Hampshire Local Flood Risk Management Strategy (LFRMS) Habitats Regulations Assessment (HRA)

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Hampshire LFRMS HRA Report

Hampshire County Council

November 2012

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Document history

Hampshire Local Flood Risk Management Strategy: HRA Screening Report

Hampshire County Council

This document has been issued and amended as follows:

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1 Introduction

1.1 Project Background

Hampshire County Council (HCC) is currently in the process of preparing its Local Flood Risk Management Strategy (LFRMS) for the County. Background information on the LFRMS is provided in section three of this report. The HRA should be read in parallel with the main LFRMS report.[i]

HCC commissioned Halcrow to undertake a Habitats Regulations Assessment (HRA) in parallel with a Strategic Environmental Assessment (SEA) of the LFRMS in March 2012.

Further description of the HRA process is provided in section 3. 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.

HRAs are required under the Habitats Directive (Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora) and the Birds Directive (Directive 79/409/EC on the Conservation of Wild Birds), which apply to proposed plans or projects that may have a significant effect on a Natura 2000 site or a Ramsar site. In this report they will be referred to as 'international' sites due to their international legislative protection, which extends beyond Europe in the case of Ramsar sites. The HRA process, international sites and requirements under the Habitats Regulations are described further in section 3.

The aim of this screening report is to assess the LFRMS and attempt to identify any potential effects on international sites. The screening report includes information on the international sites in the county or overlapping its borders.

Avoidance of impact is the stated priority in the Habitats Directive, rather than mitigation and compensation, which should only be considered successively if avoidance is not possible. During the HRA screening stage, HCC, as competent authority under the Habitats Regulations, may be able to introduce counter-acting measures that would clearly avoid the possibility of a significant effect on an international site. This would speed up the assessment process in its early stages and enable the assessment to concentrate on those aspects of the LFRMS that could have significant effects on international sites that are not easily eliminated.

1.2 Strategic Environmental Assessment

As stated in section 1.1, the LFRMS is also the subject of a Strategic Environmental Assessment (SEA), which takes a wider approach to broader sustainability and environmental impacts than the narrow approach that HRA takes by focusing on the predicted impacts of plans on international sites. Further, SEA follows the requirements of the SEA Directive (2001/42/EC) whereas HRA follows the requirements of the Habitats and Birds Directives, as described in section 3.

SEA baseline collection under the SEA Directive 'biodiversity' topic involved collecting data on international sites. Some of these data are provided in section 3 (Table 3.3) of this report. The SEA review of plans/programmes has also been used to determine whether some plans may have 'in-combination' effects in the HRA.

SEA objectives, and their underlying assessment criteria, have been developed specifically to ensure the LFRMS complies with the Water Framework Directive (WFD)(2000/60/EC). These are as follows;

4. Minimise adverse effects on water quality

5. Minimise adverse effects on water resource availability

6. Minimise adverse effects on water hydromorphology and natural processes

The Environmental Report stage of the SEA, considered whether the LFRMS would lead to any potentially significant impacts on water, quality, water resource availability or hydromorphology and natural processes at international sites. However, no such effects were predicted. As a result, the Environmental Report focused on potential environmental enhancements, such as plans for green infrastructure, as opposed to mitigation measures. Such plans could potentially have benefits in terms of WFD compliance as well as the Habitats and Birds Directives.

There will also be opportunities for SEA and HRA resource sharing via further informal consultation with stakeholders and the monitoring of environmental impacts on international sites which will be carried out through the SEA monitoring programme.

1.3 Limitations

When considering the potential influence of the LFRMS on international sites, there is considerable uncertainty at this strategic stage of LFRMS planning. For example, when evaluating potential hydrological impacts, specific details about potential LFRMS measures (e.g. precise location) and information to determine actual groundwater depths, flow and gradient are not available at this stage. It is therefore very difficult to establish if there is a hydrological pathway between the international site and the potential locations of any LFRMS measures.

Once the proposed location of LFRMS measures is identified it will be easier to predict impacts on hydrology and other direct and indirect impacts on the integrity of international sites.

2 Hampshire LFRMS

2.1 Overview and Purpose of Strategy

In accordance with the requirements of the Flood and Water Management Act 2010[ii] (FWM Act), HCC is now a Lead Local Flood Authority (LLFA). Under the FWM Act, HCC, as a LLFA, must 'develop, maintain, apply and monitor a strategy for local flood risk management in its area.' Local flood risk management includes flooding from surface runoff, ordinary watercourses and groundwater, but does not include flooding from main rivers and the sea.

The LFRMS will also build upon the work produced in the county's Preliminary Flood Risk Assessment (PFRA),[iii] which sets out the approach to partnership working to control flood risk, assesses past and future flood information and identifies potential flood risks, including floods expected to occur as a result of climate change.

The purpose of the LFRMS is to identify the extent of flood risk in Hampshire, how it will be managed in partnership with others and therefore outline HCC's approach to local flood risk management in the county, ultimately forming a policy document.

The LFRMS will provide the framework for sustainable flood risk management across the county but also refer to the actions to be taken for flood response and recovery. It will also consider the future resilience that will be required due to increasing flood risk arising from climate change and consider the role that spatial planning can play in reducing existing and future flood risk.

Although Hampshire includes the cities of Portsmouth and Southampton, these cities are unitary authorities and LLFAs in their own right. Portsmouth and Southampton will therefore produce their own LFRMS and the Hampshire LFRMS will not include any FRM measures for these areas. The Isle of Wight is also outside the scope of this LFRMS.

2.2 Strategy Contents

The LFRMS includes a set of high-level objectives, as follows;

- Improve our knowledge and understanding of local flood risk in Hampshire
- Develop Strategy, policy and a LFRMS Action Plan to manage these risks, providing balanced social and environmental benefits for the identified investment need
- Work in partnership with other flood risk management authorities to deliver the Strategy and action plan
- Maintain, and improve where necessary, local flood risk management infrastructure and systems to reduce risk
- Ensure that local planning authorities take full account of flood risk when allocating land and considering permitting development (by avoiding development in inappropriate locations and minimising flood risk wherever possible)

- Engage with local communities to increase public awareness and reporting of flooding and promote appropriate individual and community level planning and action
- Improve and support community level flood response and recovery
- Identify national, regional and local funding mechanisms to deliver flood risk management interventions.

Each of these objectives has a corresponding list of actions needed to help deliver the objectives. For the sake of brevity these actions are not repeated here.

A screening of the objectives against Natural England HRA assessment categories (these categories are provided in full in Appendix C) is provided in section 3.8.1 of this HRA screening report.

2.3 Action Plans

The LFRMS also contains a risk assessment of flooding in Hampshire in order to identify the wards which are most vulnerable to local flooding. This enables investment to be targeted where it will provide the greatest benefit. The risk assessment utilises information from;

- The Environment Agency Flood Map for Surface Water;
- HCC records of localised flooding incidents; and
- Records of the 2000-2001 groundwater flooding.

The outcome of the risk assessment is a series of maps which express the risk of flooding as an annual economic value. The LFRMS has used this information to rank the wards, with '1' being the ward with the highest risk of flooding.

An Action Plan has been produced as a separate document to the main LFRMS, which contains separate Action Plans for the 22 wards that were identified to be at highest risk from flooding. This combined Action Plan contains further details about how it is planned to deliver the objectives listed in section 2.2 in specific locations. The Action Plan will be reviewed on a two yearly cycle. A screening of the Action Plan against Natural England HRA assessment categories is provided in section 3.8.1 of this HRA screening report.

2.4 Hampshire Groundwater Surface Water Management Plan

In addition to the action plans, the forthcoming Hampshire Groundwater Surface Water Management Plan (GWSWMP) will review the pathways of groundwater and surface water flooding within each ward. At the time of writing this HRA, the GWSWMP is in its very early stages and therefore there are no specific FRM measures yet identified.

2.5 LFRMS Measures

Although no specific LFRMS measures have yet been identified, Table 2.1 identifies the types of measures that could eventually be implemented on the ground. These measures will be examined further in section 3 of this report.

Focus	Type	Theme	Example
Investigation	Non structural	Study	Surface water management plans, local flood risk studies
Investigation	Non structural	Survey/modelling	Flow survey, topographical survey, modelling
Investigation	Non structural	Social	Community perception surveys
Source	Structural	Flow reduction/Source control	SuDS (new and retrofit)
			Land management practices
Source	Non structural	Policy	Planning policies to influence location of development
Source	Non structural	Resilience	Temporary or demountable flood defences
			Improved resilience and resistance measures
			Improved weather warning
Source	Non structural	Education	Social change, education and awareness
Pathway	Structural	Conveyance	Restoring or increasing capacity in drainage systems
			Separation of foul and surface water sewers
			Managing overland flows (e.g. changing cambers, raising kerbs)
Pathway	Structural	Diversion (of pluvial runoff)	New or altered runoff routes
Pathway	Structural	Storage (pluvial)	Offline/online attenuation of pluvial flow
Pathway	Non structural	Maintenance	Improved maintenance

Focus	Type	Theme	Example
			regimes or enforcement
Pathway	Non structural	Policy	Land management practices
Receptor	Structural	Protection/permanent defences	Property level resilience (permanent)
			Community level resilience (permanent)
Receptor	Structural	Exceedence	Matrix signs, permanent signage of exceedence routes etc
Receptor	Non structural	Resilience	Improved weather warning
			Property level resilience (non-permanent)
			Community level resilience (non-permanent)
Receptor	Non structural	Education	Social change, education and awareness
Receptor	Non structural	Policy	Planning policies secure mitigation in new development

Table 2.1 Example LFRM measures

3 Habitats Regulations Assessment

3.1 Requirements of the Habitats and Birds Directives

HRA is required where any plan, alone or 'in combination' with other plans, could have a significant effect on the integrity of international sites. These sites include potential and actual Special Protection Areas (pSPAs and SPAs), designated under the Birds Directive[iv] and Special Areas of Conservation (SACs) and candidate SACs (cSACs) designated under the Habitats Directive.[v] Sites designated or proposed to be designated under the Ramsar wetlands convention[vi] are also included in HRAs, as specified in the National Planning Policy Framework.[vii]

Article 6 (3) of the Habitats Directive gives the following guidance on when HRA should be undertaken:

'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.'

Article 6(4) of the Habitats Directive goes on to discuss alternative solutions, the Imperative Reasons of Overriding Public Interest (IROPI) test and compensatory measures:

'If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.'

The Habitats Directive applies to "Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon" (Article 6(3)).

In England, SACs on land or freshwater areas are underpinned by notification as Sites of Special Scientific Interest (SSSI).[viii] HRA relates specifically and exclusively to the qualifying interests of international sites and not to the broader conservation interests or requirements under other SSSIs. However, conserving and enhancing SSSIs that underpin international designations is likely to assist the conservation and enhancement of the international designations themselves. The condition status of SSSIs can also help to understand the ecological status of the international sites of which they may form a part.

3.2 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. The following example of HRA methodology is based on the requirements of EU and UK Legislation (described below) and the guidance provided by the Department for Communities and Local Government (DCLG). [ix]

A summary of where the screening phase fits into the HRA process can be seen in Table 3.1 below.

Task HRA1	Screening – identifying likely significant effects
Task HRA2	Appropriate Assessment and ascertaining the effect on site integrity
Task HRA3	Mitigation measures and alternative solutions

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

This report represents Task HRA1; the screening phase. If the screening assessment finds that the Strategy is likely to cause significant impacts on any international site then a full AA report incorporating Task HRA2 will need to be carried out. This conclusion would need to be made in agreement with Natural England, the statutory consultee for HRA.

3.2.1 Tasks HRA1 and HRA2

Through Tasks HRA1 and HRA2, HRA promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the plan should aim to avoid any negative impacts on international sites by identifying possible impacts early in plan-making, and altering the plan in order to avoid such impacts. These possible impacts should be identified during the screening phase; Task HRA1, and more detailed effects on the integrity of international sites should be identified in Task HRA2.

3.2.2 Task HRA3

Mitigation measures should also be applied during the HRA process to the point where no adverse impacts on the site(s) remain. In fact, if the plan is likely to result in any adverse effects, and no further practicable mitigation is possible, then it will be rejected (i.e. not taken forward in its current form). Under such a worst-case scenario, the plan may have to undergo an assessment of alternative solutions (third stage). Compensatory measures are required, as a fourth stage, for any remaining adverse effects, but they are permitted only if (a) there are no alternative solutions and (b) the plan is required for imperative reasons of overriding public interest (the IROPI test). These are very onerous tests which plans are generally considered unlikely to pass.

3.3 Role of Organisations

3.3.1 Competent Authorities

In the case of the LFRMS, the plan-making authority, HCC, takes the role of Competent Authority for the purposes of the Habitats Regulations.[x]

Competent Authorities are responsible for:

- making an Appropriate Assessment before deciding to undertake, or give any consent, permission or other authorisation for a plan or project likely to have a significant effect on an international site, either alone or in combination with other plans and projects;
- for the purposes of the assessment, consulting the appropriate nature conservation body and having regard to its representations; and
- ensuring that if there is a negative assessment of a plan or project, agreement to that plan or programme is only given if there are no alternative solutions, it must be carried out for imperative reasons of over-riding public interest, and any compensatory measures that may be required are secured.

3.3.2 Natural England

Natural England implements, on behalf of the Government, international conventions and EC Directives on nature conservation. These are encompassed in the Conservation of Habitats and Species (Amendment) Regulations 2012 (the 'Conservation Regulations'), as follows:

- provide advice on whether plans and programmes are likely to have a significant effect (either alone or in combination with other plans and projects) when requested to do so;
- advise Competent Authorities whether a plan or programme is necessary for the management of the site;
- comment on Appropriate Assessments;
- provide advice on the ecological requirements of any compensatory measures; and
- provide advice on the suitability of any proposed compensatory measures.

Regulation 61 of the Habitats (Conservation) Regulations provides that if Natural England advises that a plan or project is likely to have a significant effect on an international site, it must be subject to Appropriate Assessment by a Competent Authority (HCC). The Habitats Regulations imply that the competent authority can agree if the strategy is likely to have significant effects, but it cannot 'give effect' to the strategy until an Appropriate Assessment has been carried out and determined that it will not adversely affect the integrity of the international site.

3.3.3 Secretary of State

The Secretary of State is responsible for:

- securing any necessary compensatory measures to ensure that the overall coherence of Natura 2000 is protected;
- confirming that any compensatory measures are sufficient to maintain the coherence of Natura 2000;
- informing the Commission of the measures adopted; and
- directing the plan-making authority not to give effect to a plan that may have an adverse affect on site integrity.

3.4 HRA Screening Guidance

There is no specific guidance relating to the HRA of flood risk management strategies. The methodology developed for the HRA screening is therefore based upon the following regulations and guidance documents:

Regulations

- Conservation of Habitats and Species (Amendment) Regulations 2012 (the 'Conservation Regulations').

Guidance

- The Habitats Regulations Assessment of Local Development Documents. Final Draft Guidance by David Tyldesley and Associates for Natural England, January 2009 (hereafter referred to as NE 2009).
- Assessment of plans and projects significantly affecting Natura 2000 sites. European Commission (2001).
- Department for Communities and Local Government (2006). Planning for the Protection of European Sites: Guidance for Regional Spatial Strategies and Local Development Documents.

3.5 HRA Screening Methodology

The methodology steps, based on the requirements set out in NE (2009), to be used are shown in Table 3.2.

Task	Description
1	List any international sites within, adjacent to or associated with the area that the plan covers. Review the site(s)' qualifying interest features, conservation objectives and Favourable Condition Tables. Analyse any underlying trends.
2	Determine whether the strategy is directly connected with or necessary to the management of the international site(s). If it is, then no further assessment is necessary.
3	Identify and discount all principal elements of the strategy that will have no significant impact on the international site(s) (including direct indirect and secondary impacts).
4	Identify any 'in combination' effects of the strategy with other plans and projects (including direct indirect and secondary impacts) i.e. the cumulative effect of influences of all the plans and projects on the site(s)' conditions required to maintain integrity.
5	Identify elements of the strategy that may have a significant impact (including direct indirect and secondary impacts) to take through to the AA (Task AA2) phase if AA is considered necessary.

Table 3.2: HRA screening methodology for the LFRMS

3.6 Consultation on this HRA

A list of international sites (shown in Table 3.3 below) that could potentially be impacted upon by the LFRMS was sent to Natural England on 19th September 2012 in order to agree whether the list of sites was appropriate. Conservation objectives for

these sites were requested. The list of international sites was agreed with Natural England on 28th September.[xi] Natural England was also asked to confirm which methodology and guidance was to be used for this HRA. This HRA was placed on the HCC website during October 2012 and sent to Natural England for comment. The letter received from Natural England in response to this consultation is provided as Appendix D to this report. The key elements of Natural England's comments, and the responses to them, are also shown in Appendix D.

3.7 Relevant International Sites

3.7.1 Background

The significance of a plan's effects on an international site depends on whether the "integrity" of the site is affected. Article 6(3) of the Habitats Directive requires that:

"the competent national authorities shall agree to the plan... only after having ascertained that it will not adversely affect the ***integrity of the site*** *concerned..."*

To determine what is meant by the "integrity" of the site, it is important to discover why the site was designated, i.e. identify the *qualifying interest features*. These are the reasons why the international site has been designated, for instance the endangered species that occupy the SAC; rare habitats that occur there; or threatened birds that breed or over-winter in an SPA. These features are listed in Annex I (habitats) and Annex II (species) of the Habitats Directive. Many of these are also recognised as 'priority features' for conservation in the UK, as shown in Table 3.3. The HRA focuses on the qualifying interest features.

The *conservation objectives* for each international site should also be obtained from Natural England. Conservation objectives are a statement of the overall nature conservation requirements for a site, expressed in terms of the favourable condition required for the habitats and/or species for which the site was selected. The objectives should help to focus the assessment.

The EC (2001) guidance states, "a site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realised, the capacity for self repair and self renewal under dynamic conditions is maintained, and a minimum of external management support is required". Some habitats already require heavy management to maintain their site integrity, e.g. through drainage or periodic burning.

The integrity of a site relies on the maintenance of an environment which will sustain its qualifying features and ensure their continuing viability. Legally the focus of HRA is on the site's qualifying interest features and associated conservation objectives, but these rely fundamentally on ecological processes and functions for their maintenance in a favourable condition, and cannot be appraised in isolation from them. Essential to the maintenance of interest features and the integrity of the site are those environmental conditions which enable key ecological processes and functions to persist. These might include the quantity of water reaching a site, the stability of the climate, or a low level of disturbance. The connectivity of dispersed sites under a single international designation also needs to be taken into account.

The LFRMS has the potential to help maintain or enhance the conservation status of some international sites, for example, by helping to restore water levels that the international sites require to achieve the conservation objectives that relate to the site's qualifying interest features. However, positive impacts of the LFRMS on international sites (and other environmental aspects) will be reported in the SEA. This is because only negative effects are considered in HRAs, as the European Court of Justice has ruled that only effects that could undermine the conservation objectives of an international site are considered likely to have significant effects.[xii]

3.7.2 Screening Task 1: International sites that could be affected by the LFRMS

The results of screening task 1 are presented in this section. Consultation with Natural England[xiii] confirmed that the international sites listed below may, theoretically, be affected by the LFRMS. International sites outside Hampshire's borders are identified in section 3.3. All international sites are illustrated in the Appendix A map.

The sites within, overlapping or close to Hampshire's administrative borders are shown in Table 3.3. Due to the number of international sites and quantity of information for each one, Appendix B of this report contains information on the relevant unitary authority for the site, site area, full lists of qualifying interest bird species and more detail on the vulnerability of these sites to various impact types.

Name	Designation	*Qualifying Interest Features*
Butser Hill	SAC	• Semi-natural dry grasslands and scrubland facies: on calcareous substrates *Festuco-Brometalia* • *Taxus baccata* woods of the British Isles (priority feature)
Dorset Heaths	SAC	• Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`) • Atlantic decalcified fixed dunes *Calluno-Ulicetea* (priority feature) • Humid dune slacks • Oligotrophic waters containing very few minerals of sandy plains *Littorelletalia uniflorae* • Northern Atlantic wet heaths with *Erica tetralix* • Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* (priority feature) • European dry heaths • Depressions on peat substrates of the *Rhynchosporion* • Bog woodland • Molinia meadows on calcareous, peaty or clayey-silt-laden soils *Molinion caeruleae* • Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (priority feature) • Alkaline fens • Old acidophilous oak woods with *Quercus robur* on sandy plains • Southern damselfly *Coenagrion mercuriale* • Great crested newt *Triturus cristatus*
East Hampshire Hangers	SAC	• *Asperulo-Fagetum* beech forests • *Tilio-Acerion* forests of slopes, screes and ravines (priority feature) • Semi-natural dry grasslands and scrubland facies: on calcareous substrates *Festuco-Brometalia* • *Taxus baccata* woods of the British Isles (priority feature) • Early gentian *Gentianella anglica*

Emer Bog	SAC	• Transition mires and quaking bogs
Mottisfont Bats	SAC	• Barbastelle bats *Barbastella barbastellus*
River Avon	SAC	• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation • Desmoulin`s whorl snail *Vertigo moulinsiana* • Brook lamprey *Lampetra planeri* • Sea lamprey *Petromyzon marinus* • Atlantic salmon *Salmo salar* • Bullhead *Cottus gobio*
River Itchen	SAC	• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation • Southern damselfly *Coenagrion mercuriale* • Bullhead *Cottus gobio* • White Clawed Crayfish *Austropotamobius pallipes* • Brook lamprey *Lampetra planeri* • Atlantic salmon *Salmo salar* • Otter *Lutra lutra*
Salisbury Plain	SAC	• *Juniperus communis* formations on heaths or calcareous grasslands • Semi-natural dry grasslands and scrubland facies: on calcareous substrates *Festuco-Brometalia* • Marsh fritillary butterfly *Euphydryas (Eurodryas, Hypodryas) aurinia*
Shortheath Common	SAC	• Transition mires and quaking bogs • European dry heaths • Bog woodland (priority feature)
Solent and Isle of Wight Lagoons	SAC	• Coastal lagoons (priority feature)
Solent Maritime	SAC	• Estuaries • Spartina swards *Spartinion maritimae* • Atlantic Salt Meadows *Glauco-Puccinellietalia maritimae* • Sandbanks which are slightly covered by sea water all the time • Mudflats and sandflats not covered by seawater at low tide • Coastal lagoons (priority feature)

		• Annual vegetation of drift lines • Perennial vegetation of stony banks • Salicornia and other annuals colonising mud and sand • Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`)
The New Forest	SAC	• 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 *Isoëto-Nanojuncetea* • Northern Atlantic wet heaths with *Erica tetralix* • European dry heaths • Molinia meadows on calcareous, peaty or clayey-silt-laden soils *Molinion caeruleae* • 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 (priority feature) • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* * Priority feature • Transition mires and quaking bogs • Alkaline fens • Southern damselfly *Coenagrion mercuriale* • Stag beetle *Lucanus cervus* • Great Crested Newt *Trituris cristatis*
Woolmer Forest	SAC	• Natural dystrophic lakes and ponds • European dry heaths • Depressions on peat substrates of the *Rhynchosporion* • Northern Atlantic wet heaths with *Erica tetralix* • Transition mires and quaking bogs
SPA and Ramsar Sites		
Avon Valley	SPA	• ***Waterfowl:*** *various overwintering species*

Avon Valley	Ramsar	• **Habitats and species:** diverse range of habitats, including fen, mire, lowland wet grassland and small areas of woodland. Site supports a diverse assemblage of wetland flora and fauna including several nationally-rare species. • **Waterfowl:** various species
Chichester and Langstone Harbours	SPA	• **Waterfowl:** various overwintering species and breeding season species
Chichester and Langstone Harbours	Ramsar	• **Habitats:** intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. • **Waterfowl:** various overwintering species and one breeding season species
New Forest	SPA	• **Waterfowl:** various breeding season and overwintering species
New Forest	Ramsar	• **Habitats:** valley mires and wet heaths • **Rare plants and invertebrates:** seven species of nationally rare plant and at least 65 British Red Data Book species of invertebrate.
Porton Down	SPA	• Eurasian stone curlew *Burhinus oedicnemus*
Portsmouth Harbour	SPA	• **Waterfowl:** various overwintering species
Portsmouth Harbour	Ramsar	• **Habitats**: intertidal mudflats with extensive eelgrass beds, saline lagoons, mud-snail *Hydrobia ulvae*, Common cord-grass *Spartina anglica*, green algae *Enteromorpha* spp. and sea lettuce *Ulva lactuca*, sea purslane *Halimione portulacoides*. • **Waterfowl:** various overwintering species
Solent and Southampton Water	SPA	• **Waterfowl:** various breeding season and overwintering species
Solent and Southampton Water	Ramsar	• **Habitats:** Saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs. • **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. • **Waterfowl:** various spring/autumn and overwintering species
Thames Basin Heaths	SPA	• European nightjar *Caprimulgus europaeus* • Woodlark *Lullula arborea* • Dartford warbler *Sylvia undata*
Wealden Heaths	SPA	• European nightjar *Caprimulgus europaeus*

Phase 2		• Woodlark *Lullula arborea* • Dartford warbler *Sylvia undata*

Table 3.3 International nature conservation sites within and around Hampshire

3.7.3 Screening Task 2: Connection with management requirements of international sites

Following a review of the content and objectives of the LFRMS, the findings of Task 2 were that the LFRMS is not directly connected with the management of any international sites within Hampshire or adjoining areas and therefore the remaining screening methodology steps (3 to 5) will be followed in the full screening report.

3.8 Potential Impacts of LFRMS on International Sites

3.8.1 Screening Task 3: Elements of the LFRMS with no potential impacts on international sites

The NE (2009) guidance provides advice on categorising the potential effects of the components of a plan (or strategy) in terms of six overarching categories. These six categories are further sub-divided. The categories and sub-categories are provided in full in Appendix C. The key elements of the current draft LFRMS (described in sections 2.2 and 2.3 of this report) and the assessment category they were judged to fall under are shown in Table 3.4.

LFRMS Objectives	Assessment Category
Improve our knowledge and understanding of local flood risk in Hampshire	A1(no negative effect)
Develop strategy, policy and a LFRMS action plan to manage these risks, providing balanced social and environmental benefits for the economic investment	F (depends on how the LFRMS is implemented)
Work in partnership with other flood risk management authorities to deliver the Strategy and action plan	A1
Maintain, and improve where necessary, local flood risk management infrastructure and systems to reduce risk	F
Ensure that local planning authorities take full account of flood risk when allocating land and considering permitting development (by avoiding development in inappropriate locations and minimising flood risk wherever possible)	A1
Engage with local communities to increase public awareness and reporting of flooding and promote appropriate individual and community level planning and action	A1

LFRMS Objectives	Assessment Category
Improve and support community level flood response and recovery	A1
Identify national, regional and local funding mechanisms to deliver flood risk management interventions.	A1

Table 3.4 Screening of LFRMS Draft Objectives

The screening of draft LFRMS objectives has concluded that most objectives are not likely to have any significant impacts on international sites. However, the development of action plans and LFRMS measures could potentially cause significant impacts, depending upon the content of the action plans and how the measures are implemented. For example, as Table 2.1 shows, changes to infrastructure such as 'managing overland flows (e.g. changing cambers, raising kerbs)' could potentially influence flow rates to or through international sites or affect water quality at the sites.

Table 3.5 uses the themes and examples of LFRMS measures from Table 2.1 to screen out example measures that are unlikely to impact on international sites due to the nature (e.g. desk top study) or scale of the measures. Although the examples provided are not necessarily going to be implemented, it is hoped that this will help focus future HRA screening on measures that are likely to cause significant impacts.

Theme	Example
Study (investigation)	Surface water management plans, local flood risk studies
Survey/modelling	Flow survey, topographical survey, modelling
Social	Community perception surveys
Exceedence	Matrix signs, permanent signage of exceedence routes etc
Resilience	Improved weather warning
	Property level resilience (permanent)
Education	Social change, education and awareness

Table 3.5 LFRMS measure examples screened out of further assessment

Table 3.6 shows an assessment of each of the ward-specific Action Plans against the Natural England assessment categories.

Ward-specific Action Plan	Next stage of action	Assessment Category
1. Abbey	Hampshire Groundwater Surface Water Management Plan (GSWMP) and maintenance	E2 (appropriate for lower tier assessment)
2. Aldershot Park	Rushmoor Surface Water Management Plan (SWMP)	E2
3. Ashurst	GSWMP	E2
4. Basing	Basingstoke SWMP	E2
5. Battins	Investigation, maintenance, flood risk awareness raising, policy, GSWMP	E2
6. Brookvale and Kings Furlong	Flood risk awareness raising, monitoring and reporting	E2
7. Buckskin	Basingstoke SWMP	E2
8. Cheriton and Bishops Sutton	Investigation, maintenance, flood risk awareness raising, policy, GSWMP	E2
9. Clanfield and Finchdean	GSWMP	E2
10. Cowplain	Flood risk awareness raising, monitoring and reporting	E2
11. Droxford, Soberton and Hambledon	Investigation, maintenance, flood risk awareness raising, policy, GSWMP	E2
12. Eastrop	Flood risk awareness raising, establishing ownership, monitoring and reporting, Basingstoke SWMP	E2

Ward-specific Action Plan	Next stage of action	Assessment Category
13. Eversley	Flood risk awareness raising and monitoring of existing scheme	E2
14. Fareham East	Investigation, maintenance, flood risk awareness raising, policy, GSWMP	E2
15. Hart Plain:	Flood risk awareness raising, monitoring and reporting	E2
16. Highclere and Bourne	Investigation, maintenance, flood risk awareness raising, policy, GSWMP	E2
17. Penton Bellinger	Investigation, maintenance, flood risk awareness raising, policy, GSWMP	E2
18. Popley East:	Flood risk awareness raising, establishing ownership, monitoring and reporting, Basingstoke SWMP	E2
19. St Mary's	Flood risk awareness raising, monitoring and reporting	E2
20. Totton East	Flood risk awareness raising, monitoring and reporting	E2
21. Upper Meon Valley	Investigation, maintenance, flood risk awareness raising, policy, GSWMP	E2
22. Waterloo	Flood risk awareness raising, monitoring and reporting	E2

Table 3.6 Assessment of the Ward-specific Action Plans against the Natural England Assessment Categories

3.8.2 Screening Task 4: Identifying potential in-combination effects

Table 3.7 shows the existing plans and HRAs that have been identified as being important to cross-reference during the screening of the LFRMS in order to analyse other predicted impacts on international sites in the county and surrounding area. Examining the impacts identified in other HRAs helps to establish potential 'in-combination' effects on international sites. To focus the assessment, only county level or flood risk related plans have been identified in Table 3.7. No in-combination effects with the LFRMS have been identified as a result of this screening task. The only HRA found to show potentially adverse effects on international sites was the North Solent Shoreline Management Plan (SMP) but these impacts were deemed to be different in nature (and geographic location) to the type of impacts expected with a LFRMS. The SMP impacts were also expected to be offset by the implementation of the Environment Agency's Southern Regional Habitat Creation Programme. In particular there is the opportunity for intertidal habitat creation as a result of managed realignment policies at Medmerry, East Chidham and Chidham.

The Southampton Flood and Coastal Erosion Management Strategy (FCERMS) also covers some of the geographical area of the North Solent SMP. The HRA of the FCERMS concludes there will be no adverse effect on intertidal habitats and associated species, over and above those already identified and accounted for within the North Solent SMP. The FCERMS has now been adopted. However, project-level HRA will be required for schemes in the FCERMS (and SMP) area.

Future HRA screening for other plans associated with the LFRMS (described in section 4.1) will need to take into account the plans listed in Table 3.7, as well as the HRAs of those plans.

HRA or Plan	Relevant[xiv] international sites taken through to AA stage[xv]	Principal impact types identified	Conclusion of each HRA
Hampshire Local Transport Plan 3 (2011-2031) HRA	None	Atmospheric pollution Fragmentation, deterioration and/or loss of Habitat	No adverse effects on any international sites
Hampshire Minerals and Waste Plan HRA Record, November 2011	Avon Valley SPA/ Ramsar Dorset Heathland SAC Dorset Heathlands SPA/ Ramsar Mottisfont Bats SAC New Forest SAC New Forest SPA/Ramsar River Avon SAC River Itchen SAC Solent & Southampton Water SPA/Ramsar Solent Maritime SAC Thames Basin Heaths SPA Wealden Heaths SPA	Changes to water levels and water quality Recreation-related impacts Physical disturbance/loss of habitat Noise pollution, lighting and vibration effects Air and dust pollution	No adverse effects on any international sites

New Forest Catchment Flood Management Plan, 2009[xvi]	New Forest SAC New Forest SPA/Ramsar	Current flood risk/ inundation	No adverse effects on any international sites
North Solent Shoreline Management Plan Appropriate Assessment, 2010	Chichester & Langstone Harbour SPA/Ramsar Portsmouth Harbour SPA/Ramsar Solent & Southampton Water SPA/Ramsar	Coastal squeeze Coastal processes Saline intrusion	Possible adverse effects on Chichester & Langstone Harbour SPA/Ramsar, Portsmouth Harbour SPA/Ramsar, Solent Maritime SAC and Solent & Southampton Water SPA/Ramsar if maintenance of sea defences ceased. Implementation of the Southern Regional Habitat Creation Programme is required for Habitats Regulations compliance.
Southampton Flood and Coastal Erosion Management Strategy	New Forest SAC New Forest SPA River Itchen SAC Solent Maritime SAC Solent and Southampton Water SPA/ Ramsar	Direct habitat loss Saline intrusion Changes to coastal processes resulting in morphological changes Disturbance Coastal squeeze	The HRA concludes that the Strategy preferred options will have no adverse effect on intertidal habitats and associated species, over and above those already identified and accounted for within the North Solent SMP. However, project level HRAs will need to be completed where necessary to ensure no LSE for individual schemes.
Test and Itchen CFMP, 2009	Mottisfont Bats SAC New Forest SAC New Forest SPA/Ramsar River Itchen SAC	Current flood risk/ inundation	No adverse effects on any international sites

Table 3.7 Existing HRA reports for strategic plans in and around Hampshire

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3.8.3 Screening Task 5: Identifying elements of the strategy that may have a significant impact

Following on from the screening out of example LFRMS measures in Table 3.5, it is now necessary to determine the potential impacts of the remaining example LFRMS measures from Table 2.1 on international sites.

Table 3.8 shows the example LFRMS measures, potential impacts, receptors and the most likely international sites in Hampshire to be affected. At this stage the impacts shown are theoretical as the LFRMS measures listed are examples only. The table shows that the principal impacts on international sites (if there are any at all) are likely to be water table level changes, changes to water quality, increased risk of facilitating spread of invasive species into international sites and potential physical barriers to the migration of migratory fish. There may also be habitat fragmentation, deterioration or loss or indirect impacts associated with increased recreation levels. The international sites most likely to be affected by the LFRMS are identified to be;

- Avon Valley SPA/Ramsar
- Chichester and Langstone Harbours SPA/Ramsar
- Emer Bog SAC;
- River Avon SAC;
- River Itchen SAC;
- New Forest SAC/SPA/Ramsar;
- Portsmouth Harbour SPA/Ramsar
- Shortheath Common SAC;
- Solent and Isle of Wight Lagoons SAC
- Solent Maritime SAC
- Solent and Southampton Water SPA/ Ramsar
- Woolmer Forest SAC; and
- Wealden Heaths SPA

Theme	Example	Impact type (s)	Potential Receptor	International sites in Hampshire most likely[xvii] to be affected
Flow reduction/Source control	SuDS (new and retrofit)	Water table level changes Changes to water quality (e.g. increased concentration of pollutants to aquatic habitats through reduced flow levels) Increased risk of facilitating spread of invasive species into international sites through changes to water flows or conveyance routes	Sites dependent on existing water levels and water quality status to retain integrity	Emer Bog SAC, River Avon SAC, River Itchen SAC, New Forest SAC/SPA/Ramsar, Shortheath Common SAC, Woolmer Forest SAC, Avon Valley SPA/Ramsar
Resilience	Temporary or demountable flood defences			
	Improved resilience and resistance measures			
Conveyance	Restoring or increasing capacity in drainage systems			
	Separation of foul and surface water sewers			
	Managing overland flows (e.g. changing cambers, raising kerbs)			
Diversion (of pluvial runoff)	New or altered runoff routes	New physical barriers to migration, e.g. new structures in ordinary water courses	Migratory fish species and their supporting habitats in main rivers (that are connected to ordinary water courses)	River Avon SAC, River Itchen SAC
Storage (pluvial)	Offline/online attenuation of pluvial flow			
Maintenance	Improved maintenance regimes or enforcement			

Theme	Example	Impact type (s)	Potential Receptor	International sites in Hampshire most likely[xvii] to be affected
Protection/permanent defences	Community level resilience (permanent)			
Resilience	Community level resilience (non-permanent)			
Policy	Planning policies secure mitigation in new development			
Flow reduction/ source control/ Policy	Planning policies to influence location of development	Recreation impacts, e.g. trampling, noise disturbance	Sites vulnerable to visitor pressure, particularly human and dog physical and noise disturbance to SPA/Ramsar qualifying bird species	Emer Bog SAC, River Avon SAC, River Itchen SAC, New Forest SAC/SPA/Ramsar, Shortheath Common SAC, Woolmer Forest SAC, Avon Valley SPA/Ramsar, Wealden Heaths SPA
	Land management practices	Habitat fragmentation, deterioration or loss	All EU qualifying habitats	All international sites potentially affected; each site needs to be examined on a case-by-case basis.
		Water table level changes Changes to water quality	Sites dependent on water levels and current water quality status to	Avon Valley SPA/Ramsar, Chichester and Langstone Harbours SPA/Ramsar, Emer Bog

Theme	Example	Impact type (s)	Potential Receptor	International sites in Hampshire most likely[xvii] to be affected
		(e.g. increased concentration of pollutants to aquatic habitats through reduced flow levels)	retain integrity	SAC, New Forest SAC/SPA/Ramsar Portsmouth Harbour SPA/Ramsar, River Avon SAC, River Itchen SAC, Shortheath Common SAC, Solent and Isle of Wight Lagoons SAC, Solent Maritime SAC, Solent and Southampton Water SPA/ Ramsar, Woolmer Forest SAC

Table 3.8 LFRMS Measure Examples and their Potential Impact on International Sites

3.9 International Sites Unlikely To Be Affected by LFRMS

A review of three principal factors has led to seven international sites being identified as unlikely to be at risk of significant impacts from the LFRMS. These factors are;

- the location of international sites relative to where LFRMS measures are likely to take place, based on currently identified areas of highest flood risk and the geographic location of each of the twenty two ward-specific Action Plans;
- whether there are any hydrological or significant ecological connections[xviii] between the international sites and the likely location of LFRMS measures; and
- the characteristics of the qualifying interest features of the international sites, for example whether they are water-dependent habitats or species.

It should also be noted that LFRMS measures are unlikely to be of the same spatial scale, with as far reaching impacts as, for example, Catchment Flood Management Plan or Shoreline Management Plan measures. Actual LFRMS measures being considered are not yet available; column 2 of Table 3.8 provides examples of possible LFRMS measures.

The international sites thought unlikely to be significantly affected by the LFRMS are shown in Table 3.9.

International Site unlikely to be affected by LFRMS	Rationale
Butser Hill SAC	No known hydrological or ecological connections between the qualifying features for which the site is designated to the location of any LFRMS ward-specific Action Plans
Dorset Heaths SAC	No known hydrological or ecological connections between the qualifying features for which the site is designated to the location of any LFRMS ward-specific Action Plans
East Hampshire Hangers SAC	No known hydrological or ecological connections between the qualifying features for which the site is designated to the location of any LFRMS ward-specific Action Plans
Mottisfont Bats SAC	No known hydrological or ecological connections between the qualifying features for which the site is designated to the location of any LFRMS ward-specific Action Plans
Porton Down SPA	No known hydrological or ecological connections between the qualifying features for which the site is designated to the location of any LFRMS ward-specific Action Plans

International Site unlikely to be affected by LFRMS	Rationale
Salisbury Plain SAC	No known hydrological or ecological connections between the qualifying features for which the site is designated to the location of any LFRMS ward-specific Action Plans
Thames Basin Heaths SPA	No known hydrological or ecological connections between the qualifying features for which the site is designated to the location of any LFRMS ward-specific Action Plans

Table 3.9 International sites unlikely to be affected by LFRMS

Notwithstanding the results of the initial screening shown in Table 3.8, there will still be a requirement to examine potentially significant effects on the international sites shown in Table 3.9 at LFRMS scheme level.

3.10 International Sites Screened Into Further Assessment

The following international sites will need to be included in further HRA work associated with the LFRMS Action Plans, including the GWSWMP, individual SWMPs and scheme-level HRA;

- Avon Valley SPA/Ramsar
- Chichester and Langstone Harbours SPA/Ramsar
- Emer Bog SAC;
- River Avon SAC;
- River Itchen SAC;
- New Forest SAC/SPA/Ramsar;
- Portsmouth Harbour SPA/Ramsar
- Shortheath Common SAC;
- Solent and Isle of Wight Lagoons SAC
- Solent Maritime SAC
- Solent and Southampton Water SPA/ Ramsar
- Woolmer Forest SAC; and
- Wealden Heaths SPA

3.11 Possible Avoidance Measures

For the international sites screened into the assessment, there are various potential measures that HCC could take at this stage, before the further development of action plans or LFRMS measures, to prevent significant impacts on them. These include dropping or re-wording parts of the Strategy, taking a decision on where LFRMS measures are best located geographically or changing the nature of Strategy implementation.

It would be prudent to avoid significant impacts at an early stage to prevent LFRMS implementation delays and extra costs (associated with abortive work or additional avoidance and mitigation measures) at a later stage of the LFRMS.

4 Summary of Preliminary Screening

4.1 Summary Conclusions

The report aims to provide a summary of the international sites that could potentially be affected by LFRMS and ways in which they could be affected. Natural England agreed the list of international sites to be included in the assessment.

The draft LFRMS contains seven high level objectives to manage flood risk in the county and twenty two ward-specific Action Plans for areas identified to be at the highest risk of flooding. Although the draft LFRMS currently contains no firm LFRMS 'measures' in specific geographic locations, this HRA has assessed example LFRMS measures and the key elements of each of the twenty two ward-specific Action Plans to determine their potential impacts and help focus future HRA screening.

Of these, only two of the objectives were identified to potentially cause a significant impact on international sites, depending on how they are implemented on the ground. These were as follows;

- Maintain, and improve where necessary, local flood risk management infrastructure and systems to reduce risk; and
- Develop strategy, policy and a LFRMS action plan to manage these risks, providing balanced social and environmental benefits for the economic investment

Future LFRMS HRA screening is likely to focus on the nineteen international designations that are most likely to be affected by LFRMS measures, subject to Natural England's agreement. Seven designations (also including SPA and Ramsar designations for the same geographical area) were deemed to be unlikely to be affected by LFRMS measures. However, further HRA screening will need to be undertaken at GSWMP, SWMP and scheme level and the international sites judged to be less likely to be affected at LFRMS level will also need to be re-considered. Table 4.1 shows the international designations most likely to be affected by LFRMS measures.

International designations most likely to be affected	International designations least likely to be affected
• Avon Valley SPA/Ramsar • Chichester and Langstone Harbours SPA/Ramsar • Emer Bog SAC; • River Avon SAC; • River Itchen SAC; • New Forest SAC/SPA/Ramsar; • Portsmouth Harbour SPA/Ramsar • Shortheath Common SAC; • Solent and Isle of Wight Lagoons SAC • Solent Maritime SAC • Solent and Southampton Water SPA/ Ramsar • Woolmer Forest SAC; and • Wealden Heaths SPA	• Butser Hill SAC • Dorset Heaths SAC • East Hampshire Hangers SAC • Mottisfont Bats SAC • Porton Down SPA • Salisbury Plain SAC • Thames Basin Heaths SPA

Table 4.1 International designations most and least likely to be affected by LFRMS measures

All of the international sites are shown in the map in Appendix A.

Potential impacts from the LFRMS were identified to be:

Direct/ indirect impacts:	Indirect impacts:
LFRMS measures, such as new diversion channels or flood storage areas, could lead to; • Changes to water quality/ habitat quality; • Changes to flows reaching or passing through international sites; • Changes to water levels at international sites; and • Risk of facilitating the spread of invasive species into international sites	Land management or changes to where new developments are located could lead to; • Recreation disturbance impacts on sensitive fauna and flora due to increased access to sites; and • Habitat loss, deterioration and fragmentation

Table 4.2 Potential direct and indirect impacts on international sites

The report has also identified other plans that could potentially cause significant impacts on international sites in-combination with the LFRMS. These include Environment Agency plans and the Hampshire Minerals and Waste Plan. A draft list of HRA work that has already taken place in the Hampshire area has also been provided. This work intended to help determine potential vulnerabilities of the international sites to specific plans and environmental pressures. However, no in-combination effects have been identified at this stage. However, when LFRMS measures for specific geographic locations are identified, scheme-level HRA will need to consider other plans and projects for in-combination effects, such as Local Plans.

For the international sites screened into the assessment, there are various potential 'avoidance' measures that HCC could take at this stage, before the further development of Action Plans or LFRMS measures, to prevent significant impacts on the integrity of the international sites. This could include acknowledgement in the final version of the LFRMS of the international sites, their vulnerabilities to impacts and how the LFRMS will avoid significant impacts on them.

5 Next Steps

5.1 Summary

The HRA Report will be subject to consultation with Natural England and be placed on the HCC website during October 2012. After consultation, the comments received will be taken into account into a revised report. The revised report will need to screen the LFRMS as it develops. This should include a re-screening of the twenty two Action Plans as they are developed further. The GWSWMP and SWMPs will require separate HRA screening to be undertaken.

In addition to the strategy-level HRA of the GSWMP and SWMPs, further HRA will also be required at scheme level (pre-design/feasibility stage) to determine any potentially significant effects on international sites. In accordance with Natural England's response to the first draft of this HRA, future SWMP and scheme-level HRA should include a re-screening of international sites that were considered unlikely to be affected at this stage.

6 Abbreviations

CFMP	Catchment Flood Management Plan
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EU	European Union
GWSWMP	Groundwater Surface Water Management Plan
HRA	Habitat Regulations Assessment
JNCC	Joint Nature Conservancy Council
LLFA	Lead Local Flood Authority
LFRMS	Local Flood Risk Management Strategy
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SMP	Shoreline Management Plan
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SWMP	Surface Water Management Plan
WFD	Water Framework Directive

7 Footnotes

[i] Hampshire County Council, 2012. Draft Local Flood Risk Management Strategy.
[ii] Flood and Water Management Act 2010. Available on: http://www.legislation.gov.uk/ukpga/2010/29/, accessed on 19/12/2011.
[iii] Hampshire County Council, 2011. Preliminary Flood Risk Assessment (June 2011).
[iv] Directive 79/409/EEC on the Conservation of Wild Birds.
[v] Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora.
[vi] www.ramsar.org
[vii] Communities and Local Government, 2012, National Planning Policy Framework.
[viii] SSSIs in Hampshire are designated by Natural England.
[ix] DCLG, 2006. Planning for the Protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents.
[x] The Conservation of Habitats and Species Regulations 2010. Statutory Instrument No.490.
[xi] *Pers. comm*. Telephone conversation with Stewart Coles (Natural England), 28/09/12.
[xii] Source: NE (2009), page 26.
[xiii] *Pers. comm*. Telephone conversation with Stewart Coles (Natural England), 28/09/12.
[xiv] The term 'relevant' is used as some international sites, such as in the North Solent SMP are far beyond Hampshire's borders.
[xv] It was not possible to locate HRAs of any of the CFMPs mentioned in this table.
[xvi] The South East Hampshire CFMP has not been included in this table as it does not mention any international sites within the CFMPM document.
[xvii] The term 'most likely' is not intended to preclude other international sites from experiencing the same impact. It is based on known site vulnerabilities and previous HRAs in the county (described in section 5.2). Equally it does not represent a threat of significant risk to the sites at this stage – this will be determined at the next stage of HRA screening.
[xviii] For example, if an FRM measure was to influence habitat not officially designated but known to be used by international site qualifying interest species, such as foraging areas used by SPA/ Ramsar bird species.