go far enough to score positively for SEA objective 12 as it does not include the wider local community.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
<p>To better understand the risks associated with the movement of water HCC will develop a catchment approach to flood and water management:</p> <p>2A Develop 18 prioritised river catchment based flood managed plans across Hampshire.</p> <p>2B Record and monitor flood risk data by river catchment area.</p> <p>2C Develop catchment based working groups for flood alleviation schemes.</p>													<p>It scored positively on SEA objective 9 as the development of catchment management plans are considered to decrease the risk of flooding on the public over the long term.</p> <p>The initial draft policy specifically included a preference to natural flood management which could result in positive effects on the aquatic environment. The preferred policy no longer includes this.</p> <p>Consideration should be given to the inclusion of the nature flood management which would have positive benefits.</p>
<p>3.Understand Priorities and Risks (initial draft)</p> <p>In order to highlight the most vulnerable areas at risk from flooding in Hampshire and divert resources accordingly HCC will:</p> <ul style="list-style-type: none"> Utilise a risk based approach based on a risk matrix and knowledge of flooding in each catchment. Undertake a prioritisation exercise based on numbers of properties at risk; vulnerability of residents and other socio-economic factors for each of the 18 catchment based flood risk management plans. Improve flood data collection and recording to better identify 'at risk' areas. 	0	0	0	0	0	+	+	0	+	0	0	0	<p>The objective includes a prioritisation exercise based on number of properties at risk vulnerability of and socio economic factors thereby decreasing the risk of flooding on the public. It may be prudent to include a bit more detail regarding the prioritisation exercise to ensure it includes impacts on key infrastructure, transport networks and sensitive receptors such as schools and hospitals.</p> <p>It is noted that improvements in flood data collection would also have indirect benefits potentially with respect to SEA objective 12 for example if Flood Risk Asset Register was made publicly available on the website. The improvements in flood data collection and recording may also have indirect benefits to SEA objectives 7 and 6 if this information was utilised in the risk based approach catchment management planning.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
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<ul style="list-style-type: none"> Use this improved data collection to inform an updated Flood Risk Asset Register. 													
<p>3.Understand Priorities and Risks (preferred option)</p> <p>To help protect communities that are most vulnerable to flooding, HCC will continue to identify risks and develop clear priorities:</p> <p>1A Utilise a risk based approach applying a risk matrix and knowledge of historic flooding in each catchment.</p> <p>3B Undertake a prioritisation exercise based on numbers of properties at risk; vulnerability of residents and susceptibility of critical infrastructure along with other socio economic factors for each of the 18 catchment based flood risk management plans.</p> <p>3C Improve flood data collection, recording and sharing to better identify 'at risk' areas.</p>	0	0	0	0	0	+	+	0	+	0	0	0	<p>The objective includes a prioritisation exercise based on number of properties at risk vulnerability of and socio economic factors thereby decreasing the risk of flooding on the public. It may be prudent to include a bit more detail regarding the prioritisation exercise to ensure it includes impacts on key infrastructure, transport networks and sensitive receptors such as schools and hospitals.</p> <p>It is noted that improvements in flood data collection would also have indirect benefits potentially with respect to SEA objective 12 for example if Flood Risk Asset Register was made publically available on the website. The improvements in flood data collection and recording may also have indirect benefits to SEA objectives 7 and 6 if this information was utilised in the risk based approach catchment management planning.</p>
<p>4.Support the Planning Process by encouraging Sustainable and Resilient Development (initial draft)</p> <p>In order to guide Local Planning Authorities to approving development which will not increase flood risk across Hampshire HCC will:</p>	0	0	0	+	0	0	0	0	0	0	0	0	<p>The objectives go some way to adapting new developments to climate change by supporting the drainage hierarchy and encouraging development with appropriate mitigation. It is noted that the language utilised is passive in its nature i.e. 'support' 'encourage'. The objective could be made more robust by using more positive language and by making a formal commitment for example 'encourage developers to provide appropriate mitigation' vs 'developers will be required to demonstrate appropriate mitigation'.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
<ul style="list-style-type: none"> • Reply to all planning consultations for Surface Water Management and Sustainable Drainage Systems (SuDS) within statutory timeframes. • Encourage developments which utilise SuDS and the drainage hierarchy based on current best practice and industry standards for water quality and quantity. • Encourage development which demonstrates an understanding of environmental sensitivity and provides appropriate mitigation. • Further encourage development which offers an improvement to current. • Ensure Ordinary Watercourse Consent is only granted for those works which will not increase flood risk. 													It is acknowledges that although the HCC is a statutory consultee, the Local Planning Authorities ultimately make the planning decisions.
<p>4.Support the Planning Process by encouraging Sustainable and Resilient Development (preferred option)</p> <p>To ensure successful and sustainable growth HCC will support the planning process by encouraging resilient development:</p> <p>4A Encourage the development of robust flood risk management policies within the local planning authorities local plans.</p>	0	0	0	+	0	0	0	0	+	0	0	0	<p>The policy has positive effect on SEA objectives 4 and 9 as it seeks decrease the risk of flooding on the public and can result in appropriate development considering climate change.</p> <p>It is considered a positive that the objective includes the introduction of the requirement for development to demonstrate net gain.</p> <p>It also includes states that it will encourage development which demonstrates an understanding of environmental sensitivity and provides appropriate mitigation. Consideration should be given to making this a requirement as this would make the policy more robust.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
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<p>4B Require developments to utilise sustainable drainage systems and the drainage hierarchy based on current best practice and industry standards for water quality and quantity.</p> <p>4C Encourage development which demonstrates an understanding of environmental sensitivity and provides appropriate mitigation.</p> <p>4D Require development to demonstrate a net environmental gain in local flood risk management.</p> <p>4E Ensure that works to ordinary watercourses are only consented where there is no increased flood risk and enforce against unconsented works where appropriate.</p>													
<p>5.Record, Prioritise and Investigate Flood Events (initial draft)</p> <p>In order to improve flood data capture and provide guidance and advice to those experiencing flood events HCC will:</p> <ul style="list-style-type: none"> Record and respond to all instances of flooding reported to us by any source. Prioritise flood investigation work according to our published prioritisation schedule. Liaise with HCC highways colleagues to investigate highway flooding. 	0	0	0	0	0	0	0	0	0	0	0	+	<p>The recording of flooding incidents would positively impact communities (assuming the information is made available) as it would help the public understand the risks and facilitate communities' preparedness. It is noted that the suggested approach is reactive rather than proactive which would have benefits to the communities over the longer term but less so in the short term.</p> <p>In order to ensure maximum benefit is gained, information gathered should be fed back into the catchment plans regarding the prioritisation of risks. It would be prudent to explicitly state this is the case within the objectives. Although it is noted that mention of this is made in principle 7, Empower and Support Community Resilience.</p> <p>The objectives make reference to the prioritisation schedule. It would be beneficial if some further details of the schedule are provided.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
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<ul style="list-style-type: none"> Undertake formal investigations for significant flooding events. 													It is acknowledged that some benefits maybe gained via liaising with highways with respect to minimising impacts of key infrastructure and transport links (SEA objective 7) but the objective does not go far enough to score positively in this respect.
<p>5.Record, Prioritise and Investigate Flood Events (preferred option)</p> <p>To increase knowledge and understanding of flood events HCC will record, prioritise and investigate instances of flooding.</p> <p>5A record and respond to all instances of flooding from any source reported to us.</p> <p>5B properties flood investigation work according to our published prioritisation schedule.</p> <p>5C Liase with highway authorities to investigate highway flooding.</p> <p>5D Undertaken formal investigations for significant flooding events.</p>	0	0	0	0	0	0	0	0	0	0	0	+	No real change from initial draft refer earlier comments.
<p>6.Work with Multi-Agency Groups to Develop Flood Alleviation Schemes (initial draft)</p> <p>In order to ensure flood alleviation works across the County take into account the views of all concerned parties including residents; the Environment Agency;</p>	0	0	0	0	0	+	0	0	+	0	0	+	<p>There is a positive benefit of working in a multi agency form across a regional context beyond HCC boundary, thus reflecting the nature of catchments.</p> <p>It is noted that no reference is explicitly made to those parties that support vulnerable parties including those that may be deprived, elderly or infirm. The addition of this would make the objective more robust. This could have positive benefits on SEA objectives 6 and 7.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
<p>water companies; wildlife and preservation organisations etc HCC will:</p> <ul style="list-style-type: none"> Continue to work in partnership to deliver the Council's Flood Risk and Coastal Defence Programme. Continue to attend and contribute to other multi-agency group meetings concerning flood risk across Hampshire and the South of England including Regional Flood and Coastal Committee meetings. Work with other Risk Management colleagues to set up new multi-agency groups where appropriate for emerging flood alleviation schemes. 													
<p>6.Work with Multi-Agency Groups to Develop Flood Alleviation Schemes (preferred option)</p> <p>To reduce flood risk in vulnerable areas HCC will work with Multi Agency Groups to develop flood alleviation schemes.</p> <p>6A Continue to work in partnership to deliver the Councils Flood Risk and Coastal Defence programme.</p> <p>6B Encourage the development and implementation of innovative flood alleviation measures and a flexible policy approach from partner organisations.</p>	0	0	0	0	0	+	0	0	+	0	0	+	No major changes to earlier version refer to initial draft comments.

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
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<p>6C Work to maximise the available funding for national and local sources including the private sector, and enable investment in schemes to contribute positively to local economic regeneration and sustainable growth.</p> <p>6D Continue to attend and contribute to other multi agency group meetings concerning flood risk across Hampshire and the South of England including regional Flood and Coastal Committee meetings.</p> <p>6E Work with other risk management authorities to set up new multi agency groups where appropriate for emerging flood alleviation schemes.</p> <p>6F Work with coast protection authorities and the environment agency on the refresh of shoreline management plans to ensure that these take into account of local circumstances, infrastructure and assets, and that there is full recognition of the costs and benefits of proposed; adaptive approaches' such as reversal of the hold the line policies.</p>													
<p>7. Empower and Support Community Resilience (initial draft)</p> <p>In order to ensure flood resilience across the county is at its best, local residents and communities must be engaged in a long term programme of flood awareness,</p>	0	0	0	0	0	0	0	0	0	0	0	+	<p>The objectives confirm the commitment to engaging with communities over the long term and to get the best outcomes engagement needs to be grown.</p> <p>The objective explicitly states how it will communicate funding source via online guidance thereby having positive benefit on the ability of the local community to respond.</p>

Flood and Water Management Principle and Objectives	SEA Objectives												Comments, Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
<p>riparian maintenance and preparedness. To encourage the growth of this engagement HCC will:</p> <ul style="list-style-type: none"> • Work with colleagues from HCC Emergency Planning to increase the number of community Flood Action Groups and emergency Flood Action Plans across Hampshire. • Produce guidance in the form of action plans and recommendations from flood investigation reports to inform communities of the best action to take. • Improve online guidance on funding sources and support available from charities such as the National Flood Forum. 													Commitment is made to publishing action plans and recommendations a result of flood investigations, thereby enabling communities to be better prepared over the longer term.
<p>7. Empower and Support Community Resilience (initial draft)</p> <p>To improve adaptation to and recovery from flood events HCC7A Increase the number of community flood action and emergency flood action plans.</p> <p>7B Produce guidance in the form of action plans and recommendations from flood investigation reports to inform communities of the best action to take.</p> <p>7C Improve online guidance on funding sources and support available from charities such as the National</p>	0	0	0	0	0	0	0	0	0	0	0	+	The policy does not have any effect on SEA objectives 1-11. It has a positive effect on SEA objective 12 as it provides clear commitment to engage and involve local communities resulting in early engagement facilitating communities preparedness.

	SEA Objectives											Comments, Effects and Potential Improvements	
Flood and Water Management Principle and Objectives	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
Flood Forum. will encourage and support community resilience.													

Table 3.3 Catchment Management Approach Appraisal

The Catchment Flood Risk Management Approach	SA Objectives												Comments Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
Catchment Management Approach Aims													
Ensure a stepped approach to interventions and measures to reduce flood risk in the catchment with preference to natural flood risk management, recognising that one single solution is not appropriate in all situations.	?	?	?	?	?	?	+	?	+	+	?	?	In general, it is noted that the aims of the catchment approach do not include enough information to make an assessment against many of the SA objectives with respect to biodiversity, cultural heritage etc. The catchment management approach aims to:
Work more effectively with partners within the catchment area, understanding each organisation's role and sharing responsibility to develop appropriate flood risk management.	?	?	?	?	?	?	+	?	?	?	?	+	Introduce the concept of the stepped approach to interventions to reduce flood risk touching on SA objective 7. However, the 'steps' in the process are not clearly defined within the plan and the terminology of 'stepped approach' is not referred to elsewhere. Make a commitment to the preference to natural flood management solutions which is considered pivotal to ensuring the success of the plan. This commitment will help to ensure negative effects are minimised and the opportunities for positive effects are identified. The inclusion of the preference to natural flood management may indirectly have long term, positive effects on many of the other SA objectives however; at present there is not enough information to make an assessment in this regard. Consideration could be given to specifically mentioning the flood management hierarchy within the aims formalising its use within the LFWMS.
Empower local residents and communities to take action to mitigate flooding.	?	?	?	?	?	?	?	?	?	?	?	+	Acknowledge that water resources do not respect administrative boundaries which although this issue is not specifically referred to within the SA objectives, it has the potential to indirectly effect many of the SA objectives. It is noted that the aims do not specifically mention parties outside of the administrative boundaries. It is imperative that HCC works within applicable partners within

	SA Objectives												Comments Effects and Potential Improvements	
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community		
The Catchment Flood Risk Management Approach														
														<p>catchments including those beyond the plans administrative boundaries. It is recommended that an amendment is made to include parties beyond the HCC administrative boundaries where applicable.</p> <p>Include a formal commitment to engage with local communities which is essential to ensure the strategy is successful, this commitment will have a positive impact on SA objective 12. The aims also acknowledge the importance that responsibilities are shared in order to get buy in early engagement is essential. It is noted that aims do not provide any clarity around the timing of local community engagement/ empowerment. The inclusion of timing would increase the robustness of the aim.</p> <p>Consider including the concept of catchment management plans, and their programs, potentially including how these will be prioritised. This would improve the positive impacts of SA objective 7.</p>
<p>Catchment management plans implementation (Prioritisation)</p> <p>Prioritisation. There are 18 catchments within HCC. These have been prioritised on the basis of nine criteria:</p>														
Properties at risk of fluvial flooding (Counts of properties at risk of fluvial flooding)	?	?	?	+	?	+	+	?	+	?	?	?	?	<p>These priorities have a direct positive impact on the SA objectives 7 and 9 by protecting land assets and managing flooding and public well being. It also has a positive effect on objective 4 by adapting existing development to the impact of climate change (i.e. flooding). Indirectly they also result in a positive impact to objective 6 as flooding has a detrimental effect on health and well being of the public.</p> <p>It is possible that there may be an indirect benefit with respect to objective 5 maintaining and protecting soils as flooding can have an impact on soil quality however not enough information is</p>
Properties at risk of surface water flooding (Counts of properties at risk of surface water flooding)	?	?	?	+	?	+	+	?	+	?	?	?	?	
Properties at risk of coastal flooding (Counts of properties at risk of coastal flooding)	?	?	?	+	?	+	+	?	+	?	?	?	?	

	SA Objectives												Comments Effects and Potential Improvements
	1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	
The Catchment Flood Risk Management Approach													
Properties at risk of groundwater flooding (Counts of properties at risk of groundwater flooding)	?	?	?	+	?	+	+	?	+	?	?	?	available assess this. Not enough information is provided in order to assess the impacts on the other SA objectives.
Historic property flooding (Counts of properties / locations with historic evidence of flooding)	?	?	?	+	?	+	+	?	+	?	?	?	
Areas of deprivation, 20% and 40% most deprived (Count of deprived residential properties identified in criteria 1-3 at risk of a 1 in 100 (fluvial/surface water) or 1 in 200 (coastal))	0	0	0	0	0	+	0	0	+	?	?	+	Quality of life is affected by flooding; more socially deprived communities are likely to be more significantly affected by the impact of flooding and this priority has a positive effect on objective 12 in this regard.
Strategic Road Network at risk from flooding (Length of strategic roads at risk of flooding)	0	0	0	0	0	+	+	?	+	0	0	0	This priority has a direct positive impact on objective 7 and indirectly on objectives 6 and 9 as the strategic road networks in important for the health and wellbeing ensuring access to services and health facilities.
Road repair costs (Length of all roads at risk of flooding)	0	0	0	0	0	0	0	0	?	0	0	0	These priorities are financially driven, not enough information is provided to assess them against the SA objective.

Symbol	Explanation of the Effect
+	Positive: will result in positive impact on the objective
0	Neutral: Neutral or negligible effect on the objective
-	Negative: Option will result on a negative impact on the objective

		SA Objectives											Comments Effects and Potential Improvements	
The Catchment Flood Risk Management Approach		1 Biodiversity	2 Water quality	3 Landscape and heritage	4 Climate Change	5 Ground Conditions	6 Quality of Life	7 Flood Risk Assets	8 Public Access	9 Flood Risk public wellbeing and economy	10 Aquatic Environment	11 Water resources	12 Community	

?	Unknown: The relationship is unknown, or there is not enough information to make an assessment
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Appendix 4: Quality Assurance Checklist²³

²³ A Practical Guide to the Strategic Environmental Assessment Directive, September 2005, Office of the Deputy Prime Minister

Checklist	Completed/Location
Objectives and Context	
The plans or programs purpose and objectives are made clear.	Section 1.5
Environmental issues and constraints, including international and EC environmental protection objectives, are considered in developing objectives and targets.	Appendix 1
SEA objectives, where used, are clearly set out and linked to indicators and targets where appropriate.	Table 2.4
Links with other related plans, programmes and policies are identified and explained.	Table 2.2
Conflicts that exist between SEA objectives, between SEA and plan objectives and between SEA objectives and other plan objectives are identified and described	Section 2.6
Scoping	
Consultation Bodies are consulted in appropriate ways and at appropriate times on the content and scope of the Environmental Report.	Section 2.8
The assessment focuses on significant issues.	Table 2.4
Technical, procedural and other difficulties encountered are discussed; assumptions and uncertainties are made explicit.	Section 2.5 and 3.9
Reasons are given for eliminating issues from further consideration.	Refer to Scoping Report
Alternatives	
Realistic alternatives are considered for key issues, and the reasons for choosing them are documented.	Section 3.4
Alternatives include 'do minimum' and/or 'business as usual' scenarios wherever relevant.	Section 3.4

The environmental effects (both adverse and beneficial) of each alternative are identified and compared.	Appendix 3, where applicable
Reasons are given for selection or elimination of alternatives.	Section 3.4
Inconsistencies between the alternatives and other relevant plans, programmes or policies are identified and explained.	Section 3.4
Baseline information	
Relevant aspects of the current state of the environment and their likely evolution without the plan or programme are described.	Table 2.6
Environmental characteristics of areas likely to be significantly affected are described, including areas wider than the physical boundary of the plan area where it is likely to be affected by the plan.	Table 2.6
Difficulties such as deficiencies in information or methods are explained.	Section 2.4
Prediction and evaluation of likely significant environmental effects	
Effects identified include the types listed in the Directive (biodiversity, population, human health, fauna, flora soil, water, air, climate factors, material assets, cultural heritage and landscape), as relevant; other likely environmental effects are also covered, as appropriate.	Table 3.2
Both positive and negative effects are considered, and the duration of effects (short, medium or long-term) is addressed.	Appendix 3
Likely secondary, cumulative and synergistic effects are identified where practicable.	Appendix 3
Inter-relationships between effects are considered where practicable.	Table 3.1
The prediction and evaluation of effects makes use of relevant accepted standards, regulations, and thresholds.	Owing to the nature of the plan this is not applicable.
Methods used to evaluate the effects are described.	Section 2.7
Mitigation measures	

Measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the plan or programme are indicated.	Appendix 3, Section 3.5
Issues to be taken into account in project consents are identified.	N/A
The Environmental Report	
Is clear and concise in its layout and presentation.	Yes
Uses simple, clear language and avoids or explains technical terms.	Yes
Uses maps and other illustrations where appropriate.	Yes included where relevant
Explains the methodology used.	Section 2.6
Explains who was consulted and what methods of consultation were used.	Section 2.8
Identifies sources of information, including expert judgement and matters of opinion.	Refer scoping
Contains a non-technical summary covering the overall approach to the SEA, the objectives of the plan, the main options considered, and any changes to the plan resulting from the SEA.	Yes Non Technical Summary included
Consultation	
The SEA is consulted on as an integral part of the plan-making process.	Section 2.8
Consultation Bodies and the public likely to be affected by, or having an interest in, the plan or programme are consulted in ways and at times which give them an early and effective opportunity within appropriate time frames to express their opinions on the draft plan and Environmental Report.	Section 2.8
Decision-making and information on the decision	
The environmental report and the opinions of those consulted are taken into account in finalising and adopting the plan or programme.	Section 2.8
An explanation is given of how they have been taken into account.	Section 2.8

Reasons are given for choosing the plan or programme as adopted, in the light of other reasonable alternatives considered.	Section 3.4
Monitoring measure	
Measures proposed for monitoring are clear, practicable and linked to the indicators and objectives used in the SEA.	Section 3.8 and Table 3.2
Monitoring is used, where appropriate, during implementation of the plan or programme to make good deficiencies in baseline information in the SEA.	N/A
Proposals are made for action in response to significant adverse effects.	N/A