

# Southampton Local Flood Risk Management Strategy

## Habitats Regulations Assessment (HRA) Screening Report

October 2014



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# 1. Introduction

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Under the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive) it is necessary to undertake an appropriate assessment of a plan or project to determine whether it will have a “likely significant effect” (LSE) on sites designated for their nature conservation interest at an international level. This Directive has been transposed into national laws through the Conservation of Habitats and Species Regulations 2010 (Habitats Regulations 2010). In particular Regulation 61 states that

*“A competent authority, before deciding to undertake, or give any consent, permission, or other authorisation for a plan or project which:*

*(a) is likely to have significant effect on a European site in Great Britain (either alone or in combination with other plans or projects); and*

*(b) is not directly connected or necessary to the management of the site shall make an appropriate assessment of the implications for the site in view of that site’s conservation objectives”.*

European site (also referred to as a *Natura 2000* site) is either a Special Area of Conservation (SAC) identified through the EU Habitats Directive (Council Directive 92/43/EEC) or Special Protection Area (SPA) identified through the Birds Directive (Council Directive 79/409/EEC). Additionally, it is a matter of policy throughout the UK that Ramsar sites identified through the Ramsar Convention 1976 should receive the same protection as designated SPAs and SACs. Therefore, Ramsar sites are included under the European Site heading for the purposes of carrying out an Appropriate Assessment, even though they are not technically classed as European sites.

In the UK, it is also Government policy (Office of Deputy Prime Minister (ODPM), 2005), that these requirements are also extended to the consideration of effects on sites that are proposed for designation such as potential SPAs (pSPAs) and candidate SACs (cSACs), and this would also include any proposed extensions or additions to existing *Natura 2000* sites.

When evaluating the effects on designated sites as part of the assessment process, if the relevant Competent Authority, cannot conclude that the plan or project will not have an adverse effect on the integrity of a European site (either alone or in combination with other plans or projects) the plan can only be adopted if it has been ascertained that there are no alternative solutions and it is necessary for Imperative Reasons for Overriding Public Interest (IROPI), including those of a social or economic nature<sup>1</sup>. In such cases, compensatory measures must be taken to ensure that the overall coherence of the network of *Natura 2000* sites is maintained.

Given the proximity of the strategy study area to internationally designated sites (see Section 3.2, Figure 3-1) the possibility of ‘likely significant effects’ (LSE) on European designated sites cannot be excluded and therefore a Habitats Regulations Assessment (HRA) is required. In the case of this HRA Southampton City Council (SCC) is the competent authority. SCC, with advice from Natural England, will need to ensure that if there is a negative assessment of a plan or project, agreement to that plan or project is only given if there are no alternative solutions, it must be carried out for Imperative Reasons of Overriding Public Interest (IROPI), and any compensatory measures that may be required are secured.

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<sup>1</sup> Article 6 of the Habitats Directive also states that, where the site concerned hosts a priority natural habitat, type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.



# 2. Southampton LFRMS

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## 2.1 Background

It is a requirement under Section 9 of the Flood and Water Management Act 2010 (FWMA) for a Lead Local Flood Authority (LLFA) to 'develop, maintain, apply and monitor a strategy for local flood risk management in its area'. Southampton City Council, as a LLFA, therefore has a duty to develop the LFRMS for Southampton to assess the local flood risk within the city and propose ways of managing it.

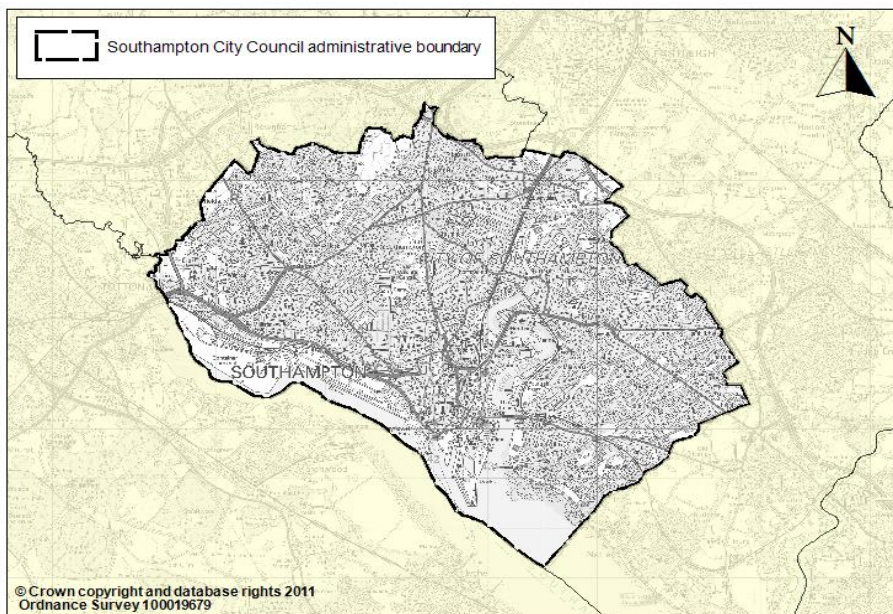
The definition of *local flood risk* is provided in Section 9(2) of the FWMA as being flood risk from:

- Surface runoff,
- Groundwater; and
- Ordinary watercourses.

An ordinary watercourse is defined further by the act as a watercourse that does not form part of a main river including, but not limited to, all streams, ditches, culverts and ponds. Main rivers can be identified on a main river map, and like the sea and reservoirs, are not classed as local risk and therefore remain the responsibility of the Environment Agency.

Where there is an interaction between local sources of flood risk and risks which are the responsibility of the Environment Agency, it may be necessary for all sources of flood risk to be considered to some extent in the Local Flood Risk Management Strategy (LFRMS). An example of a flood risk occurring due to an interaction of sources is 'tidal locking' which is the result of the tide entering an ordinary watercourse, causing a backlog of water which is unable to discharge. As there are several interactions of flood sources in Southampton, the LFRMS shall include flooding from all sources to ensure an integrated approach to the management of flood risk.

The LFRMS covers the administrative boundary of Southampton (Figure 2-1).



**Figure 2-1: Area covered by the LFRMS**

## **2.2 Requirements of the LFRMS**

It is a statutory requirement set out in the FWMA, for the LFRMS to specify:

- a) The risk management authorities in the authorities areas,
- b) The flood and coastal erosion risk management functions that may be exercised by those authorities in relation to the area,
- c) The objectives for managing local flood risk, relevant to the local area and reflecting the level of risk,
- d) The measures proposed to achieve the set objectives,
- e) How and when the measures are expected to be implemented,
- f) The costs and benefits of the measures, and how they are to be paid for,
- g) The assessment of local flood risk for the purpose of the strategy,
- h) How and when the strategy is to be reviewed, and
- i) How the strategy contributes to the achievement of wider environmental objectives.

In addition to the above requirements, the LFRMS must also be consistent with the National Flood and Coastal Erosion Risk Management Strategy (2011)

## **2.3 Aim and Objectives of the Southampton LFRMS**

The purpose of the Southampton LFRMS is to identify the extent and sources of flood risk across the city, and outline the approach to managing the risks. The overarching aim of the LFRMS is to better understand, communicate and manage the risk of flooding in Southampton through viable, sustainable and coordinated approaches, for the benefit of people, property, land and the environment, both now and in the future.

There are 8 objectives of the Southampton LFRMS which are:

- 1) Improve the knowledge and understanding of all sources of flood risk across the City.
- 2) Work in partnership with other authorities who have a role in flood risk management, including across administrative boundaries.
- 3) Identify ways to increase public awareness of the flood risk across the City.
- 4) Identify ways of improving support for people at direct risk to promote appropriate individual and community level planning and action.
- 5) Ensure that planning decisions are properly informed by flooding issues so future development assists with reducing and mitigating flood risk.
- 6) Identify appropriate measures which reduce the likelihood of harm to people and damage to the economy and the environment.
- 7) Maintain, and improve where necessary, flood risk management infrastructure and systems to reduce flood risk.
- 8) Identify all available funding mechanisms to enable delivery of flood risk management interventions.

# 3. Habitats Regulations Assessment

## 3.1 HRA Stages

HRA is an assessment of the potential effects of a proposed plan ‘in combination’ with other plans and projects on one or more international sites. The screening stage is undertaken to determine if a ‘likely significant effect’ will impact on the integrity of an international site. If likely significant effects are predicted in the screening stage, the second stage, the Appropriate Assessment (AA) needs to provide a statement that says whether the plan does or does not adversely affect the integrity of an international site.

A summary of the different stages of the HRA process can be seen in Table 3.1.

**Table 3.1: Stages of HRA, based on (DCLG 2006)**

Stage	Description
1	Screening
2	Appropriate Assessment
3	Mitigation measures & alternative solutions

The methodological steps for completing each of the stages is summarised in Table 3.2.

**Table 3.2: Methodological steps (Natural England, 2009)**

Stage	Task	Outcome
1- Screening	Identify all international sites in and around the plan area.	No significant effects are likely – no further assessment is required.  Significant effects likely or uncertain – complete Stage 2 (and 3).
	Acquire, examine & understand the conservation objectives of each interest feature of each international site potentially affected.	
	Consider the policies & proposals in the plan & the changes that they may cause that may be relevant to the European sites.	
	Acknowledging the plan is not necessary for site management, would any elements of the plan be likely to have a significant effect on any interest feature, alone or in combination with other projects.	
2- Appropriate Assessment	Agree scope & method of appropriate assessment with Natural England.	It is ascertained that the integrity of the international site will not be adversely affected – no further action required.  It could not be ascertained that the integrity of the international site will not be adversely affected – see Regulation 103 of the 2010 Regulations.
	Undertake an appropriate assessment of the implications for each affected site in light of its conservation objectives, using the best information, science & technical know-how available.	
3- Mitigation measures	Consider whether any possible adverse effect on integrity of any site could be avoided by changes to the plan, such as modifying a policy or proposal whilst still achieving the plan aims and objectives.	

This report represents Stage 1; the screening phase. If the screening assessment finds that the LFRMS is likely to cause significant impacts on any international site then a full AA report incorporating Stage 2 will need to be carried out. This conclusion would need to be made in agreement with Natural England, the statutory consultee for HRA.

### **3.2 European Sites to be considered including Interest Features and Conservation Objectives**

The LFRMS area lies within Southampton Water from Redbridge on the River Test around the main part of the City to Woodmill at the tidal extent of the River Itchen. The international nature conservation importance of the area has been recognised through a number of statutory designations. All internationally designated sites greater than 5km from the LFRMS area have been screened out of the assessment because they are beyond the zone of influence and any potential impacts will not extend hydrologically upstream. Internationally designated sites within 5km of the LFRMS area include:

Special Protected Areas (SPA) designated under the Birds Directive (Council Directive 79/409/EEC):

- New Forest SPA;
- Solent and Southampton Water SPA.

Wetlands of International importance designated under the Ramsar Convention:

- New Forest Ramsar site;
- Solent and Southampton Water Ramsar site.

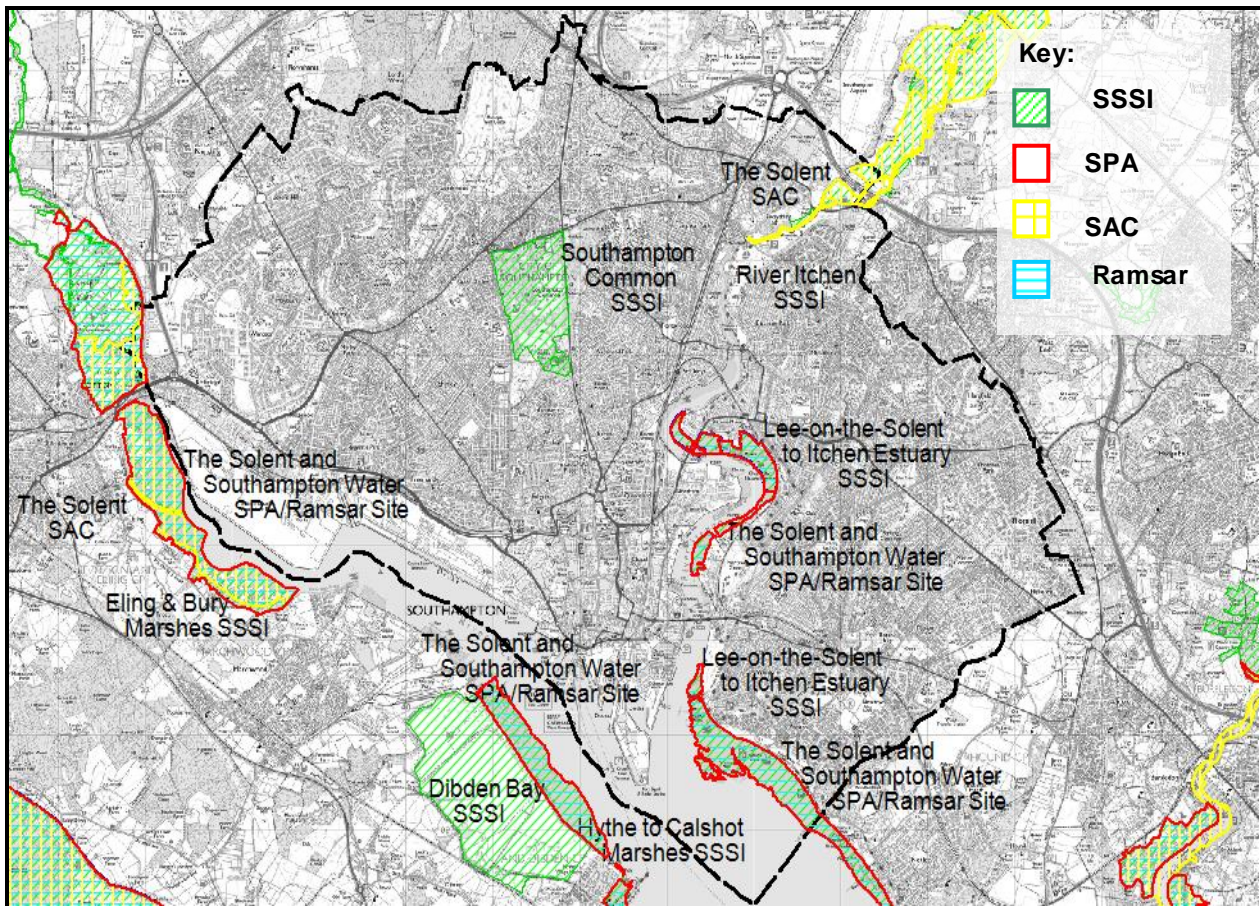
Special Areas of Conservation (SAC) designated under the EU Habitats Directive (Council Directive 92/43/EEC):

- New Forest SAC;
- River Itchen SAC;
- Solent Maritime SAC.

The Solent and Southampton Water SPA and Ramsar site and the Solent Maritime SAC form part of the Solent European Marine Site as defined in the Habitats Regulations. Where the European Site lies below highest astronomical tide i.e. land covered (continuously or intermittently) by tidal waters, or any part of the sea, in or adjacent to Great Britain, up to the seaward limit of territorial waters, it is described as a European Marine Site.

The boundaries of these designated sites in relation to LFRMS area are shown in Figure 3.1. Further information on the qualifying and interest features, conservation objectives and vulnerabilities for the designated sites that will be covered by the assessment are given in the following sections.





**Figure 3-1: Environmental designations around the Southampton frontage**

### 3.2.1 Special Protection Areas (SPA)

The EC Birds Directive (79/409/EEC) requires all member states to identify areas to be given special protection for the rare or vulnerable waterbird species listed in Annex 1 (Article 4.1) and for regularly occurring migratory species (Article 4.2) and for the protection of wetlands, especially wetlands of international importance.

#### 3.2.1.1 NEW FOREST SPA

The New Forest SPA, covering 28003ha, was designated in September 1993. The SPA comprises 29% broad-leaved deciduous woodland, 27% heath and scrub, 18% dry grassland and steppes, 17% coniferous woodland, 6% bog, marsh, water fringed vegetation and fens, 2% humid grassland and less than 1% inland water bodies. The boundary of the New Forest SPA site in relation to the study area is shown in Figure 3.1.

The New Forest SPA achieves the following:

- Article 4.1 – regularly supports an internationally important population of breeding Annex I species, comprising Nightjar, Woodlark, Honey Buzzard and Dartford Warbler, and overwintering Annex I species, Hen Harrier; and
- Article 4.2 – during the breeding season supports internationally important populations of Eurasian Hobby and Wood Warbler.

As the New Forest SPA does not form part of a European Marine Site, there is no Natural England advice under Regulation 33 of the favourable condition targets for qualifying features. However it can be assumed that conservation objectives for the site would be to maintain

habitats which support internationally important bird species in a favourable condition, subject to natural change.

The site is considered to be sensitive to recreational pressures and disturbance. Low water levels may also affect the wetland habitats which are sensitive to drainage pressures and erosion.

### 3.2.1.2 SOLENT AND SOUTHAMPTON SPA

The Solent and Southampton Water SPA, covering 5506ha, was designated in October 1998. The SPA comprises 48% tidal rivers, estuaries, mudflats, sandflats and lagoons (including saltwork basins), 18% saltmarshes, salt pastures and salt steppes, 17% humid and mesophile grassland, 10% shingle, sea cliffs and islets, 3% bog, marsh, water fringed vegetation and fens, 3% coastal sand dunes, sand beaches and machair, and 1% broad-leaved deciduous woodland. The boundary of the Solent and Southampton Water SPA site in the study area is shown in Figure 3.1.

The Solent and Southampton SPA achieves the following:

- Article 4.1 – regularly supports an internationally important population of breeding Annex I species, comprising Mediterranean Gull, Little Tern, Roseate Tern, Common Tern, Sandwich Tern; and
- Article 4.2 – supports an internationally important assemblage of birds over winter (51361 waterfowl), and internationally important populations of regularly occurring migratory species, including Eurasian Teal, Dark-bellied Brent Goose, Ringed Plover, and Black-tailed Godwit.

The conservation objectives of the Solent and Southampton Water SPA as defined in the Regulation 33 advice for the Solent EMS are shown in Table 3.3 below.

The site is considered to be particularly sensitive to activities or developments which result in loss of habitat through direct removal or coastal squeeze, modification of physical processes and sediment transfer patterns, pollution, and disturbance.

**Table 3.3: Conservation objectives for Solent and Southampton Water SPA**

Solent and Southampton Water SPA	
Internationally important populations of regularly occurring Annex I species	Subject to natural change, maintain in favourable condition the habitats for the <b>internationally important populations of the regularly occurring Annex 1 species</b> , in particular sand and shingle, saltmarsh, intertidal mudflats and sandflats and shallow coastal waters.
Internationally important regularly occurring migratory species	Subject to natural change, maintain in favourable condition the habitats for the <b>internationally important populations of the regularly occurring migratory species</b> , in particular, saltmarsh, intertidal mudflats and sandflats, boulder and cobble shores and mixed sediment shores.
Internationally important waterfowl assemblage	Subject to natural change, maintain in favourable condition the habitats for the <b>internationally important assemblage of waterfowl</b> , in particular saltmarsh, intertidal mudflats and sandflats, boulder and cobble shores and mixed sediment shores.

### 3.2.2 Ramsar

Under the 1972 Ramsar Convention on Wetlands of International Importance, it is a requirement of signatory states to protect wetland sites of international importance, including those that are important waterfowl habitats.

### 3.2.2.1 NEW FOREST RAMSAR

The New Forest Ramsar Site was designated in September 1993 and overlaps entirely with the New Forest SPA, covering 28,003ha. The New Forest is an area of semi-natural vegetation including valley mires, fens and wet heath. Other wetland habitats include numerous ponds and a network of small streams mainly acidic in character, which have no lowland equivalent in the UK. The habitats present are of high ecological quality and diversity with undisturbed transition zones. The boundary of the New Forest Ramsar site in the study area is shown in Figure 3.1.

The New Forest was designated a Ramsar site by meeting the qualifying criteria outlined below:

- Criterion 1 – Valley mires and wet heaths are found throughout the site and are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffers the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain;
- Criterion 2 – The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plant are found on the site, as are at least 65 British Red Data Book species of invertebrate;
- Criterion 3 – The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scarce wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England.

Noteworthy fauna within the New Forest Ramsar site include nationally important breeding populations of the Dartford Warbler, *Sylvia undata* and Hen Harrier, *Circus cyaneus* as well as internationally and nationally important invertebrate species.

As the New Forest Ramsar site does not form part of a European Marine Site, there is no Natural England advice under Regulation 33(2) of the favourable condition targets for qualifying features. However it can be assumed that conservation objectives for the site would be to maintain wetland habitats in a favourable condition, subject to natural change.

The site is considered to be sensitive to recreational pressures and disturbance. Low water levels may also affect the wetland habitats which are sensitive to drainage pressures and erosion.

### 3.2.2.2 SOLENT AND SOUTHAMPTON WATER RAMSAR

The Solent and Southampton Water Ramsar Site was designated in October 1998 and overlaps entirely with the Solent and Southampton Water SPA, covering 5346ha. The site comprises estuaries and adjacent coastal habitats, including intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland, and grazing marsh. The different habitats support internationally important numbers of wintering waterfowl, important breeding gull and tern populations and an important assemblage of rare invertebrates and plants. The boundary of the Solent and Southampton Water Ramsar site in the study area is shown in Figure 3.1.

The Solent and Southampton Water was designated a Ramsar site by meeting the qualifying criteria outlined below:

- Criterion 1 – The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow with long periods of slack water at high and low tide. It comprises many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs;
- Criterion 2 – The site supports an important assemblage of rare plants and invertebrates. At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site;



- Criterion 5 – supports internationally important assemblages of overwintering waterfowl (51343 waterfowl); and
- Criterion 6 – used regularly by species/populations occurring at levels of international importance. Qualifying species/populations (as identified at designation) that have peak counts in spring/autumn are Ringed Plover. Those having peak counts in winter are Dark-bellied Brent Goose, Eurasian Teal and Black-tailed Godwit.

The conservation objectives of the Solent and Southampton Water Ramsar site as defined in the Regulation 33 advice for the Solent EMS are listed in Table 3.4.

**Table 3.4: Conservation objectives for Solent and Southampton Water Ramsar Site.**

Solent and Southampton Water Ramsar	
Atlantic biogeographical region	Subject to natural change, maintain the <b>internationally important wetland characteristic of the Atlantic biogeographical region</b> in favourable condition, in particular, estuaries, saline lagoons, saltmarsh and intertidal reefs.
Assemblage of rare, vulnerable or endangered species	Subject to natural change, maintain the <b>wetland hosting an assemblage of rare, vulnerable or endangered species</b> in favourable condition, in particular, saline lagoons, saltmarsh, cordgrass swards ( <i>Spartinon</i> spp.).
20,000 waterfowl species	Subject to natural change, maintain the <b>wetland regularly supporting 20,000 waterfowl species</b> in favourable condition, in particular, saltmarshes, intertidal mudflats and sandflats, boulder and cobble shores, and mixed sediment shores.
1% or more of the individuals in a population of waterfowl species	Subject to natural change, maintain the <b>wetland regularly supporting 1% or more of the individuals in a population of waterfowl species</b> in favourable condition, in particular, saltmarshes, sand and shingle, shallow coastal waters, intertidal mudflats and sandflats, and boulder and cobble shores, and mixed sediment shores.

The site is considered to be particularly sensitive to activities or developments which result in loss of habitat through direct removal or coastal squeeze, modification of physical processes and sediment transfer patterns, pollution, and disturbance.

### 3.2.3 Special Areas of Conservation (SAC)

The EC Habitats Directive (92/43/EEC) requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended).

#### 3.2.3.1 NEW FOREST SAC

The New Forest was proposed as eligible as a Site of Community Importance (SCI) in June 1995 and designated as SAC in April 2005. The SAC covers 29262ha and comprises 34% heath, scrub, maquis, garrigue and phygrana, 29% broad-leaved deciduous woodland, 17% coniferous woodland, 10% dry grassland and steppes, 7% bog, marsh, water fringed vegetation and fen, and 3% humid grassland and mesophile grassland. The boundary of the New Forest SAC site in the study area is shown in Figure 3.1.

Annex I habitats that are a primary reason for selection of this site are:

- Oligotrophic waters containing very few minerals of sandy plains, *Littorelletalia uniflorae*;

- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoeto-Nanojuncetea*;
- Northern Atlantic wet heaths with *Erica tetralix*;
- European dry heaths;
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils;
- Depressions on peat substrates of the *Rhynchosporion*;
- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*);
- Asperulo-Fagetum beech forests;
- Old acidophilous oak woods with *Quercus robur* on sandy plains;
- Bog woodland; and
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*).

Annex I habitats that are a qualifying feature for site selection are:

- Transition mire and quaking bog; and
- Alkaline fen.

Annex II species that are a primary reason for selection of this site are:

- Southern damselfly, *Coenagrion mercuriale*; and
- Stag beetle, *Lucanus cervus*.

Annex II species that are a qualifying feature for site selection are:

- Great crested newt, *Triturus cristatus*.

As the New Forest SAC does not form part of a European Marine Site, there is no Natural England advice under Regulation 33(2) of the favourable condition targets for qualifying features. However it can be assumed that conservation objectives for the site would be to maintain Annex I habitats for which the site has been designated in a favourable condition, subject to natural change.

The site is considered to be sensitive to the drainage of wetland habitats, afforestation of heathlands, grazing and recreational pressures.

### 3.2.3.2 SOLENT MARITIME SAC

The Solent Maritime SAC, covering 11,325ha, was proposed as eligible as a Site of Community Importance (SCI) in October 1998, and designated as SAC in April 2005. The SAC comprises 59% tidal rivers, estuaries, mudflats, sandflats and lagoons (including saltwork basins), 23% salt marshes, salt pastures and salt steppes, 14% marine areas and sea inlets, 3% shingle, sea cliffs and islets, and 1% coastal sand dunes, sand beaches, machair, and broad-leaved deciduous woodland. The boundary of the Solent Maritime SAC site in the study area is shown in Figure 3.1.

Annex I habitats that are a primary reason for selection of this site are:

- Estuaries;
- *Spartina* swards (*Spartinion maritimae*); and
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*).

Annex I habitats present as a qualifying feature for selection of this site are:

- Sandbanks which are slightly covered by seawater all the time;
- Mudflats and sandflats not covered by seawater at low tide;
- Coastal lagoons;
- Annual vegetation of drift lines;
- Perennial vegetation of stony banks;
- *Salicornia* and other annuals colonising mud and sand; and

- Shifting dunes along the shoreline with *Ammophila arenaria* (“white dunes”).

Annex II species present as a qualifying feature for site selection is:

- Desmoulin’s whorl snail, *Vertigo moulinsiana*.

The conservation objectives of the Solent Maritime SAC as defined in the Regulation 33 advice for the Solent EMS are listed below in Table 3.5.

**Table 3.5: Conservation objectives for Solent Maritime SAC**

Solent Maritime SAC	
Estuaries	Subject to natural change, maintain the <b>estuaries</b> in favourable condition, in particular, saltmarsh communities, intertidal mudflat and sandflat communities, intertidal mixed sediment communities and subtidal sediment communities.
Annual vegetation of drift lines	Subject to natural change, maintain the <b>annual vegetation of drift lines</b> in favourable condition.
Atlantic salt meadows	Subject to natural change, maintain the <b>Atlantic salt meadows (<i>Glauco-Puccinellietalia</i>)</b> in favourable condition, in particular, low marsh communities, mid marsh communities, upper marsh communities and transitional high marsh communities.
<i>Salicornia</i>	Subject to natural change, maintain the <b><i>Salicornia</i> and other annuals colonising mud and sand</b> in favourable condition, in particular annual <i>Salicornia</i> saltmarsh communities (SM8) and <i>Suaeda maritima</i> saltmarsh communities (SM9).
Cordgrass swards	Subject to natural change, maintain the <b>cordgrass swards (<i>Spartinion maritimae</i>)</b> in favourable condition, in particular, small cordgrass ( <i>Spartina maritima</i> ) communities, smooth cordgrass ( <i>Spartina alterniflora</i> ) communities and Townsends cordgrass ( <i>Spartina x townsendii</i> ) communities.
Intertidal mudflats and sandflats	Subject to natural change, maintain the <b>mudflats and sandflats not covered by seawater at low tide</b> in favourable condition, in particular, intertidal mud communities, intertidal muddy sand communities, intertidal sand.
Subtidal sandbanks	Subject to natural change, maintain the <b>sandbanks which are slightly covered by seawater all the time</b> in favourable condition, in particular, subtidal gravely sand and sand, subtidal muddy sand and subtidal eelgrass <i>Zostera marina</i> beds.

The site is considered to be particularly sensitive to activities or developments which result in loss of habitat through direct removal or coastal squeeze, modification of physical processes and sediment transfer patterns, pollution, and the introduction of non-native species.

### 3.2.3.3 RIVER ITCHEN SAC

The River Itchen was proposed as eligible as an SCI in March 1998, and designated as a SAC in April 2005. The SAC covers 309ha and comprises 40% inland water bodies (standing water, running water), 27% bog, marsh, water fringed vegetation and fens, 19% humid and mesophile grassland, 10% broadleaved deciduous woodland, 2% mixed woodland, 1% improved grassland, and 1% non-forest areas cultivated with woody plants (including orchards, groves, vineyards and dehesas). The boundary of the River Itchen SAC site in the study area is shown in Figure 3.1.



Annex I habitats that are a primary reason for selection of this site are:

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation.

Annex II species that are a primary reason for selection of this site are:

- Southern damselfly, *Coenagrion mercuriale*; and
- Bullhead, *Cottus gobio*.

Annex II species that are a qualifying feature for site selection are:

- White-clawed crayfish, *Austropotamobius pallipes*;
- Brook lamprey, *Lampetra planeri*;
- Atlantic salmon, *Salmo salar*; and
- Otter, *Lutra lutra*.

As the River Itchen SAC does not form part of a European Marine Site, there is no Natural England advice under Regulation 33(2) of the favourable condition targets for qualifying features. However it can be assumed that conservation objectives for the site would be to maintain Annex I habitats for which the site has been designated in a favourable condition, subject to natural change.

The mobile nature of certain species (Atlantic Salmon & Otter) mean these interest features may extend beyond the boundaries of the River Itchen SAC, and will therefore need to be considered across the Strategy area.

Table 3.6 provides a summary of the interest features and conservation objective habitats designated under the international sites within 5km of the study area.

**Table 3.6: Summary of interest features and conservation objective habitats for designated sites.**

European Site	Interest Feature	Conservation Objective - Habitats
Solent and Southampton Water SPA	Annex I species (Common Tern, Little Tern, Mediterranean Gull, Roseate Tern, Sandwich Tern)	Sand and shingle
		Saltmarsh
		Intertidal mudflats and sandflats
		Shallow coastal waters
	Migratory species (Black-tailed Godwit, Dark-bellied Brent, Teal, Ringed Plover) and Waterfowl assemblage	Saltmarsh
		Intertidal mudflats and sandflats
		Boulder and cobble shores
		Mixed sediment shores
New Forest SPA	Annex I species (Hen Harrier, Nightjar, Woodlark, Honey Buzzard and Dartford Warbler)	Wet heaths
		Dry heaths
		Mires
	Migratory species (Eurasian Hobby and Wood Warbler).	Inland water bodies
		Bogs
		Marshes
		Fens

European Site	Interest Feature	Conservation Objective - Habitats
		Woodland
		Grassland
Solent and Southampton Water Ramsar	Atlantic biogeographical region	Estuaries
		Saline lagoons
		Saltmarsh
		Intertidal reefs
	Assemblage of rare, vulnerable or endangered species	Saline lagoons
		Saltmarsh
		Cordgrass swards ( <i>Spartinion</i> spp.)
	20,000 waterfowl species	Saltmarshes
		Intertidal mudflats and sandflats
		Boulder & cobble shores
		Mixed sediment shores
	1% or more of the individuals in a population of waterfowl species	Saltmarsh
		Sand & shingle
		Shallow coastal waters
Intertidal mudflats and sandflats		
Boulder and cobble shores		
Mixed sediment shores		
New Forest Ramsar	Important wetland habitats	Wet heaths
		Dry heaths
	Internationally important fauna and flora	Mires
		Inland water bodies
		Bogs
		Marshes
		Fens
		Woodland
		Grassland
Solent Maritime SAC	Estuaries	
	Annual vegetation of drift lines	
	Atlantic salt meadows	
	<i>Salicornia</i> and other annuals colonising mud and sand	
	<i>Spartina</i> swards	
	Intertidal mudflats and sandflats	
	Subtidal sandbanks	
	Coastal lagoons	

European Site	Interest Feature	Conservation Objective - Habitats
	Perennial vegetation of stony banks	
	Shifting dunes along the shoreline with <i>Ammophila arenaria</i>	
	Desmoulin`s whorl snail	
River Itchen SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	
	Southern damselfly	
	Bullhead	
	White-clawed crayfish	
	Brook lamprey	
	Otter	
	Atlantic salmon	
New Forest SAC	Oligotrophic waters containing very few minerals of sandy plains, <i>Littorelletalia uniflorae</i>	
	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoeto-Nanojuncetea</i>	
	Northern Atlantic wet heaths with <i>Erica tetralix</i>	
	European dry heaths	
	Molinia meadows on calcareous, peaty or clayey-silt-laden soils	
	Depressions on peat substrates of the <i>Rhynchosporion</i>	
	Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer	
	<i>Asperulo-Fagetum</i> beech forests	
	Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains	
	Bog woodland	
	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	
	Transition mire and quaking bog	
	Alkaline fen	
	Southern damselfly	
	Stag beetle	
Great crested newt		

### 3.3 Assessment of likely significant effect

#### 3.3.1 Screening for potential impacts on international sites

Natural England guidance (2009) provides advice on classification of potential impacts into six different assessment categories, with some further divided into sub-categories (a summary of these are provided in Appendix A). The LFRMS objectives and actions have been assessed against these and have been assigned to the category which was deemed most applicable to the potential impact, outlined in Table 3.7 and Table 3.8.

**Table 3.7: Screening of LFRMS objectives**

<b>LFRMS Objective</b>	<b>Assessment Category</b>
Improve the knowledge and understanding of all sources of flood risk across the City	A1 (no negative effect)
Work in partnership with other authorities who have a role in flood risk management, including across administrative boundaries	A1
Identify ways to increase public awareness of the flood risk across the City	A1
Identify ways of improving support for people at direct risk to promote appropriate individual and community level planning and action	A1
Ensure that planning decisions are properly informed by flooding issues so future development assists with reducing and mitigating flood risk	A1
Identify appropriate measures which reduce the likelihood of harm to people and damage to the economy and the environment	F (depends on how the LFRMS is implemented)
Maintain, and improve where necessary, flood risk management infrastructure and systems to reduce flood risk	F
Identify all available funding mechanisms to enable delivery of flood risk management interventions	A1

**Table 3.8: Screening of LFRMS actions**

<b>Actions</b>		<b>Assessment Category</b>
Existing	Investigate flooding incidents	A1 (no negative effect)
	Develop & maintain a register of flood risk assets	A1
	Maintenance/regulating activities on main rivers	A3 (intended to conserve or enhance the environment)
	Regulating works on ordinary watercourses	A3
Strategic	Implementation of existing flood risk management plans & strategies (flood risk management schemes)	E2 (appropriate for lower tier assessment)
	Encouraging the use of Sustainable Drainage Systems (SuDS) in new developments	A3
	Joint working	A1
	Improve knowledge & understanding of flood risk	A1
	Raise awareness of flood risk	A1
	Improve existing drainage infrastructure	E2
	Improve watercourses	A3
	Designation of features	A1
Local	Property level protection schemes	A1
	Support establishment of local flood groups	A1
	Retrofitting SuDS schemes	E2

The screening of LFRMS objectives has concluded that most are not likely to have any significant impact on international sites. However, the identification of measures to reduce flood risk and improve flood risk management infrastructure could potentially cause significant impacts depending upon how these objectives will be implemented. Considering the outlined actions, the screening has concluded that the majority are not likely to have any significant impact on international sites. However, the three actions which have been identified as requiring further lower tier assessment are as follows:

- Implementation of existing flood risk management plans and strategies (flood risk management schemes)

- Improve existing drainage infrastructure
- Retrofitting SuDS schemes

It was not possible to screen out these actions from the first phase of the HRA. This is because such actions are likely to lead to potentially damaging activities but, at present, they are not sufficiently well developed to allow appropriate mitigation measures to be identified. However, the likely impacts arising from such actions are (well understood) and it is possible to assess the likelihood of successful mitigation strategies being developed. Potential impacts arising from the above actions and the interest features which would be affected are outlined in Table 3.9, with appropriate mitigation options for these impacts identified in Table 3.10.

**Table 3.9: Potential impacts on from the actions requiring lower tier assessments**

Activity	Potential impact	Interest feature affected	Designated site
<b>Implementation of existing flood risk management plans and strategies</b>			
New flood risk management measures (tidal)	Loss of habitat (coastal squeeze)	Mudflats	Not internationally designated
	Noise and vibration	Waders, waterfowl, gulls & terns (up to 300m from >70dB source)	Solent & Southampton Water SPA/Ramsar
		Off-site salmon & otters (up to 20m from 128 dB source)	River Itchen SAC
	Dust	Mudflats (settlement of dust particles affecting foraging)	Solent & Southampton Water SPA/Ramsar
	Release of contaminants	Mud/sand flats plus waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
		Off-site salmon & otters	River Itchen SAC
	Physical disturbance from humans	Waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
	Air pollution (from vehicle movements – depends on size of scheme & in-combination)	Lowland wood pasture (and <i>Ranunculus</i> , fen, meadow, grasslands, plus typical species)	River Itchen SAC
		Saltmarsh, grazing marsh (and mudflats/sandflats, perennial vegetation & drift lines, dunes (plus typical species))	Solent Maritime SAC (and Solent & Southampton Water SPA/Ramsar)
		Lowland heath (and grasslands, woodlands, bogs, mires, plus typical species)	New Forest SAC/Ramsar/SPA
New flood risk management measures (surface water)	Change/loss of habitat	Woodland, amenity grassland	Not internationally designated
	Noise and vibration	Waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
	Dust	None – designated sites are beyond the area of impact from the potential scheme locations.	
	Release of contaminants	Mud/sand flats plus waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
		Off-site salmon & otters	River Itchen SAC
Physical disturbance from humans	None – potential scheme locations are within the city away from any of the		

		designated sites.	
	Changes to hydrological regime	None – designated sites are beyond the area of impact from the potential scheme locations.	
	Increased recreational access	None – the schemes will be enhanced where possible to improve amenity access to these areas within the city thereby assisting with alleviating pressure on the designated sites.	
	Air pollution (from vehicle movements – depends on size of scheme & in-combination)	Lowland wood pasture (and <i>Ranunculus</i> , fen, meadow, grasslands, plus typical species)	River Itchen SAC
Saltmarsh, grazing marsh (and mudflats/sandflats, perennial vegetation & drift lines, dunes (plus typical species))		Solent Maritime SAC (and Solent & Southampton Water SPA/Ramsar)	
Lowland heath (and grasslands, woodlands, bogs, mires, plus typical species)		New Forest SAC/Ramsar/SPA	
<b>Improve existing drainage infrastructure</b>			
Improve highway drainage at hotspot flood risk locations	Loss of habitat	None – any schemes will be delivered within the existing footprint of the highway	
	Noise and vibration	Waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
	Dust	Mudflats (but it is heavily dependent on the location of any scheme)	Solent & Southampton Water SPA/Ramsar
	Release of contaminants	Mud/sand flats plus waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
		Off-site salmon & otters	River Itchen SAC
	Physical disturbance from humans	Waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
	Air pollution (from vehicle movements – depends on size of scheme & in-combination)	Lowland wood pasture (and <i>Ranunculus</i> , fen, meadow, grasslands, plus typical species)	River Itchen SAC
		Saltmarsh, grazing marsh (and mudflats/sandflats, perennial vegetation & drift lines, dunes (plus typical species))	Solent Maritime SAC (and Solent & Southampton Water SPA/Ramsar)
Lowland heath (and grasslands, woodlands, bogs, mires, plus typical species)		New Forest SAC/Ramsar/SPA	
<b>Retrofitting SuDS schemes</b>			
Implementing drainage systems which mimic natural drainage	Noise and vibration	Waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
	Dust	Mudflats (settlement of dust particles affecting foraging)	Solent & Southampton Water SPA/Ramsar
	Release of	Mud/sand flats plus waders,	Solent & Southampton



<p>within the existing urban fabric within the city</p> <p><i>Note: Potential impacts will vary depending on the scheme proposals, size &amp; location</i></p>	contaminants (construction phase)	waterfowl, gulls & terns	Water SPA/Ramsar
		Off-site salmon & otters	River Itchen SAC
	Physical disturbance from humans	Waders, waterfowl, gulls & terns	Solent & Southampton Water SPA/Ramsar
	Changes to hydrological regime	Mudflats	Solent & Southampton Water SPA/Ramsar
	Increased recreational access	None – any schemes would enhance the local amenity and biodiversity of the area where possible	
	Air pollution (from vehicle movements – depends on size of scheme & in-combination)	Lowland wood pasture (and <i>Ranunculus</i> , fen, meadow, grasslands, plus typical species)	River Itchen SAC
		Saltmarsh, grazing marsh (and mudflats/sandflats, perennial vegetation & drift lines, dunes (plus typical species))	Solent Maritime SAC (and Solent & Southampton Water SPA/Ramsar)
		Lowland heath (and grasslands, woodlands, bogs, mires, plus typical species)	New Forest SAC/Ramsar/SPA

**Table 3.10: Options for mitigating the identified potential impacts**

Impact	Interest feature affected	Mitigation options	Confidence level
<b>Implementation of existing flood risk management plans and strategies</b>			
Noise and vibration	Waders, waterfowl, gulls & terns, Atlantic salmon	Timing of works to avoid sensitive periods of the year	High – well established as an effective mitigation measure for existing projects
Dust	Mudflats	Damping of surfaces	High – well established as an effective mitigation measure for existing projects
Release of contaminants	Mud/sand flats plus waders, waterfowl, gulls & terns; Off-site salmon & otters	Works should be informed by suitable site investigations where potential contaminants might be mobilised and best practice measures utilised to reduce & manage the risk of contaminant release	High – well established as an effective mitigation measure for existing projects
Physical disturbance from humans	Waders, waterfowl, gulls & terns	Screening sites to block views of workers	High – well established as an effective mitigation measure for existing projects
Air pollution (from vehicle movements – depends on size of scheme & in-	Lowland wood pasture (and <i>Ranunculus</i> , fen, meadow, grasslands, plus typical species); Saltmarsh, grazing marsh (and mudflats/sandflats,	Bring vehicles to site outside the rush hour to avoid standing traffic  Avoid undertaking works at the same time as other	High – this issue is being addressed within the CCAP and local transport plan. Behaviour change schemes are expected

combination)	perennial vegetation & drift lines, dunes (plus typical species)); Lowland heath (and grasslands, woodlands, bogs, mires, plus typical species)	major construction traffics	to reduce the amount of vehicular traffic in the city by 2026.
<b>Improve existing drainage infrastructure</b>			
Noise and vibration	Waders, waterfowl, gulls & terns	Timing of works to avoid sensitive periods of the year	High – well established as an effective mitigation measure for existing projects
Dust	Mudflats	Damping of surfaces	High – well established as an effective mitigation measure for existing projects
Air pollution (from vehicle movements – depends on size of scheme & in-combination)	Lowland wood pasture (and <i>Ranunculus</i> , fen, meadow, grasslands, plus typical species); Saltmarsh, grazing marsh (and mudflats/sandflats, perennial vegetation & drift lines, dunes (plus typical species)); Lowland heath (and grasslands, woodlands, bogs, mires, plus typical species)	Bring vehicles to site outside the rush hour to avoid standing traffic  Avoid undertaking works at the same time as other major construction traffics	High – this issue is being addressed within the CCAP and local transport plan. Behaviour change schemes are expected to reduce the amount of vehicular traffic in the city by 2026.
<b>Retrofitting SuDS schemes</b>			
Noise and vibration	Waders, waterfowl, gulls & terns, Atlantic salmon	Timing of works to avoid sensitive periods of the year	High – well established as an effective mitigation measure for existing projects
Dust	Mudflats	Damping of surfaces	High – well established as an effective mitigation measure for existing projects
Release of contaminants	Mud/sand flats plus waders, waterfowl, gulls & terns; Off-site salmon & otters	Works should be informed by suitable site investigations where potential contaminates might be mobilised and best practice measures utilised to reduce & manage the risk of contaminant release	High – well established as an effective mitigation measure for existing projects
Physical disturbance from humans (construction phase)	Waders, waterfowl, gulls & terns	Screening sites to block views of workers	High – well established as an effective mitigation measure for existing projects
Changes to hydrological regime	Mudflats	Siting of scheme to avoid changes to the hydrological regime & design of schemes to reduce the intensity of	High – Negligible impact as schemes will only be introduced where they will deliver multiple benefits, such

		flow which reaches the watercourses during rainfall events	as reduce peak discharges, reduce runoff volume from impermeable areas & improve water quality
Air pollution (from vehicle movements – depends on size of scheme & in-combination)	Lowland wood pasture (and <i>Ranunculus</i> , fen, meadow, grasslands, plus typical species); Saltmarsh, grazing marsh (and mudflats/sandflats, perennial vegetation & drift lines, dunes (plus typical species)); Lowland heath (and grasslands, woodlands, bogs, mires, plus typical species)	Bring vehicles to site outside the rush hour to avoid standing traffic  Avoid undertaking works at the same time as other major construction traffics	High – this issue is being addressed within the CCAP and local transport plan. Behaviour change schemes are expected to reduce the amount of vehicular traffic in the city by 2026.

The assessment shows that, for all of the likely impacts, effective mitigation approaches are available. Provided the appropriate mitigation is implemented, it can be concluded that no likely significant effects will occur. A detailed lower tier assessment will be required to identify any likely significant effects at the site-specific level and put forward the required mitigation to avoid these.

### 3.3.2 Identifying potential in-combination effects

The existing plans or projects and associated HRAs that have been identified as important to consider the potential in-combination effects are listed in Table 3.11. Any identified impacts for each plan/project were examined to determine if any potential in-combinations effects on international sites are likely.

**Table 3.11: Existing plans & projects**

<b>Plan</b>	<b>Relevant International sites</b>	<b>Principle impact types identified</b>	<b>Conclusion of HRA/Environmental Impact Assessment</b>
Southampton Local Development Framework Core Strategy (2010)	New Forest SAC; New Forest SPA/Ramsar; River Itchen SAC; Solent & Southampton Water SPA/Ramsar; Solent Maritime SAC.	Coastal squeeze; Recreation disturbance; Air pollution; Tall buildings affecting flight/view lines; Increased effluent discharge; Increased water demand; Noise & light pollution.	Possible adverse effects. Appropriate mitigation measures have been identified and lower tier assessments will need to be completed in subsequent development plan documents.
Southampton City Centre Action Plan (Proposed submission stage)	New Forest SAC; New Forest SPA/Ramsar; River Itchen SAC; Solent & Southampton Water SPA/Ramsar; Solent Maritime SAC.	Atmospheric pollution; Disturbance; Water demand; Mobilisation of contaminants; Loss or degradation of wader roosts; Collision risk, light, noise & vibration.	Possible adverse effects relating to atmospheric pollution and disturbance from recreation. Appropriate mitigation measures have yet to be agreed and finalised.
Hampshire Local Transport Plan 3 (2011-2031)	None	Atmospheric pollution; Fragmentation, deterioration and/or loss of habitat.	No adverse effects.
Hampshire Minerals & Waste Plan (2011)	New Forest SAC; New Forest SPA/Ramsar; River Itchen SAC; Solent & Southampton Water SPA/Ramsar; Solent Maritime SAC.	Changes to water levels & water quality; Recreation-related impacts; Physical disturbance/loss of habitat; Noise pollution, lighting & vibrations effects; Air & dust pollution.	No adverse effects.
Draft Hampshire Local Flood Risk Management Strategy (2012)	New Forest SAC; New Forest SPA/Ramsar; River Itchen SAC; Solent & Southampton Water SPA/Ramsar; Solent Maritime SAC.	Changes to water quality/habitat quality; Changes to flows; Changes to water levels; Risk of facilitating spread of invasive species; Recreation disturbance; Habitat loss, deterioration & fragmentation.	Possible adverse effects but these are dependent on how the strategy is implemented. It was identified that future HRA screening at the project level will be necessary.
North Solent Shoreline Management Plan (2010)	Solent & Southampton Water SPA/Ramsar.	Coastal squeeze; Coastal processes; Saline intrusion.	Possible adverse effects. Implementation of the Southern Regional Habitat Creation Programme is required for Habitats Regulations compliance.

Southampton Flood & Erosion Risk Management Strategy (2012)	New Forest SAC; New Forest SPA/Ramsar; River Itchen SAC; Solent & Southampton Water SPA/Ramsar; Solent Maritime SAC.	Direct habitat loss; Saline intrusion; Changes to coastal processes resulting in morphological changes; Disturbance; Coastal squeeze.	No adverse effect over & above that already identified & accounted for within the North Solent SMP. However, project level HRAs will need to be completed to ensure no likely significant effect resulting from individual schemes.
<b>Plan</b>	<b>Relevant International sites</b>	<b>Principle impact types identified</b>	<b>Conclusion of HRA/Environmental Impact Assessment</b>
Test & Itchen Catchment Flood Management Plan (2009)	New Forest SAC; New Forest SPA/Ramsar; River Itchen SAC.	Current flood risk/inundation.	No adverse effects.
Port of Southampton Dredging Works	Solent & Southampton Water SPA/Ramsar.	Changes to water levels; Changes to coastal processes resulting in morphological changes; Disturbance.	Mainly either insignificant or minor impacts. Any larger adverse impacts can be mitigated such that the residual impacts will be within acceptable levels.

A number of plans/projects examined were concluded to have potential adverse effects on international sites of relevance to the LFRMS, however, appropriate mitigation and compensation has been identified to offset these impacts. The North Solent Shoreline Management Plan (SMP) was identified to have a potential likely significant effect on international sites but these are expected to be offset by implementation of the Environment Agency's Southern Regional Habitat Creation Programme. It is unlikely that impacts from the proposed Port of Southampton dredging works will add any additional pressures to the integrity of the international sites in combination with actions from the LFRMS. The Southampton Core Strategy (2010), Southampton Coastal Flood & Erosion Risk Management Strategy (2012) and Draft Hampshire Local Flood Risk Management Strategy (2012) have identified that further lower-tier assessment will be required at the project-level.

The Southampton City Centre Action Plan (proposed submission stage) has identified possible adverse effects relating to atmospheric pollution and recreational disturbance and appropriate options have yet to be put forward to mitigate the potential impacts on the designated sites. The actions to introduce new flood risk management measures (for surface water) and retrofitting SuDS schemes can be designed to improve recreational access and enhance local amenity within the city which will assist with alleviating pressure on the designated sites due to recreation. The potential impacts from atmospheric pollution as a result of implementing the activities identified in Table 3.9 could have an in-combination effect but since well established mitigation options have been identified (in Table 3.10) they would not add to the impacts. In addition, emissions would only be temporary during the construction phase of the projects with a limited number of additional vehicle movements occurring which could be managed through an appropriate traffic plan to avoid vehicle movements during peak traffic flows and diversion away from the designated sites which are particularly sensitive to vehicle emissions (namely the Solent Maritime SAC). Therefore, it is unlikely that the actions from the LFRMS will add additional pressure to the impacts identified from implementation of the policies within the Southampton City Centre Action Plan (proposed submission stage).

It can be concluded that no in-combination effects with the LFRMS have been identified, because appropriate mitigation measures are available to avoid any potential impacts from implementing the LFRMS draft actions. However, since future HRA screening of developing projects associated with the LFRMS is required, they will need to consider the in-combination effects of any impacts identified within the strategic plans identified in Table 3.11 and any subsequent lower-tier assessments of the projects associated with them.

### **3.4 Conclusion of the screening assessment**

The conclusion of the screening assessment is that the actions from the LFRMS, either alone or in-combination with other existing plans/projects, are not likely to significantly impact the international sites. However, there are three actions (which will work towards delivering the objectives that were identified within the 'depends on how the plan is implemented' category) that will require further HRA screening at the project-level to assess the alone and in-combination effects on the international sites. These actions include:

- Implementation of existing flood risk management plans & strategies (flood risk management schemes)
- Improve existing drainage infrastructure
- Retrofitting SuDS schemes



# Appendix A - Key to Natural England Guidance

## Assessment Categories

The following categories and sub-categories used in the assessment are taken from the Natural England HRA guidance (The Habitats Regulations Assessment of Local Development Documents. Final Draft Guidance by David Tyldesley and Associates for Natural England, January 2009). It should be noted that the assessment categories used in the matrices are based on background information listed in the main HRA report and the nature of significant or adverse effects is not described in the matrices themselves for the sake of brevity.

### General Categories

- (a) Category A: elements of the plan / options that would have no negative effect on a European site at all;
- (b) Category B: elements of the plan / options that could have an effect, but the likelihood is there would be no significant negative effect on a European site either alone or in combination with other elements of the same plan, or other plans or projects;
- (c) Category C: elements of the plan / options that could or would be likely to have a significant effect alone and will require the plan to be subject to an appropriate assessment before the plan may be adopted;
- (d) Category D: elements of the plan / options that would be likely to have a significant effect in combination with other elements of the same plan, or other plans or projects and will require the plan to be subject to an appropriate assessment before the plan may be adopted;
- (e) Category E: elements of the plan / options the effects of which will be more appropriate for lower tier assessments, in accordance with the criteria set out in Part 4 above;
- (f) Category F: elements of the plan / options the effect of which depends on how the plan is implemented.

### Sub-categories

Category A: No negative effect	
A1	Options / policies that will not themselves lead to development e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy.
A2	Options / policies intended to protect the natural environment, including biodiversity.
A3	Options / policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European Site.
A4	Options / policies that positively steer development away from European sites and associated sensitive areas

Category B – no sub-categories

Category C: Likely significant effect alone	
C1	The option, policy or proposal could directly affect a European site because it provides for, or steers, a quantity or type of development onto a European site, or adjacent to it
C2	The option, policy or proposal could indirectly affect a European site e.g. because it provides for, or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it or it may increase disturbance as a result of increased recreational pressures
C3	Proposals for a magnitude of development that, no matter where it was located, the development would be likely to have a significant effect on a European site

C4	Options, policies or proposals for developments or infrastructure projects that could block options or alternatives for the provision of other development or projects in the future, which will be required in the public interest, that may lead to adverse effects on European sites, which would otherwise be avoided
	Any other options, policies or proposals that would be vulnerable to failure under the Habitats Regulations at project assessment stage; to include them in the plan would be regarded by the EC as 'faulty planning'
	Any other proposal that may have an adverse effect on a European site, which might try to pass the tests of the Habitats Regulations at project assessment stage by arguing that the plan provides the imperative reasons of overriding public interest to justify its consent despite a negative assessment

#### Category D: Likely significant effects in combination

D1	The option, policy or proposal alone would not be likely to have significant effects but if its effects are combined with the effects of other policies or proposals provided for or coordinated by the LDD (internally) the cumulative effects would be likely to be significant
D2	Options, policies or proposals that alone would not be likely to have significant effects but if their effects are combined with the effects of other plans or projects, and possibly the effects of other developments provided for in the LDD as well, the combined effects would be likely to be significant
D3	Options or proposals that are, or could be, part of a programme or sequence of development delivered over a period, where the implementation of the early stages would not have a significant effect on European sites, but which would dictate the nature, scale, duration, location, timing of the whole project, the later stages of which could have an adverse effect on such sites

#### Category E: Appropriate for lower tier assessment

E1	An option, policy or proposal would have no effect where no development could occur through the policy itself, because it is implemented through later policies in the same DPD, which are more detailed and therefore more appropriate to assess for their effects on European Sites and associated sensitive areas. These kinds of policies may be found in the Core Strategy where a broad quantity of development may be specified as being delivered through a more specific policy in a later chapter or section of the DPD
E2	An option, or policy that makes provision for a quantity / type of development (and may indicate one or more broad locations e.g. a particular part of the plan area), but the detailed location of the development is to be selected following consideration of options in later, more site specific DPD. The consideration of options in the later DPD will need to assess potential effects on European Sites.

Category F – no sub-categories