South East Flood Risk Management Plan

Habitats Regulations Assessment

December 2022

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1. Non-Technical Summary

Introduction

1.1 This is the Habitats Regulations Assessment (HRA) of the South East River Basin District (RBD) Flood Risk Management Plan (FRMP). The HRA has been undertaken in accordance with The Conservation of Habitats and Species Regulations (The Habitat Regulations) 2017 (as amended) and considers the potential implications of the FRMP on designated European conservation sites. These sites contain species and habitats that are important at a European scale.

1.2 The FRMP, covering the years between 2021 and 2027, seeks to manage significant flood-related issues in the South East RBD, including 12 specifically identified Flood Risk Areas. It covers an area of 10,200km^2. The FRMP seeks to reduce a range of flooding threats, including from rivers, the sea, surface water, groundwater and sewers / canals / reservoirs.

1.3 The need for protecting human receptors should be viewed in the context of the environmental challenges present in the South East RBD. Many geographic areas in the RBD are experiencing growth and need to mitigate climate change. Therefore, many freshwater and coastal habitats in the RBD, important in sustaining wintering wildfowl, fish populations and terrestrial species (e.g. otters), are subject to a wide range of human impacts, such as recreational pressure, reduced water flow / level, declining water quality and coastal squeeze. This HRA assesses the potential for the South East FRMP to result in Likely Significant Effects (LSEs) and, where applicable, adverse effects on the integrity of European sites (i.e. the ability of those sites to achieve their conservation objectives).

Methodology

1.4 The Habitats Regulations 2017 (as amended) set out the specific assessment steps required for the HRA process.

1.5 The first step in the sequence of tests, often referred to as HRA screening, establishes whether a more detailed analysis known as Appropriate Assessment is required. The purpose of HRA screening is to determine, in view of the best available scientific knowledge, whether a plan or project, either alone or in-combination with other plans or projects, could result in LSEs on European sites in view of their Conservation Objectives. If the Competent Authority determines that no LSEs are present (both alone and in-combination), then no further assessment is necessary.

Test of Likely Significant Effects

1.6 All measures included in the South East RBD were assessed for LSEs on the European sites across and within 10km of the RBD.

1.7 None of the measures were identified to result in LSEs on any European site for a range of reasons, including that they are too non-specific to assess meaningfully, already being implemented (thus having undergone HRA previously), being subjected to a separate consenting process (as applies to Local Flood Risk Management Plans, Shoreline Management Plans (SMPs) and Coastal Strategies), desk-based and involving no physical activity on the ground, remote from

hydrologically vulnerable sites or worded such they are about ‘investigating’, ‘reviewing’ and ‘identifying opportunities’.

1.8 One group of measures was found to commit to physical work on the ground by ‘delivering’ or ‘implementing’ flood management interventions, such as coastal defence structures or natural flood management approaches. The broad location of some measures, is known, enabling a broad assessment of their proximity to European sites and potential linking impact pathways. However, detailed HRA (including Appropriate Assessment) was deferred to either lower-tier plans or the planning application stage when details on the nature of proposals are available. This approach was adopted to account for the strategic (and thereby necessarily non-specific) nature of the FRMP, while also identifying the measures with the highest impact potential on European sites.

1.9 This document also identified that a range of measures in the South East FRMP have the potential to improve the hydrological condition of European sites across the RBD, particularly in the Solent, where several specific measures are targeted towards developing sustainable solutions to flood risk management that also incorporates habitat creation and enhancement.

Other Plans and Projects

1.10 The potential for the FRMP to result in LSEs on European sites in-combination with (i.e. considered alongside) other plans and projects was also assessed. Many such plans are proposed across the RBD, which are associated with their own impact potential. For example, local authorities are proposing a minimum of 200,000 new dwellings within the timescales of their current Local Plans and Core Strategies. There is also a potential for cumulative impacts with Water Resource Management Plans and SMPs.

1.11 Potential in-combination LSEs with Local Plan development were excluded due to most measures not being associated with impact pathways linking to European sites, the fact that some measures are only included for completeness being driven by entirely separate plan processes, and the strategic nature of the FRMP, meaning that those measures with potential interactions with European sites depend upon considerable further development before the presence of any impact pathways can be clearly identified.

Conclusion

1.12 LSEs of the FRMP on all European sites, both alone and in-combination, were excluded for all measures and an Appropriate Assessment was not required. This was based on various factors, including some measures being carried over from the cycle 1 FRMP (which would have been subject to the statutory consenting process, including HRA), already implemented, not associated with impact pathways linking to European sites or too non-specific (either in terms of specific location, their nature or both) to allow for a detailed, meaningful assessment.

1.13 Notably, four measures were screened out at the strategic FRMP level but recommended for down-the-line HRA since the measures are sufficiently broadly expressed that they could be delivered without adverse effects but this will need to be reassessed as actual schemes are developed. As the details of potential schemes are developed towards the planning application stage, the HRA process will ensure

that adequate mitigation measures, where relevant, are incorporated and the integrity of European sites will be protected.

2. Introduction and Approach to Assessment

Background and Description of the South East River Basin District

2.1 The South East River Basin District (RBD) is one of 10 RBDs across England and Wales, covering over 10,200 square kilometres. It extends from Hampshire in the west to Kent in the east. The RBD also includes East and West Sussex, the Isle of Wight and very small parts of Wiltshire and Surrey.

2.2 The South East RBD is predominantly rural, with most of the inhabitants living in the densely populated coastal zone. In particular, in the low-lying coastal plain of Hampshire and West Sussex. In total, over 3.9 million people live in the South East RBD, which includes the major urban centres of:

- Southampton
- Portsmouth
- Ashford
- Brighton and Hove

2.3 The management catchments that make up the RBD include many interconnected:

- rivers
- lakes
- groundwater bodies
- estuarine waters
- coastal waters

2.4 These range from the chalk streams of the Test and Itchen catchments to the modified rivers of the Rother catchment, and comprise:

The New Forest

- Isle of Wight
- Test and Itchen
- East Hampshire
- Arun and Western Streams
- Adur and Ouse
- Cuckmere and Pevensey Levels
- Rother
- Stour

2.5 The location of these management catchments can be seen in Flood Plan Explorer, the interactive mapping tool. Around 65% of the RBD is used for farming, including:

- livestock
- arable
- horticultural businesses

2.6 Important sectors contributing to the economy of the district include:

- technology
- manufacturing
- tourism
- financial services
- construction

2.7 The South East RBD has a diverse and high-quality landscape with a higher proportion (35%) of land under national landscape designation than any other UK RBD. Large areas are designated for their iconic landscapes such as the New Forest and the South Downs National Parks. Many areas are protected for nature conservation, for example the Solent Estuary. The South East RBD has a rich heritage with many listed buildings and structures, which are often located close to rivers, lakes and the coast.

2.8 The coastline of the RBD is varied with alternating coastal lowlands and chalk and sandstone cliffs. The lowlands include the natural harbours of Portsmouth, Langstone, Chichester and Pagham. Most of the open coast features natural and managed shingle (sand and flint gravel) beaches. There are 2 locations with sand dunes at East Head and Camber, and some sand beaches around the Isle of Thanet. The Victorian legacy on the coast consists of numerous sea-side resorts with associated infrastructure like groynes, sea walls and piers.

2.9 The Isle of Wight is a unique feature within the RBD and even with its relatively small coastline has all of the wider catchment features. This includes the iconic Needles on the west of the island, the marshes at Bembridge and the sandy beaches at Sandown and Ryde.

2.10 The South East RBD has a rich diversity of wildlife and habitats, supporting many species of global and national importance. These include:

- migratory salmon rivers
- native white clawed crayfish
- estuaries and coastal waters important for shellfish, wintering wildfowl, breeding gulls and terns

2.11 The South East RBD shares a border with 3 other RBDs, as follows:

- the South West
- Thames
- Anglian (estuarine/coastal boundary only)

2.12 Within the South East RBD there are:

- Flood Risk Areas (FRAs) for significant risk of flooding from main rivers and the sea
- 4 FRAs for significant risk of flooding from surface water

2.13 The Environment Agency leads development of the Flood Risk Management Plans (FRMP) for River Basin Districts in England and delivery of flood warning services. The draft second cycle FRMP is a plan to manage significant flood risks in designated flood risk areas (FRAs). The ambition is that the FRMP is a strategic, place-based plan which shows what is happening in flood risk management across

the River Basin District. FRMPs focus on the more significant areas of flooding and describe the risk of flooding now and in the future. These plans will help:

- identify actions that will reduce the likelihood and consequences of flooding update plans to improve resilience whilst informing the delivery of existing flood programmes
- work in partnership to explore wider resilience measures, including nature-based solutions for flood and water
- set longer-term, adaptive approaches to help improve the nation's resilience

2.14 This document forms the Habitats Regulations Assessment (HRA) for the South East FRMP. This document considers the potential effects of the FRMP on Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites, either alone or in combination with other plans or projects, and in view of best scientific knowledge.

Legislative context

2.15 The National Site Network of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) is protected via the Conservation of Habitats and Species Regulations 2017 (as amended, most recently in 2019 to reflect Brexit). These regulations also set out the process for assessing potential adverse effects on such sites, known as HRA. Paragraph 181 of the National Planning Policy Framework[1] clarifies that, in England, the HRA process is also applied to another category of internationally important wildlife site called Ramsar sites.

2.16 The legislative basis for HRA is set in the Conservation of Habitats and Species Regulations 2017 (as amended). This states that 'A competent authority, before deciding to … give any consent for a plan or project which is likely to have a significant effect on a European site … shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives… The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site'.

2.17 The competent authority that carries out the HRA (in this case the Environment Agency) is required to apply the precautionary principle to European sites and can only adopt a plan once it has been ascertained that it will not adversely affect the integrity of the site concerned. However, even if significant adverse effects on the designated site are predicted, and in the absence of a suitable alternative solution, the plan can still be adopted in exceptional circumstances where there are deemed sufficient imperative reasons of over-riding public interest (IROPI). In such cases, however, compensatory measures must be implemented.

Overview of HRA process

2.18 The Habitats Regulations do not prescribe a particular methodology for carrying out an appraisal of plans or projects. However, it does set out the specific assessment steps involved. In February 2021 the government provided broad guidance on the HRA process[2]. The most detailed guidance on the HRA process in the UK has been produced by Scottish Natural Heritage (now NatureScot). They outline a series of thirteen steps. However, with cognisance of recent case law (refer to Table1) clarifying when mitigation can be taken into account in the HRA process, the process has been revised to constitute eleven stages (see Figure 1).

2.19 A four-stage methodology for HRA would therefore include:

- HRA Stage 1 – screening (including a 'likely significant effect' judgement)
- HRA Stage 2 – appropriate assessment
- HRA Stage 3 – assessment of alternative solutions
- HRA Stage 4 – assessment where no alternative solutions exist and where adverse effects remain (i.e. consideration of Imperative Reasons of Overriding Public Interest (IROPI)) and identification of compensatory measures

2.20 The first step in the sequence of tests is to establish whether an appropriate assessment is required. This is often referred to as HRA screening. The purpose of HRA screening is to determine, in view of best available scientific knowledge, whether a plan or project, either alone or in combination with other plans or projects, could have likely significant effects (LSE) on a European site, in view of that site's conservation objectives.

2.21 For this purpose, and as a result of case law 'likely' means 'possible', while a 'significant' effect is one which could undermine the Conservation Objectives of a European site. To this end the HRA process applies the 'Precautionary Principle'[3] to European sites. If the competent authority determines that there are no LSE (including 'in combination' effects from other plans or projects), then no further assessment is necessary and the plan or project can, subject to any other issues, be taken forward. If, however, the competent authority determines that there are LSE, or if there is reasonable scientific doubt, then the next step in the process must be initiated and a detailed appropriate assessment undertaken. While a judgment over likely significant effects must be precautionary, the court in R (Boggis) v Natural England [2009] EWCA Civ 1061 also noted that there must be a 'real', rather than a hypothetical, risk to European sites.

2.22 This is relevant to the assessment of the FRMP measures; while many measures commit to the production, update and/or delivery of other plans (such as Water Level Management Plans, WLMPs), or the assessment of options for, or a general commitment to, flood risk management assets in certain locations, the ability to identify 'real' rather than hypothetical impacts is constrained by the fact that considerable further work is needed at lower tiers to develop the plans or schemes in question before specific impact pathways can be identified with any confidence. For example, whether a given WLMP poses a likely significant effect on a given European site will depend entirely on the proposals it contains, which are not set by FRMP measures that commit to updating WLMPs. Similarly, the potential for likely significant effects to arise from 'implementing flood risk management improvements' will vary significantly depending on what is proposed and how it is to be delivered, which may not be determined at the FRMP level; a set-back flood embankment or a flood relief channel may have no implications for a given European site compared to sheet piling in the river.

2.23 The purpose of the appropriate assessment is to carry out sufficient scientific investigation to ascertain whether the plan or project, alone or in combination with other plans or projects, will not adversely affect the integrity of European sites, in view of their conservation objectives and considering any design modifications or mitigation (but not compensatory measures, which can only be considered in exceptional circumstances when requirements for the above HRA Stages 3 and 4 have been met).

2.24 Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the European site(s) in question. Plans and projects with predicted adverse impacts on European sites may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the plan or project in question.

2.25 Over time the term HRA has come into wide currency to describe the overall process set out in the Regulations from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'.

2.26 The HRA has been carried out being mindful of the implications of European case law in 2018, notably the Holohan ruling and the People over Wind ruling, both discussed below.

Figure 1. Stages of the HRA process (adapted from SNH (2015))

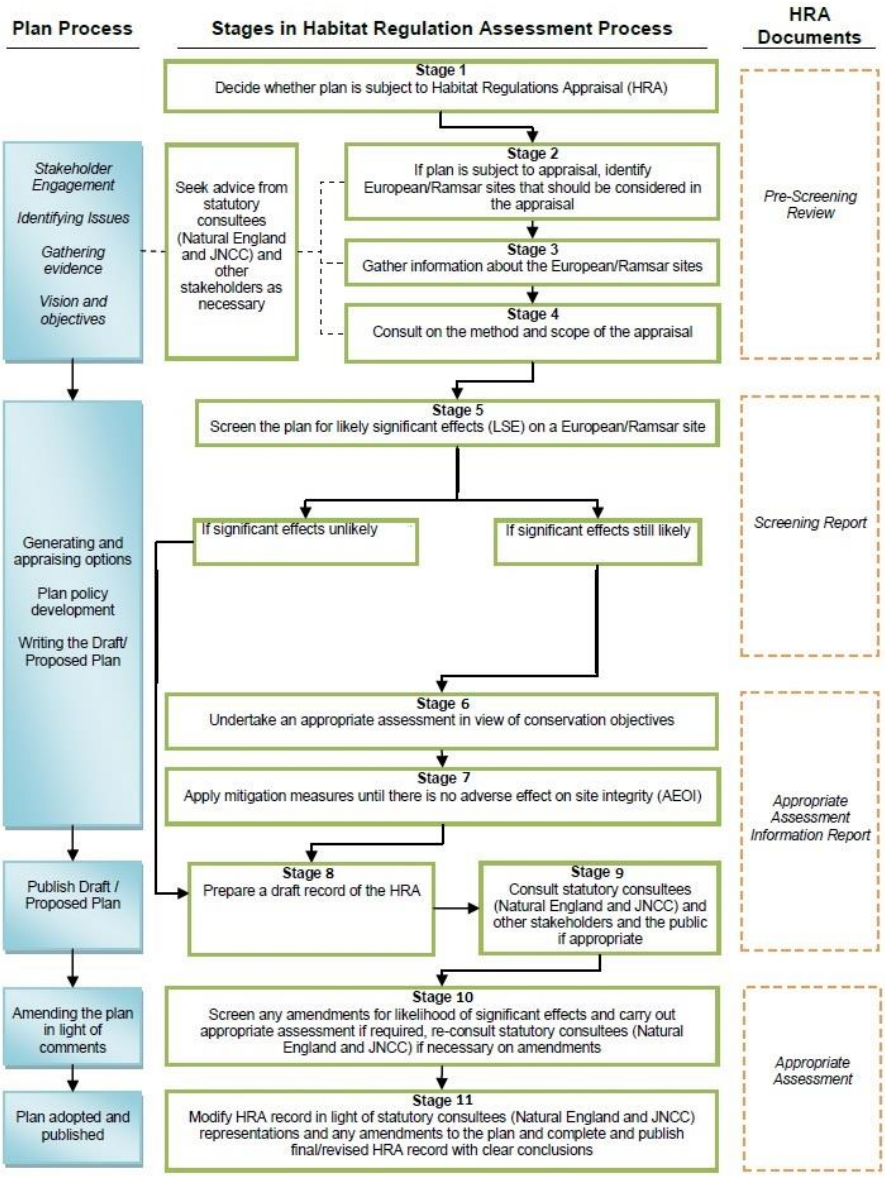


Figure 1 accessible description

Figure 1 shows the plan process, stages in Habitat Regulation Assessment process and HRA documents involved in the HRA process.

The first part of the plan process involves stakeholder engagement, identifying issues, gathering evidence and the vision and objectives. Advice may be needed from statutory consultees, such as Natural England and JNCC, and other stakeholders as necessary. The stages include:

1. Decide whether the plan is subject to Habitat Regulations Appraisal.
2. If the plan is subject to appraisal, identify European and Ramsar sites that should be considered in the appraisal.
3. Gather information about European sites and Ramsar sites.
4. Consult on the method and scope of the appraisal.

A pre-screening review document is needed for stages 1 to 4.

The second part of the plan process involves generating and appraising options, planning policy development and writing the draft/proposed plan. The stages include:

5. Screen the plan for likely significant effects (LSE) on a European or Ramsar site. If the significant effects are unlikely, then move on to stage 8. If significant effects are likely, then continue to stage 6.
6. Undertake an appropriate assessment in view of conservation objectives.
7. Apply mitigation measures until there is no adverse effect on site integrity (AEOI).

A screening report is needed for stage 5 and appropriate assessment information report is needed for stage 6 to 9.

The third part of the plan process involves publishing the draft or proposed plan. The stages include:

8. Prepare a draft record of the HRA.
9. Consult statutory consultees (Natural England and JNCC), other stakeholders and the public if appropriate.

The fourth part of the plan process involves amending the plan in light of comments. This includes stage 10:

10. Screen any amendments for likelihood of significant effects and carry out appropriate assessment if required, re-consult statutory consultees (Natural England and JNCC) if necessary, on amendments.

An appropriate assessment document is needed for stage 10 and 11 of the plan process.

In the fifth and final part of the process the plan is adopted and published. This includes stage 11:

11. Modify HRA record in light of statutory consultees (Natural England and JNCC) representations and any amendments to the plan and complete and publish final/revised HRA record with clear conclusions.

Relevant case law

2.27 As a consequence of the UK's exit from the EU, it was necessary for various amendments to be made to the Habitats Regulations. These changes were required to ensure that England and Wales (and Scotland through separate regulations) continue to maintain the same standard of protection afforded to European sites. The Habitats Regulations remain in force, including the general provisions for the protection of European sites and the procedural requirements to undertake HRA. The changes made were only those necessary to ensure that they remain operable following the UK's exit from the EU.

2.28 Although the UK is no longer part of the EU, a series of prior rulings of the Court of Justice of the European Union (CJEU) are relevant and have been considered when preparing this document. These rulings and their implications for this HRA are summarised in Table 1.

Table 1. Case law relevant to the HRA of the FRMP

Case	Ruling	Relevance to the HRA of the FRMP
People Over Wind and Sweetman v Coillte Teoranta (C-323/17)	The ruling of the CJEU in this case requires that any conclusion of 'no likely significant effect' on a European site must be made prior to any consideration of measures to avoid or reduce harm to the European site. The determination of likely significant effects should not, in the opinion of the CJEU, constitute an attempt at detailed technical analyses. This should be conducted as part of the appropriate assessment.	NatureScot has published guidance on the implications of this ruling for HRA (SNH, 2019). It will be necessary to distinguish between those measures which are intended to avoid or reduce harmful effects on a European site and those elements of the flood management plan that may incidentally provide some degree of mitigation, but which are intrinsic or essential parts of the plan itself. SNH advises that intrinsic parts of a plan can be considered at the screening stage of HRA. If it can be concluded that the Flood management plan area will have no adverse effect on any European site, in the absence of mitigation, it will be possible to conclude 'no likely significant effects', and the need for further detailed appropriate assessment will be 'screened out'.

Case	Ruling	Relevance to the HRA of the FRMP
Waddenzee (C-127/02)	The ruling in this case clarified that appropriate assessment must be conducted using best scientific knowledge, and that there must be no reasonable scientific doubt in the conclusions drawn. The Waddenzee ruling also provided clarity on the definition of 'significant effect', which would be any effect from a plan or project which is likely to undermine the conservation objectives of any European site.	Adopting the precautionary principle, a 'likely' effect in this HRA is interpreted as one which is 'possible' and cannot be objectively ruled out. The test of significance of effects has been conducted with reference to the conservation objectives of relevant European sites.
Holohan and Others v An Bord Pleanála (C-461/17)	The conclusions of the Court in this case were that consideration must be given during appropriate assessment to: • effects on qualifying habitats and/or species of a SAC or SPA, even when occurring outside of the boundary of a European site, if these are relevant to the site meeting its conservation objectives, and • effects on non-qualifying habitats and/or species on which the qualifying habitats and/or species depend and which could result in adverse effects on the integrity of the European site.	This relates to the concept of 'functionally-linked habitat', i.e. areas outside of the boundary of a European site which supports its qualifying feature(s). In addition, consideration must be given to non-qualifying features upon which qualifying habitats and/or species rely.
T.C Briels and Others v Minister van Infrastructuur en Milieu (C-521/12)	The ruling of the CJEU in this case determined that compensatory measures cannot be used to support a conclusion of no adverse effect on site integrity.	Compensation can only be considered at the relevant stage of HRA and not during appropriate assessment. Compensation must be delivered when appropriate assessment concludes that there will be adverse effects on site integrity.

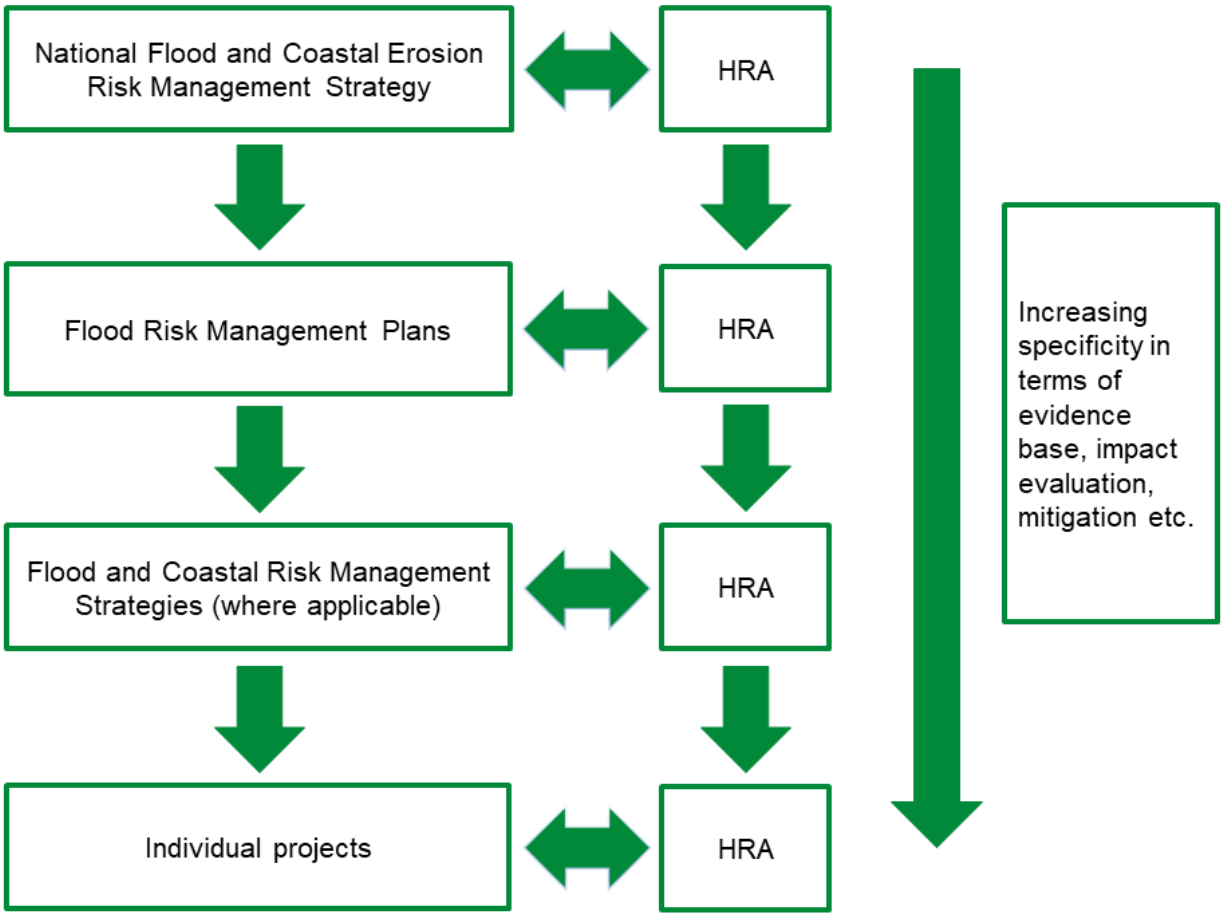
Purpose of this document

2.29 This report forms the HRA of the South East FRMP. It has been prepared with regard to best scientific knowledge and an examination of potential impacts of the Flood Risk Management Plan on European Sites.

2.30 Project-related HRA often requires bespoke survey work and novel data generation in order to accurately determine the significance of effects. In other words, to look beyond the risk of an effect to a justified prediction of the actual likely effect and to the development of avoidance or mitigation measures.

2.31 However, there is a tacit acceptance that HRA can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers as illustrated in Figure 2 below. Note that some measures in the FRMPs come from other plans and are reflected in the FRMP for consistency and completeness.

Figure 2. Tiering in HRA of Land Use Plans



2.32 In any strategic plan, there are numerous measures for which there is a limit to the degree of assessment that is possible at this plan level. This is because either:

- The measure in question does not contain any specific details describing what will be delivered or where so literally cannot be assessed in detail at the plan level.
- Development of a specific type is identified but the nature of the potential impacts are dependent on exactly how the development will be designed and constructed and therefore cannot be assessed in detail at the plan level but rather at the scheme level.

2.33 For example, NatureScot has published guidance[4] that indicates a measure or initiative in a higher tier plan can be screened out without further analysis if:

a. they are intended to protect the natural environment

b. they will not themselves lead to development or other change

c. they make provision for change but could have no conceivable effect on a European site

d. they make provision for change but could have no significant effect on a European site, or

e. effects on any particular European site cannot be identified because the measures are too general or lack any spatial definition.

2.34 Similarly, the Habitats Regulations Assessment Handbook[5] sets out three criteria in section F.10.1.5, that it considers would make it reasonable to defer further assessment to a lower tier plan or project:

a. The higher level plan assessment cannot reasonably predict any effect on a European site in a meaningful way; and

b. The lower level plan or project, which will identify more precisely the nature, timing, duration, scale or location of the measure, and thus its potential effects, will have the necessary flexibility over the exact nature, timing, duration, scale and location of the measure to enable an adverse effect on site integrity to be avoided; and

c. The HRA of the lower tier plan or project is required as a matter of law or government policy.

2.35 In these cases, the HRA focusses on setting down-the-line requirements for more detailed assessment at the scheme level that can be included in the plan to ensure that whatever proposals come forward will not result in adverse effects on integrity. On these occasions the advice of Advocate-General Kokott[6] should be considered. She commented that: 'It would …hardly be proper to require a greater level of detail in preceding plans [rather than planning applications] or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure**'**.

2.36 Similarly, published EU guidance on HRA states: 'Where one or more specific projects are included in a plan in a general way but not in terms of project details, the assessment made at plan level does not exempt the specific projects from the assessment requirements of Article 6(3) at a later stage, when much more details about them are known.'[7]

2.37 It is also important to consider the approach taken regarding coastal defence schemes and strategies. The stance throughout all FRMP HRAs is that, provided measures are already covered by the SMP/Coastal Strategy process or another HRA process, then these measures are effectively included in the FRMPs for completeness. The FRMPs are not the source plans for these schemes and they are already committed elsewhere. The SMP and Coastal Strategies will be updated as part of their normal cycle and that will include revision to their HRAs which will take account of any changes in evidence. Each scheme will also have its own HRA before it is consented. In these cases, the DTA handbook states that plan elements can be screened out if they have, or will be subject to, HRA under another plan and this plan (the FRMP) would not materially change if they were omitted.

2.38 This is the approach taken in the HRA of the FRMP to avoid confusing the FRMP with other plan processes (such as Shoreline Management Plan (SMP) and Coastal Strategy processes) that have their own separate HRA, or the individual schemes that are referenced in the FRMP and will be taken forward subject to significant further work including outline design, detailed design, securing of funding, community consultation and securing of necessary consents and permits. The fact that a scheme is referenced in the FRMP does not prejudge the down-the-line permitting processes.

The 'in Combination' Scope

2.39 It is a requirement of the Habitats Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the European site(s) in question.

2.40 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation, i.e. to ensure that those projects or plans which in themselves have minor impacts are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee[8] case.

2.41 For the purposes of this HRA, in-combination assessment is focussed on the plans and projects identified in the Strategic Environmental Assessment (SEA) Environmental Report of the FRMP. The plans and projects were identified in the SEA as having a significant interaction with the FRMP for biodiversity, flora and fauna and required consideration. The key relevant plans and projects with a potential for in-combination effects are:

- Mid-Sussex District Plan
- Horsham District Local Plan
- Chichester Local Plan
- Tunbridge Wells Local Plan
- Brighton and Hove City Plan Part One. Brighton and Hove City Council's Development Plan
- Draft Portsmouth Local Plan 2038
- Eastbourne Borough Plan
- Hastings Borough Council Local Plan
- Lewes Core Strategy: Local Plan Part 1and 2
- Rother District Council Local Plan
- South Downs Local Plan
- Wealden District Council Local Plan
- Basingstoke and Deane Borough Council Local Plan
- East Hampshire Adopted Local Plan
- Eastleigh Borough Local Plan
- Fareham Borough Council Local Plan

- Gosport Local Plan
- Hart Local Plan
- Havant Core Strategy Local Plan
- New Forest Local Plan
- Rushmoor Local Plan 2036
- Test Valley Local Plan
- Winchester Local Plan
- New Forest National Park Authority
- Ashford Local Plan
- Canterbury City Local Plan 2031
- Dartford Local Plan
- Dover Draft Local Plan
- Folkestone and Hythe Local Plan
- Gravesham Local Plan
- Maidstone Borough Local Plan
- Sevenoaks Emerging Local Plan
- Swale District Local Plan 2031
- Thanet District Local Plan
- Tonbridge and Malling Borough Council
- Isle of Wight Local Plan
- National Flood and Coastal Erosion Risk Management Strategy for England
- draft South East River Basin Management Plan
- Portsmouth Local Flood Risk Management Strategy
- Southampton Local Flood Risk Management Strategy
- Brighton and Hove Local Flood Risk Management Strategy
- East Sussex Local Flood Risk Management Strategy
- West Sussex Local Flood Risk Management Strategy
- Kent Local Flood Risk Management Strategy
- evolving ‘Southern Water Drainage and Wastewater Management Plans
- Isle of Grain to South Foreland Shoreline Management Plan
- South Foreland to Beachy Head Shoreline Management Plan
- Beachy Head to Selsey Bill (South Downs) Shoreline Management Plan
- Selsey Bill to Hurst Split (North Solent) Shoreline Management Plan
- Portsea Island Coastal Strategy Study
- River Hamble to Portchester Coastal Strategy
- Portchester Castle to Emsworth Coastal Strategy
- Folkestone to Cliff End Coastal Strategy
- Brighton and Hove Surface Water Management Plan
- Hastings Surface Water Management Plan
- Eastbourne Surface Water Management Plan

- Portsmouth Surface Water Management Plan
- SDNP: South Downs National Park Partnership Management Plan. 2013
- NFNP: Partnership Plan for the New Forest National Park. 2015
- South East Biodiversity Strategy: South East England Biodiversity Forum. 2009
- Water Level Management Plans (respectively Pevensey Levels, Lewes Brooks)

2.42 The potential for ‘in combination’ effects between these plans and projects and the FRMP are discussed later in this document.

3. Pathways of Impact

Direct habitat loss

3.1 Any permanent, irreversible, habitat loss from a designated site that will result in the loss of qualifying habitats and / or species, or habitats that support the designated species, will be adverse, although to affect the integrity of the site (the coherence of its structure and function) the loss must be sufficiently adverse that it materially impairs the achievement of the Conservation Objectives for the site.

3.2 Various developments can result in the loss of habitat in European Sites, either temporary or permanent. Temporary habitat loss (e.g. such as due to the need for a construction period footprint to encroach on a site) is potentially reversible depending on what the site is designated for, and there is also potential for deploying mitigation measures to avoid adverse effects on site integrity. In contrast, the permanent loss of designated habitat will result in a reduction of coverage of a potentially very rare ecosystem, with potential knock-on impacts on dependent qualifying species.

3.3 Plans or projects that result in the loss of land from a SAC can be approved in certain situations (please see Defra (2012)[9], even if the loss is sufficient to adversely affect the integrity of an SAC, if three sequential tests are met:

- no feasible alternative solutions to the plan or project exist that are less damaging
- imperative reasons of overriding public interest (IROPI)
- compensatory measures secured to ensure that the overall coherence of the European Site network is maintained

Inappropriate Coastal Management Including Coastal squeeze

3.4 Inappropriate coastal management covers any coastal management activities that would interfere with natural coastal processes to such an extent that they would potentially interfere with the ability of European sites to achieve their conservation objectives. Examples of inappropriate coastal management include:

- Reduced sediment supply to adjacent frontages, resulting in loss of habitat area. For example, defending the Holderness Coast in East Yorkshire results in a reduction in the amount of longshore sediment that would otherwise be transported into the Humber Estuary SAC/SPA/Ramsar site and this in turn could affect the persistence of features that require a continued supply of sediment, such as Spurn Point.
- Presence of flood risk management defences causing habitat erosion seawards of those defences due to wave reflection. This is more of an issue with some types of defence (such as sheet metal piling) than with other types of defence.
- Restriction of the area of intertidal habitat in front of the flood risk management defences.
- Coastal squeeze.

3.5 Coastal squeeze is defined by government as 'the loss of natural habitats or deterioration of their quality arising from anthropogenic structures or actions, preventing the landward transgression of those habitats that would otherwise naturally occur in response to sea level rise in conjunction with other coastal processes. Coastal squeeze affects habitat on the seaward side of existing structures.'[10]

3.6 Measures which involve a 'Hold the Line' approach by establishing a hard structure or maintaining the existing standard of protection by improving the defences, have the potential to result in the loss of seaward habitats as a consequence of coastal squeeze. The process of coastal squeeze prevents the landward transgression of habitats in response to climate change and resulting sea level rise. Over time, unmitigated coastal squeeze would inevitably lead to the cumulative loss of designated habitats and supporting functionally-linked habitats. Coastal squeeze impacts due to measures have already been fully explored and mitigation or compensation quantified if necessary through the SMP and Coastal Strategy process and their HRAs, and through the Flood and Coastal Erosion Risk Management (FCERM) National Strategy 2021 and compensation delivered in the form of the Habitat Compensation Programme. Therefore, coastal squeeze is scoped out of this HRA.

3.7 All the FRMPs contain measures which refer to implementing or updating Shoreline Management Plans or Coastal Strategies or flood and coastal erosion risk management schemes that are contained within those documents. In commenting on the draft version of the HRA, Natural England advised the SMP Health Check documents will include detail on what changes to SMP HRAs will be required to account for (for example) changes in sea level rise predictions. However, these reports have not yet been completed or published, and as such this information is not yet available.

3.8 The approach taken throughout all FRMP HRAs is that, provided such schemes are already covered by the SMP/Coastal Strategy process or another HRA process, these measures are effectively included in the FRMPs for completeness. The FRMPs are not the source plans for these schemes and they are already committed elsewhere. The SMP and Coastal Strategies will be updated as part of their normal cycle and that will include revision to their HRAs which will take account of any changes in evidence. Each scheme will also have its own HRA before it is consented.

Disturbance

3.9 Flood risk management construction works can result in noise or visual disturbance of qualifying species in European sites, both during the construction and operational periods. For example, noise and visual disturbance arising from construction may result in temporary behavioural changes in otters (e.g. disturbance in holts, displacement from specific stretches of the river). Piling noise during construction of defences could displace over wintering or breeding birds for which an SPA is designated. Three of the most important factors determining the magnitude of disturbance from construction schemes appear to be species sensitivity, proximity of the disturbance source and timing / duration of the disturbance.

Birds

3.10 Development schemes (such as those for flood risk management assets) can result in the disturbance of qualifying SPA / Ramsar bird species in European sites or

functionally linked habitats and this can apply whatever activity the bird is undertaking, whether nesting, foraging, loafing or roosting. Noise and visual disturbance arising from construction activities may result in behavioural changes (e.g. flight from the nest, cessation of foraging) in birds. Furthermore, post-construction disturbance from site usage, road traffic and operational lighting might also arise. Three of the most important factors determining the magnitude of disturbance appear to be species sensitivity, proximity of the disturbance source and timing / duration of the disturbance. Generally, the most disturbing visual and auditory stimuli are likely to involve irregular, infrequent, unpredictable loud noise events, movements or vibrations. Birds are least likely to be disturbed by activities that involve regular, predictable and quiet patterns of sound or movement. The further any activity is from the birds, the less likely it is to result in disturbance.

3.11 An increasing amount of research on visual and noise disturbance of waterfowl from construction (and other activities) is now available. Both visual and noise stimuli may elicit disturbance responses, potentially affecting the fitness and survival of waterfowl and waders. Noise is a complex disturbance parameter requiring the consideration of multiple parameters, including the fact that it is not described on a linear scale, its nonadditive effect and the source-receptor distance. A high level of noise disturbance constitutes a sudden noise event of over 60dB or prolonged noise of over 72dB. Bird responses to high noise levels include major flight or the cessation of feeding, both of which might affect the survival of birds if other stressors are present (e.g. cold weather, food scarcity).

3.12 Generally, research has shown that above noise levels of 84 dB waterfowl show a flight response, while at levels below 55dB there is no effect on their behaviour[11]. These two thresholds are therefore considered useful as defining two extremes. The same authors have advised that regular noise levels should be below 70 dB at the bird, as birds will habituate to noise levels below this level[12]. The Waterbird Disturbance Mitigation Toolkit published by the Institute of Estuarine & Coastal Studies in 2013, summarises the key evidence base relating to the noise disturbance impact pathway[13]. Generally, noise is attenuated by 6 dB with every doubling of distance from the source. Impact piling, the noisiest construction process of approx. 110 dB at 0.67m from source, will therefore reduce to 67-68dB by 100m away from the source. The loudest construction noise should therefore have fallen to below disturbing levels by 100m, and certainly by 200m, away from the source even without mitigation. Note that this is a rule of thumb and does not obviate the need for application-level noise modelling. However, comparison with baseline noise levels will also be important in any assessment rather than purely using comparison with the 70 dB metric (see paragraph below).

3.13 An alternative approach to assessment is to consider the relative change in the noise levels experienced by birds, rather than an absolute noise threshold. There are no formal guidelines that define a change threshold that is deemed disturbing to waterfowl and waders, but they are thought to have hearing comparable to humans. For humans a change of 3 dB defines the threshold for a change in noise to be perceptible (in other words, a change of 1 or 2 dB cannot be detected by the human ear). However, there is a significant difference between being able to notice that a noise has gotten louder and finding the increase in noise to be sufficiently intolerable that it causes displacement or otherwise significantly disrupts activity. Therefore, 3 dB may be an excessively precautionary threshold to use for judging disturbance. Due to the logarithmic nature of the decibel scale a change of 5 dB increase at the receptor is approximately a 50% increase in perceived loudness while a 10 dB increase is a

doubling in perceived loudness or sound intensity. It is reasonable to assume that an increase of 10 dB would run a high risk of causing adverse impacts to bird behaviour such as flushing, for the duration of exposure.

3.14 Visual disturbance is generally considered to have a higher impact than noise disturbance as, in most instances, visual stimuli will elicit a disturbance response at much greater distances than noise[14]. For example, a flight response is triggered in most species when they are approached to within 150m across a mudflat. Visual disturbance can be exacerbated by workers operating equipment outside machinery, undertaking sudden movements and using large machinery. Some species are particularly sensitive to visual disturbance[15], including curlew (taking flight at 275m), redshank (at 250m), shelduck (at 199m) and bar-tailed godwit (at 163m). In some areas, greater distances have been agreed between Environment Agency and Natural England, at least for purposes of HRA Screening. For example, in the Humber Estuary area have agreed a precautionary distance of 300m for the purposes of assessment of bird disturbance.

Fish / Marine Mammals

3.15 Fish use sound for vital life functions, requiring it for completion of their life cycle as well as maintaining productivity. A review of 115 primary studies (66 of which were investigating fish species) highlights that noise disturbance leads to a wide range of impacts in fish, including their development, anatomy, physiology, stress levels and behaviour[16]. A study comparing the foraging behaviour of perch and roach, found that both species showed significantly fewer feeding attempts when exposed to motorboat noise[17]. For roach, which are better hearing than perch, no habituation to noise occurred over time. In a study of pink snappers (similar to many other commercial species such as tuna, cod and haddock), it was determined that a single seismic air gun with a source noise level of 222.6dB re 1uPa resulted in extensive damage to the ears, with no apparent recovery after 58 days[18]. The impacts of noise may not be immediately visible, as demonstrated by a noise playback experiment on perch, carp and gudgeon. Exposure of the fish to underwater ship noise, resulted in cortisol increases of between 81% to 120% compared to control values[19]. Notwithstanding this evidence, it is important to note that extrapolations from noise impact studies to different settings or species should be made with caution.

3.16 Construction noise also presents a significant threat (both regarding injury and mortality) to marine mammals, including harbour porpoise and grey seals. For example, the density of harbour porpoise has been shown to be significantly reduced for several kilometres surrounding seismic surveys and impact piling activities[20] [21]. Noise impacts can also cause avoidance/ displacement of haul out sites and increased energy expenditure in finding food. Cetaceans produce and receive sound over a great range of frequencies for use in communication, orientation, predator avoidance and foraging. Interference with these important behaviours has the potential to result in significant negative impacts Harbour porpoise are high frequency cetaceans that have low sensitivity thresholds to impulsive sound sources. Anthropogenic sound has the potential to result in direct effects on the hearing ability of mammals (among other impacts, such as behavioural responses and masking of other underwater sounds), including Permanent Threshold Shifts (PTS) and Temporary Threshold Shifts (TTS)[22]. Some construction works within the marine environment may require Unexploded Ordnance (UXO) detonation, which involves impulsive sound elements stretching over tens of kilometres. In practice, it is typically not known whether such works will be required. Guidance from the Joint Nature

Conservation Committee (as utilised for example in the HRA of the South-West England Marine Plan) confirms that a likely significant effect via underwater noise could affect European sites up to 50km distant depending on the nature of the works.

Hydrology

3.17 The water level, its flow rates and the mixing conditions are important determinants of the condition of European sites and their qualifying features. Hydrological processes are critical in influencing habitat characteristics in wetlands and coastal waters, including current velocity, water depth, dissolved oxygen levels, salinity and water temperature. In turn these parameters indirectly determine the short- and long-term viability of plant and animal species, as well as overall ecosystem composition.

3.18 Many animal species are directly sensitive to hydrological changes, including the drying and excessive flooding of habitat. For example, many species (partially) restricted to the aquatic environment are sensitive to periodic or permanent drying, because this reduces the extent of supporting habitat available. This includes species such as the great-crested newt, southern damselfly, white-clawed crayfish and a diverse array of fish (e.g. Atlantic salmon, river lamprey, sea lamprey). In contrast, excessive flooding can result in sub-optimal water levels for foraging birds, such as small waders. If water is too deep, some species may not be able to access their primary prey species, with potential implications for foraging efficiency.

3.19 Wetland, riverine, estuarine and coastal habitats rely on hydrological connections with other surface water systems. A supply of water within natural limits is fundamental to maintaining the ecological integrity of sites. However, while the natural fluctuation of water levels within narrow limits is desirable, excess or too little water supply might cause the water level to be outside of the required range of plant and animal species. This might lead to the loss of the structure and function of aquatic habitats.

3.20 FRMPs generally propose measures to reduce the magnitude and impacts of potential flooding events. This may involve a wide range of interventions, such as flood defences and natural flood management techniques. If any such measures are delivered in the proximity to hydrology-dependent European sites, they may have implications for the water level in designated site boundaries. For example, a natural flood management intervention delivered immediately upstream of a designated floodplain or waterbody, while intended to restore the hydrological regime to a natural baseline, could reduce the volume of freshwater input to and flooding regime in that downstream European site.

Pollution

3.21 The quality of the water that feeds European sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour.
- Eutrophication, the enrichment of water with nutrients, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration.

The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In freshwater ecosystems, plant growth is primarily determined by phosphorus concentrations, which are determined by a wide range of sources, including treated sewage effluent from Wastewater Treatment Works and urban surfaces such as roads.

- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.

3.22 There is an obligation for flood risk protection, management and resilience schemes to consider water quality impacts. Under the Environmental Damage (Prevention and Remediation) (England) Regulations 2015 and the Environmental Permitting (England and Wales) Regulations 2016, it is illegal to pollute watercourses. Individual planning proposals will undergo Preliminary Ecological Appraisal (PEA) or Environmental Impact Assessment (EIA), if identified as Schedule 1 or Schedule 2 proposals by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. As such, water quality protection measures must by law be introduced on any scheme that could affect the water quality of the river or coastal environment, irrespective of whether part of that environment is designated as an SAC or SPA.

3.23 For this reason, this particular impact pathway has not been used as a basis to screen in measures in this FRMP or identify the need for down-the-line HRA at lower planning tiers, as protecting water quality will be an inherent element in delivery of all measures irrespective of the designation status of linked waterbodies, watercourses and sensitive sites.

Functionally-Linked Land

3.24 While most European sites have been geographically defined in order to encompass the key features that are necessary for coherence of their structure and function, this is not the case for all such sites. Due to the highly mobile nature of waterfowl, it is inevitable that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of the European site for which they are an interest feature. However, this area will still be essential for maintenance of the structure and function of the interest feature for which the site was designated and land use plans that may affect this land should still therefore be subject to further assessment. This has been underlined by a recent European Court of Justice ruling (C-461/17, known as the Holohan ruling[23]) which in paragraphs 37 to 40 confirms the need for an appropriate to consider the implications of a plan or project on habitats and species outside the European site boundary provided that those implications are liable to affect the conservation objectives of the site.

3.25 Certain management approaches, while positive for coastal processes, could result in the loss of landward habitats, such as coastal grazing marsh, grassland, reedbeds and arable land. Birds are mobile species and are also dependent on sites outside of formal designations and rely on the availability of a network of feeding and roosting resources over the winter period.

Spread of invasive non-native species

3.26 Invasive non-native species can have detrimental impacts on native species and habitats. Their spread can occur during construction and operation of a development, and via multiple pathways (for example via watercourses or on the treads of construction machinery).

3.27 Under the Wildlife and Countryside Act 1981, as amended, and the Invasive Alien Species (Enforcement and Permitting) Order 2019, it is an offence to cause any plant to spread or grow in the wild outside of its native range. Appropriate biosecurity measures will therefore also be implemented during works carried out during both the construction and operational phases of any scheme to prevent the spread of invasive non-native species, irrespective of whether there are European sites in the vicinity.

4. Test of Likely Significant Effects

4.1 When seeking to identify relevant European sites, consideration has been given primarily to identified impact pathways and the source-pathway-receptor approach, rather than adopting a purely 'zones'-based approach. The source-pathway-receptor approach is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means there is no possibility for an effect to occur. Furthermore, even where an impact is predicted to occur, it may not result in significant effects (i.e. those which undermine the conservation objectives of a European site). Briefly defined, pathways are routes by which a change in activity can lead to a significant effect upon a European site.

4.2 The likely zone of impact (also referred to as the likely 'zone of influence') of a plan or project is the geographic extent over which significant ecological effects are likely to occur. The zone of influence of a plan or project will vary depending on the specifics of a particular proposal and must be determined on a case-by-case basis with reference to a variety of criteria, including:

- the nature, size / scale and location of the plan
- the connectivity between the plan and European sites, for example through hydrological connections or because of the natural movement of qualifying species
- the sensitivity of ecological features under consideration
- the potential for in-combination effects

4.3 There is no geographical limit beyond which plans need not be considered by HRA. However, as a first step in identifying European sites which may be relevant, a search was made for sites within the River Basin District, or within 10km of the River Basin District. Consideration was then given to their hydrological sensitivity and the potential for them to be connected to flood risk management measures. The European sites identified within this search area is given in Table 2. Note that there are numerous European sites within the River Basin District or within 10km of it which are not hydrologically sensitive or likely to be affected by flood defences or are hydrologically sensitive but would not be linked to potential flood risk management activities. These are not listed below as they are scoped out of the HRA process.

4.4 Full details of the Europeans sites (including Conservation Objectives and pressures and threats) are available in Appendix A.

4.5 There are numerous hydrologically sensitive European sites across the South East River Basin District, which can generally be divided into freshwater and coastal habitats. These European sites are characterised by a gradient in their extent of hydrological dependency. While some sites (e.g. the River Itchen SAC) form an integral component of the RBD because they constitute freshwater bodies, others (e.g. Arun Valley SAC, Emer Bog SAC and Ashdown Forest SAC) are not themselves freshwater bodies but rely on continuous freshwater input from surface waterbodies and groundwater sources for sustained flooding and / or permanent standing water. A third category of European sites, especially sites that are designated for the features 'Northern Atlantic wet heaths with *Erica tetralix*' and '*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)', have impeded drainage and rely on freshwater supply from a combination of sources, including groundwater and

surface water. Generally, rivers and sites with strong hydrological linkages (e.g. those on floodplains or bisected by major freshwater bodies), are likely to be most at risk from the measures contained in the South East FRMP. Regardless, European sites with less obvious or unclear hydrological connections that rely on extended periods of wetting, are nonetheless included in this assessment.

4.6 Estuarine, coastal and some inland terrestrial European sites have additional sensitivities (beyond hydrology) potentially linking to FRMP measures. For example, marine SPAs, Ramsars and SACs (e.g. Dungeness SAC, Margate and Long Sands SAC and Sandwich Bay SAC) are designated for, or depend on, intertidal habitats such as Atlantic saltmarshes and mudflats. These estuarine / coastal habitats are under threat from coastal squeeze, whereby development or flood defences immediately inland, prevent their landward migration in response to sea level rise. FRMP measures adjoining these sites have the potential to contribute to habitat loss from estuarine and coastal sites through coastal squeeze. Furthermore, all SPAs / Ramsars, whether inland or on the coast, are sensitive to visual and noise disturbance arising during the implementation period of FRMP schemes, for example due to the presence of construction workers or the use of noisy construction equipment (e.g. piling).

4.7 None of the measures in the South East River Basin District FRMP have been identified to result in Likely Significant Effects (LSEs) on European sites. This is generally because the measures are:

- too non-specific to assess meaningfully
- already being implemented
- being subjected to a separate HRA consenting process (e.g. Local Flood Risk Management Plans (LFRMPs) or SMPs will involve their own HRA process)
- essentially desk-based with a view to undertaking a study or enhancing knowledge
- remote from hydrologically sensitive European sites; or
- worded such that they are about ‘investigating’, ‘reviewing’ or ‘identifying opportunities for’ interventions, rather than committing to physical work on the ground

4.8 Any specific schemes that subsequently emerge from the investigation/review will be subject to their own down-the-line HRA process.

4.9 One group of measures goes beyond ‘investigating’, ‘reviewing’ or ‘identifying’ by committing to ‘delivering’ or ‘implementing’ flood management interventions, making it clear that physical work on the ground will occur. In some instances, particularly for Management Catchment measures, the broad (and, occasionally, specific) location for these measures is known, while details of their implementation are not. Given the absence of details at the FRMP level, and in line with the approach to tiering of HRA set out in Section 2, HRA (including Appropriate Assessment as necessary) must be deferred to later scheme development, lower tier plans, the outline business case and/or the planning application stage. Measures where this screening outcome applies have been categorised as ‘No Likely Significant Effect, but down-the-line HRA required’. This approach has been adopted to account for the strategic (and thereby necessarily non-specific) nature of the FRMP, while also identifying the measures with the highest impact potential on European sites. One example of such measures are discussed in the following paragraph (for the full range of measures requiring down-the-line assessment please refer to Table 4).

4.10 ‘Undertake works to better manage the coastal flood and erosion risk from Holywell, Eastbourne to Cooden in East Sussex” is a measure proposed in the Eastbourne and Pevensey Bay flood risk area. It is noted that managing coastal flooding and erosion is likely to be positive for nearby coastal European sites. Notwithstanding this, care must be taken to ensure that inadequately sited or conceptualised coastal defence programmes do not result in inadvertent physical impacts on costal European sites such as by accelerating coastal erosion further along the coastline. Furthermore, the implementation of coastal engineering is likely to involve earthworks, site staff and construction plant, which is associated with the potential for visual / noise disturbance, impacts on water quality and loss of functionally linked habitat. Therefore, it is concluded that this measure should be subjected to down-the-line HRA.

4.11 One broader matter requiring consideration as part of the Likely Significant Effects process is the extent to which any measures, through committing to the status quo, may be contributing to the exacerbation or persistence of an existing water-related problem at European sites. However, for the South East region no specific measures have been identified that contain proposals that would reinforce a negative situation, subject to down-the-line HRA for any schemes that may emerge from the numerous studies committed to in the FRMP. Although not technically within the remit of HRA, it is nonetheless noted that there are several measures that present opportunities for improving the hydrological situation at European sites in affected areas, in conjunction with nature recovery plans and catchment sensitive farming. The following are identified as measures with positive impact potential, all of which apply to coastal areas and European sites as the coast is the predominant slant of the measures in the South East FRMP:

- The measure ‘Work collaboratively with the Environment Agency on reducing coastal erosion and flood risk along the shoreline in the Harbour View to Cador Drive and Fareham Quays areas’ relates to an area which lies adjacent to Portsmouth Harbour SPA/Ramsar. Reductions in flooding and coastal erosion in the area surrounding the protected site could benefit the site by making it more resilient.

- The measure ‘Investigate innovative ways of managing flows and runoff into watercourses (including Natural Flood Management) and implement plans and policies in Southampton’ could benefit the protected sites within Southampton by reducing flood impact. These sites include Solent and Southampton water SPA/Ramsar, Solent maritime SAC and River Itchen SAC,

- The measure ‘Construct the North Portsea Island Coastal Flood and Erosion Risk Management Scheme, with ecological enhancements, in the Tipner to Milton area’ relates to the Tipner to Milton area which lies adjacent to Portsmouth Harbour SPA/Ramsar sites. Resulting ecological enhancements could benefit the site either directly, or indirectly by aiding preservation and enhancement of functionally-linked fields for brent goose and waders beyond the SPA.

- The measure ‘Develop a sustainable solution to flood risk management that meets the legal requirement in Farlington Marshes’ relates to Farlington Marshes which is part of the Chichester & Langstone Harbours SPA/Ramsar site. A sustainable solution to flood risk management could benefit the protected sites, on the basis that if it adversely affected the SPA it wouldn’t be a sustainable solution.

- The measure ‘Update the East Solent Coastal Flood Modelling to include new climate change allowances for sea level rise in the harbours and coast surrounding Portsea Island’ relates to sea level rise in and around Portsmouth. Better prediction of sea level rise may allow for European sites to better prepare and have increased resilience. Sites effected include Chichester and Langstone harbour SPA/Ramsar, Solent maritime SAC and Portsmouth harbour Ramsar/SAC

4.12 Between them these measures could provide opportunities to improve the hydrological situation in sensitive European sites as well as protecting homes and economic assets.

4.13 Hydrologically sensitive coastal European sites occupy parts of the Kent, East and West Sussex, Hampshire and Isle of Wight coastline. There are numerous measures in the South East FRMP which refer to implementing or reviewing Coastal Strategies and SMPs. Such plans and strategies present considerable potential for impacts on sensitive coastal sites as set out in Section 3, particularly coastal squeeze, direct habitat loss from coastal defence footprints and (depending on use of land outside SPA boundaries by qualifying wildfowl and waders) loss of functionally-linked land.

4.14 However, the FRMP does not decide the content of either SMP’s or Coastal Strategies (including the package of underlying schemes) as these are subject to their own independent development and assessment processes, including HRA. The FRMP’s are essentially referencing these strategies and plans to create a complete picture of flood risk management in coastal areas. Therefore, despite the potential SMPs and Coastal Strategies possess for affecting European sites, the FRMP measures relating to those plans will not result in likely significant effects.

4.15 Measures that commit to ‘reviewing’ SMP’s or Coastal Strategies do contain within them the potential to also commit to shaping those plans with a view not simply to managing flood risk to human assets but also positively influencing persistence and/or recovery of coastal habitats. This is not strictly an HRA consideration, since HRA is fundamentally about identifying whether given measures will interfere with the ability of European sites to achieve their conservation objectives, rather than shaping them to positively contribute towards achievement of those objectives. However, those measures could be amended to include reference to shaping the next generation of SMP’s and Coastal Strategies to not only take account of the latest sea level rise projections but also opportunities to improve achievement of conservation objectives for the European sites on the relevant frontage.

4.16 The Site Improvement Plan for the Solent covers the Solent Maritime SAC, Solent and Southampton Water SPA, Portsmouth Harbour SPA and Chichester and Langstone Harbours SPA. The Solent Maritime SAC is under pressure from many existing anthropological pressures and is currently failing its conservation objectives in relation to water quality and geomorphology changing flows to estuary features. The fluctuations in freshwater flows are resulting in increased saltwater intrusion into designated freshwater environments which negatively effects the freshwater communities. The Solent and Southampton Water SPA and Ramsar site and Portsmouth Harbour SPA and Ramsar are already failing their Conservation Objectives in relation to water quality.

4.17 The SIP states ‘Habitats are being lost as they are squeezed between rising sea levels and hard coastal defences that are maintained. There is a direct impact due to loss of the SAC habitats such as saltmarsh. There is also an impact on birds due to

the loss of habitat for feeding, roosting and breeding. In some areas rising sea levels will result in coastal grasslands being lost to more saline grasslands, thus losing habitat for some breeding waders of the waterbird assemblage… Changes to land management are likely to occur in areas where tidal flaps/sluices are altered and this results in changes to water levels or salinity of that land. Some sluices are failing, which may also result in changes to water levels or salinity of land. Some ditches and drains are neglected and this can cause difficulties in land management, resulting in changes… Private sea defences are causing disruption to the natural processes of allowing erosion to move sediments around the SAC… There is an increasing loss of salt-marsh in much of the Solent for reasons unknown, and this needs to be investigated' and includes targets that include investigating the causes of some of the issues and to provide alternative grazing marsh habitat to compensate for habitat loss as a result of managed realignment schemes, to compensate for coastal squeeze. There are multiple measures within the FRMP that target the issues of erosion and related land loss in the absence of adequate management. These include 'construct the Southsea Coastal Flood and Erosion Risk Management Scheme, with ecological enhancements, in the area from Old Portsmouth to Eastney' and 'Develop a sustainable solution to flood risk management that meets the legal requirement in Farlington Marshes'. The SIP also states 'water pollution affects a range of habitat and bird species at the site through eutrophication and toxicity' which may be benefited by the FRMP measure 'work together to reduce combined sewer flooding in the Little Morass area in Southsea'.

4.18 River Itchen SAC may also be suffering from unacceptably low flows at times, as well as water quality issues from increased phosphorus. The Site Improvement Plan for the River Itchen SAC states 'the Itchen faces numerous pressures from water abstraction and flow diversions, discharges, agricultural runoff, channel modifications, fisheries management and human impacts associated with the urbanisation alongside much of the river`s valley' FRMP measures that may benefit the SAC include 'Implement the first phase of the Southampton Coastal Flood and Erosion Risk Management Strategy in Southampton between Northam Bridge and Itchen Bridge on the west bank of the River Itchen'.

4.19 The Site Improvement plan for the Stodmarsh SAC/SPA/Ramsar site states 'Poor water quality has been recorded in the NNR lake (Unit 10) and associated reedbeds. The Lampen stream and Great Stour which feeds into the lake have fairly high nitrogen levels, and orthophosphate levels regularly over 100ug/L, especially since 2009. This leads to a reduction in fish stocks and macrophytes, which impacts on food availability for SPA birds (bittern, gadwall). It is unknown what impact it may have on populations of the SAC feature (Desmoulin's whorl snail)… Nitrogen deposition exceeds site-relevant critical loads'. The FRMP measure 'Carry out a Flood Action Campaign in Canterbury' and 'Investigate measures to reduce flood risk along the Great Stour and achieve environmental improvements in the Ashford to Fordwich area' could be used to reduce flooding of residential areas upstream and manage water flow down into the European site and could benefit the site by making it more resilient.

4.20 Arun Valley SAC/Ramsar site is suffering from low water levels in the ditches due to abstraction which is negatively affecting the snail and other invertebrates for which the site is designated. The site improvement plan states 'Environment Agency is ceasing to administer Internal Drainage Board (IDB) ditches, and water control structures, with the likelihood that management will revert to landowners/Local Authorities. This has implications for management/clearance of the ditches and

maintenance of water controlling structures. There could be impacts on water levels, the marginal and in-channel flora and associated species. *Anisus vorticulus* is not known to tolerate occasional ditch drought (M.Willings, Pers Comm 2014) Bewick's Swan and the majority of water bird assemblage species for which the site is classified require large bodies of in field water and water levels maintained within the ditch systems… Environment Agency are reviewing management of river bank defences adjacent to the Special Protection Area/Site of Community Importance in the medium term (beyond 10 years) as part of the Lower Tidal River Arun Strategy (LTRAS) project. If the banks are not maintained, there will be a permanent increase in water levels, with added risk of changes in salinity, water levels, and increasing water pollution (rivers Stor and Arun failing for phosphorus levels). *Anisus vorticulus* is not known to have a tolerance for elevated salinity levels. The majority of Ramsar plant species (also key supporting habitat for *A.vorticulus* and Bewick's swan) are intolerant of poor water quality. Impacts of increased salinity largely unknown.' None of the measures in the FRMP are identified to exacerbate this situation, although none will improve it either as they do not cover the Arun Valley at all.

4.21 The Dungeness Site Improvement Plan states 'Water levels across the grazing marsh areas potentially impact habitats supporting birds using the site. Feeding and roosting areas in winter. Breeding areas for waders, reedbed birds and sea birds. Infrastructure to help manage water levels in the complex ditch network, including the Royal Military Canal, across the grazing marsh habitat is critical for the fine balance of water levels and movement of water across the site. Great crested newt breeding ponds are scattered across the SAC designation and would be seriously impacted if water levels were reduced to the point of drying out ponds permanently… Overwintering bird assemblages use large intertidal areas for feeding and roosting. Rising sea levels and coastal defences in the area may lead to loss of habitat for pSPA birds due to coastal squeeze.' None of the measures in the FRMP are identified to negatively affect hydrology at Dungeness, although none will improve it either as they do not cover the Dungeness area at all.

Table 2. European sites within 10km of the South East River Basin District and that are potentially linked to local flood risk management measures

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Arun Valley Ramsar	Ramsar criterion 2 • Seven threatened or endangered invertebrate species and four nationally rare and four nationally scarce plant species. Ramsar criterion 3 • Ditches intersecting the site have a particularly diverse and rich flora. Ramsar criterion 5 • Internationally important waterfowl assemblage Underlying SSSI is unfavourable recovering	Hydrologically sensitive flood plains of the River Arun located in Sussex. SAC and Ramsar site are known to be suffering from drawdown due to abstraction affecting ditch habitat.
Arun Valley SAC	• The Ramshorn snail, *Anisus vorticulus.* Underlying SSSI is unfavourable recovering	Hydrologically sensitive flood plains of the River Arun located in Sussex. SAC and Ramsar site are known to be suffering from drawdown due to abstraction affecting ditch habitat.
Arun Valley SPA	• *Cygnus columbianus bewickii,* Bewick's swan (non-breeding) • Qualifying assemblage of species Underlying SSSI is unfavourable recovering	Hydrologically sensitive flood plains of the River Arun located in Sussex. SAC and Ramsar site are known to be suffering from drawdown due to abstraction affecting ditch habitat.
Ashdown Forest SAC	• Northern Atlantic wet heaths with *Erica tetralix*, European dry heaths • Great crested newt *Triturus cristatus* Underlying SSSI is unfavourable recovering	This site consists of hydrologically sensitive wet heath. Located in East Sussex
Ashdown Forest SPA	• *Caprimulgus europaeus;* European nightjar (Breeding) • *Sylvia undata*; Dartford warbler (Breeding)	This site consists of hydrologically sensitive wet heath. Located in East Sussex

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Chichester and Langstone Harbours Ramsar	Ramsar criterion 1 • Two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. Ramsar criterion 5 • Assemblages of international importance. Ramsar criterion 6 • species/populations occurring at levels of international importance including Ringed plover, *Charadrius hiaticula,* Black-tailed godwit, *Limosa limosa islandica* and Common redshank, *Tringa totanus tetanus.* Underlying SSSI is 80% unfavourable declining.	These sites feature extensive intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. This is a coastal site that will be sensitive to any measures working on coastal flood defences as well as to changes in freshwater flows which could cause hydromorphological and water quality impacts (site is known to be suffering from excessive nitrogen inputs). Located in West Sussex

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Chichester and Langstone Harbours SPA	• *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding) • *Tadorna tadorna;* Common shelduck (Non-breeding) • *Anas penelope*; Eurasian wigeon (Non-breeding) • *Anas crecca;* Eurasian teal (Non-breeding) • *Anas acuta;* Northern pintail (Non-breeding) • *Anas clypeata;* Northern shoveler (Non-breeding) • *Mergus serrator*; Red-breasted merganser (Non-breeding) • *Charadrius hiaticula*; Ringed plover (Non-breeding) • *Pluvialis squatarola*; Grey plover (Non-breeding) • *Calidris alba*; Sanderling (Non-breeding) • Calidris alpina alpina; Dunlin (Non-breeding) • *Limosa lapponica;* Bar-tailed godwit (Non-breeding) • *Numenius arquata;* Eurasian curlew (Non-breeding) • *Tringa totanus;* Common redshank (Non-breeding) • *Arenaria interpres*; Ruddy turnstone (Non-breeding) • *Sterna sandvicensis*; Sandwich tern (Breeding) • *Sterna hirundo;* Common tern (Breeding) • *Sterna albifrons;* Little tern (Breeding) • Waterbird assemblage Underlying SSSI is 80% unfavourable declining.	
Dungeness SAC	• Annual vegetation of drift lines • Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves • *Triturus cristatus;* Great crested newt Underlying SSSI is 70% favourable	Located on the Kent Coast. Hydrologically sensitive and could be affected by coastal defence works.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Dungeness, Romney Marsh and Rye Bay SPA and extension	• *Botaurus stellaris;* Great bittern (Non-breeding) • *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding) • *Anas clypeata*; Northern shoveler (Non-breeding) • *Circus aeruginosus;* Eurasian marsh harrier (Breeding) • *Circus cyaneus;* Hen harrier (Non-breeding) • *Recurvirostra avosetta;* Pied avocet (Breeding) • *Pluvialis apricaria*; European golden plover (Non-breeding) • *Philomachus pugnax*; Ruff (Non-breeding) • *Larus melanocephalus*; Mediterranean gull (Breeding) • *Sterna sandvicensis*; Sandwich tern (Breeding) • *Sterna hirundo;* Common tern (Breeding) • *Sterna albifrons*; Little tern (Breeding) • *Acrocephalus paludicola*; Aquatic warbler (Non-breeding) • Waterbird assemblage Underlying SSSI is 70% favourable	These sites are made up of several coastal environments with hydrological sensitivity. Located on the coast of East Sussex and Kent. Marshlands are sensitive to changes in water levels affecting their value to SPA and Ramsar birds.
Dungeness, Romney Marsh and Rye Bay Ramsar	Ramsar Criterion 1 • contains representative, rare, or unique examples of natural or near-natural wetland types. Ramsar Criterion 2 • supports threatened ecological communities including saltmarsh, natural freshwater pits, fens, ponds, gravel pits, and grazing marsh and ditches that support rich and diverse assemblages of bryophytes, vascular plants and invertebrates that are rare, threatened, listed as priority species in the UK Biodiversity Action Plan (BAP) or specially protected under the Wildlife and Countryside Act 1981 Criterion 5 • regularly supports 20,000 or more waterbirds Underlying SSSI is 70% favourable	These sites are made up of several coastal environments with hydrological sensitivity. Located on the coast of East Sussex and Kent. Marshlands are sensitive to changes in water levels affecting their value to SPA and Ramsar birds.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Emer Bog SAC	• Transition mires and quaking bogs Underlying SSSI is 68% unfavourable no change.	This site features hydrologically sensitive bogs, marshes, water fringed vegetation and fens. Located in Hampshire. The surface water catchment has been identified and is reported on the Test Valley Borough Council website[24].

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
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 shrub layer (*Quercion robori-petraeae* or *Ilici-Fagenion*); Beech forests on acid soils • Asperulo-Fagetum beech forests; Beech forests on neutral to rich soils • Old acidophilous oak woods with Quercus robur on sandy plains • Bog woodland • Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae,* • *Salicion albae);* Alder woodland on floodplains • Alkaline fens; Calcium-rich springwater-fed fens • Transition mires and quaking bogs • Coenagrion mercuriale; Southern damselfly • Lucanus cervus; Stag beetle • *Triturus cristatus*; Great crested newt Underlying SSSI is 55% favourable	Complex matrix of woodland, heathland, mire and other habitats, with numerous hydrologically sensitive features including *Molinia* meadows, standing waters and bog woodland. Located in Hampshire.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
New Forest SPA	• *Pernis apivorus*; European honey-buzzard (Breeding) • *Circus cyaneus*; Hen harrier (Non-breeding) • *Falco subbuteo*; Eurasian hobby (Breeding) • *Caprimulgus europaeus*; European nightjar (Breeding) • *Lullula arborea;* Woodlark (Breeding) • *Sylvia undata;* Dartford warbler (Breeding) • *Phylloscopus sibilatrix*; Wood warbler (Breeding) Underlying SSSI is 55% favourable	
New Forest Ramsar	Ramsar criterion 1 • Valley mires and wet heaths that are of outstanding scientific interest. Ramsar criterion 2 • The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Ramsar 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. The site contains a rich invertebrate fauna. Underlying SSSI is 55% favourable	Wetland features present and drainage/ reclamation is identified as a potential threat to the site.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Outer Thames Estuary SPA	• *Gavia stellata*; Red-throated diver (Non-breeding) • *Sterna hirundo*; Common tern (Breeding) • *Sternula albifrons*; Little tern (Breeding) Underlying SSSI is favourable/recovering.	Marine site that covers the entire Kent coast.
Pagham Harbour SPA	• *Branta bernicla bernicla;* Dark-bellied brent goose (Non-breeding) • *Philomachus pugnax*; Ruff (Non-breeding) • *Sterna hirundo;* Common tern (Breeding) • *Sterna albifrons;* Little tern (Breeding) Underlying SSSI is 92% favourable	Hydrologically sensitive marine/coastal wetland site in East Sussex.
Pagham Harbour Ramsar	Ramsar criterion 6 • Species/populations occurring at levels of international importance Underlying SSSI is 92% favourable	Hydrologically sensitive marine/coastal wetland site in East Sussex.
Pevensey Levels SAC	• *Anisus vorticulus*; Little whorlpool ram's-horn snail Underlying SSSI is 99% unfavourable recovering	Site in East Sussex with hydrologically sensitive inland water bodies and humid grassland. Water levels in the ditches are controlled by a series of pumping stations and sluices operated by the Environment Agency

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Pevensey Levels Ramsar	Ramsar criterion 2 • The site supports an outstanding assemblage of wetland plants and invertebrates including many British Red Data Book species. Ramsar criterion 3 • The site supports 68% of vascular plant species in Great Britain that can be described as aquatic. It is probably the best site in Britain for freshwater molluscs, one of the five best sites for aquatic beetles Coleoptera and supports an outstanding assemblage of dragonflies Odonata. Underlying SSSI is 99% unfavourable recovering	Site in East Sussex with hydrologically sensitive inland water bodies and humid grassland. Water levels in the ditches are controlled by a series of pumping stations and sluices operated by the Environment Agency
Portsmouth Harbour Ramsar	Ramsar criterion 3 • The intertidal mudflat areas possess extensive beds of eelgrass *Zostera angustifolia* and *Zostera noltei* which support the grazing dark-bellied brent geese populations. The mud-snail *Hydrobia ulvae* is found at extremely high densities, which helps to support the wading bird interest of the site. Common cord-grass *Spartina anglica* dominates large areas of the saltmarsh and there are also extensive areas of green algae Enteromorpha spp. and sea lettuce *Ulva lactuca*. More locally the saltmarsh is dominated by sea purslane *Halimione portulacoides* which gradates to more varied communities at the higher shore levels. The site also includes a number of saline lagoons hosting nationally important species. Ramsar criterion 6 • Species/populations occurring at levels of international importance: Dark-bellied brent goose, *Branta bernicla bernicla* Underlying SSSI is 71% unfavourable no change	Coastal engineering, e.g. construction of sea defences for coastal protection with coastal squeeze arising from coastal defences is a known threat to this site on the Hampshire coast. Also, subject to excessive nitrogen from runoff and from sewage treatment works discharges into rivers that flow into the site.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Portsmouth Harbour SPA	• *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding) • *Mergus serrator;* Red-breasted merganser (Non-breeding) • *Calidris alpina alpina*; Dunlin (Non-breeding) • *Limosa limosa islandica;* Black-tailed godwit (Non-breeding) Underlying SSSI is 71% unfavourable no change	
River Itchen SAC	• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot • Coenagrion mercuriale; Southern damselfly • *Austropotamobius pallipes*; White-clawed (or Atlantic stream) crayfish • Lampetra planeri; Brook lamprey • *Salmo salar;* Atlantic salmon • Cottus gobio; Bullhead • Lutra lutra; Otter Underlying SSSI is 55% unfavourable recovering	The River Itchen is hydraulically sensitive, is subject to poor water quality from excessive phosphorus and located in Hampshire.
Sandwich Bay SAC	• Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram • Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland* • Dunes with Salix repens ssp. argentea (*Salicion arenariae*); Dunes with creeping willow • Humid dune slacks Underlying SSSI is 67% favourable	Dune habitats are not generally hydrologically sensitive although humid dune slacks depend on localised groundwater reaching the surface of the sand.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Thanet Coast & Sandwich Bay Ramsar	• Ramsar criterion 2 • Supports 15 British Red Data Book wetland invertebrates • Ramsar criterion 6 • species/populations occurring at levels of international importance: Ruddy turnstone *Arenaria interpres interpres* Underlying SSSI is 78% favourable	Site located on the Kent coast, consisting of a long stretch of rocky shore, estuary, sand dune, maritime grassland, saltmarsh and grazing marsh.
Thanet Coast & Sandwich Bay SPA	• *Pluvialis apricaria;* European golden plover (Non-breeding) • *Arenaria interpres;* Ruddy turnstone (Non-breeding) • *Sterna albifrons;* Little tern (Breeding) Underlying SSSI is 78% favourable	Site located on the Kent coast, consisting of a long stretch of rocky shore, estuary, sand dune, maritime grassland, saltmarsh and grazing marsh.
Thanet Coast SAC	• Reefs • Submerged or partially submerged sea caves Underlying SSSI is 78% favourable	Site located on the Kent coast, consisting of a long stretch of rocky shore, estuary, sand dune, maritime grassland, saltmarsh and grazing marsh.
Solent and Dorset Coast SPA	• *Sterna sandvicensis;* Sandwich tern (Breeding) • *Sterna hirundo*; Common tern (Breeding) • *Sternula albifrons;* Little tern (Breeding)	A coastal site that covers 88,980.55 ha and stretches from Worbarrow Bay in Dorset to Littlehampton in West Sussex incorporating most of the Hampshire and Isle of Wight coastline and adjacent offshore areas.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Solent Maritime SAC	• Sandbanks which are slightly covered by sea water all the time • Estuaries • Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats • Coastal lagoons • Annual vegetation of drift lines • Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves • Salicornia and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand • Spartina swards (*Spartinion maritimae*); Cord-grass swards • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes withmarram • *Vertigo moulinsiana*; Desmoulin`s whorl snail Underlying SSSI is favourable	Coastal site on the south coast of England featuring a major estuarine system, coastal lagoons and mudflats.
South Wight Maritime SAC	• Reefs • Vegetated sea cliffs of the Atlantic and Baltic coasts • Submerged or partially submerged sea caves Underlying SSSI is favourable/recovering	Hydrologically sensitive coastal site that runs the full length of the south coast of the Isle of Wight.
Stodmarsh SAC	• *Vertigo moulinsiana*; Desmoulin`s whorl snail Underlying SSSI is 60% favourable	Site located on the Kent coast featuring hydrologically sensitive marine and coastal wetlands. Known to be suffering from poor water quality due to excessive nitrogen and phosphorus.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Stodmarsh Ramsar	Ramsar criterion 2 • Six British Red Data Book wetland invertebrates. Two nationally rare plants, and five nationally scarce species. A diverse assemblage of rare wetland birds Underlying SSSI is 60% favourable	Site located on the Kent coast featuring hydrologically sensitive marine and coastal wetlands. Known to be suffering from poor water quality due to excessive nitrogen and phosphorus.
Stodmarsh SPA	• *Botaurus stellaris*; Great bittern (Non-breeding) • *Anas strepera*; Gadwall (Breeding) • *Anas strepera*; Gadwall (Non-breeding) • *Anas clypeata*; Northern shoveler (Non-breeding) • *Circus cyaneus*; Hen harrier (Non-breeding) • Waterbird assemblage • Breeding bird assemblage Underlying SSSI is 60% favourable	Site located on the Kent coast featuring hydrologically sensitive marine and coastal wetlands. Known to be suffering from poor water quality due to excessive nitrogen and phosphorus.
Tankerton Slopes and Swalecliffe	• *Gortyna borelii lunata*; Fisher's estuarine moth Underlying SSSI is 100% favourable/recovering	Kent coast site with humid grassland. Supports 20% of Fisher's estuarine moth population in UK.
Woolmer Forest SAC	• Natural dystrophic lakes and ponds; Acid peat-stained lakes and ponds • Northern Atlantic wet heaths with Erica tetralix; Wet heathland with cross-leaved heath • European dry heaths • Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking`surface • Depressions on peat substrates of the Rhynchosporion Underlying SSSI is 56% favourable	The hydrologically sensitive site located in Hampshire and West Sussex consists of inland water bodies, bogs, marshes, water fringed vegetation.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
The Swale Ramsar	Ramsar criterion 2 • The site supports nationally scarce plants and at least seven British Red data book invertebrates Ramsar criterion 5 • Assemblages of international importance Ramsar criterion 6 • Species/populations occurring at levels of international importance: Common redshank, *Tringa totanus tetanus*, Dark-bellied brent goose, *Branta bernicla* b*ernicla* and Grey plover, *Pluvialis squatarola*, • Underlying SSSI is 97% favourable	The site located on the north Kent coast consists of mudflats, saltmarsh and freshwater grazing marsh, an estuarine channel, and areas of shingle, shell and sand beaches and mussel beds. This site lies beyond the South East River Basin District being located within the Thames River Basin District.
The Swale SPA	• *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding) • Calidris alpina alpina; Dunlin (Non-breeding) • Breeding bird assemblage • Waterbird assemblage • Underlying SSSI is 97% favourable	The site located on the north Kent coast consists of mudflats, saltmarsh and freshwater grazing marsh, an estuarine channel, and areas of shingle, shell and sand beaches and mussel beds. This site lies beyond the South East River Basin District being located within the Thames River Basin District.
River Avon SAC	• Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot • *Vertigo moulinsiana*; Desmoulin`s whorl snail • Petromyzon marinus; Sea lamprey • Lampetra planeri; Brook lamprey • *Salmo salar;* Atlantic salmon • Cottus gobio; Bullhead Underlying SSSI is 85% unfavourable no change	Hydrologically sensitive river habitat located 0.6km from the RBD in Hampshire and Wiltshire.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Thursley, Ash, Pirbright and Chobham SAC	• Northern Atlantic wet heaths with Erica tetralix; Wet heathland with cross-leaved heath • European dry heaths • Depressions on peat substrates of the Rhynchosporion Underlying SSSI is favourable/recovering	Hydrolically sensitive heath and woodland with inland water bodies, bogs, marshes, water fringed vegetation and fens located 1.6km from the RBD in Surrey.
Shortheath Common SAC	• European dry heaths • Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface • Bog woodland Underlying SSSI is 94% unfavourable recovering	Bog woodland present as well as inland water bodies. It is located 3km from the RBD in Hampshire
Thursley & Ockley Bogs Ramsar	Ramsar criterion 2 • Supports a community of rare wetland invertebrate species including notable numbers of breeding dragonflies Ramsar criterion 3 • It is one of few sites in Britain to support all six native reptile species. The site also supports nationally important breeding populations of European nightjar *Caprimulgus europaeus* and woodlark *Lullula arborea* Underlying SSSI is 82% favourable	The site is a valley mire complex which occurs within a matrix of heathland, where drainage is impeded. Several areas of open water also contribute to the overall diversity of the site, ranging from acidic boggy pools and ditches to large ponds. It is located 3km from the RBD in Surrey.
Avon Valley SPA	• *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding) • *Anas strepera*; Gadwall (Non-breeding) Underlying SSSI is 59% favourable	This site is a fen, mire, lowland wet grassland, and small areas of woodland. The area classified as inland and human-made wetland. Human induced changes in hydraulic conditions is considered a threat to this site. It is located 3.1km from the RBD in Hampshire.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Avon Valley Ramsar	Ramsar criterion 1 • The site shows a greater range of habitats than any other chalk river in Britain, including fen, mire, lowland wet grassland and small areas of woodland. Ramsar criterion 2 • The site supports a diverse assemblage of wetland flora and fauna including several nationally-rare species. Ramsar criterion 6 • species/populations occurring at levels of international importance: Gadwall, *Anas strepera strepera* Underlying SSSI is 59% favourable	The flow regime resulting from reservoir/barrage/dam Is recognised as a threat to this site. It is located 3km from the RBD in Hampshire.
Dorset Heaths SAC	• Northern Atlantic wet heaths with *Erica tetralix;* Wet heathland with cross-leaved heath • European dry heaths • Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae);* Purple • moor-grass meadows • Depressions on peat substrates of the Rhynchosporion; • Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*; Calcium-rich fen dominated by great fen sedge (saw sedge) • Alkaline fens; Calcium-rich springwater-fed fens • Old acidophilous oak woods with *Quercus robur* on sandy plains; Dry oak-dominated woodland • Coenagrion mercuriale; Southern damselfly • *Triturus cristatus;* Great crested newt	Hydrologically sensitive site with primarily heath and scrub habitat with inland water bodies, bogs and marshes. It is located 4km from the RBD in Dorset.

Site name	Qualifying feature(s) (*and latest published condition**)	Summary of connectivity with the River Basin District
Dorset Heathlands SPA	• *Circus cyaneus*; Hen harrier (Non-breeding) • *Falco columbarius*; Merlin (Non-breeding) • *Caprimulgus europaeus*; European nightjar (Breeding) • *Lullula arborea;* Woodlark (Breeding) • *Sylvia undata*; Dartford warbler (Breeding)	Hydrologically sensitive coastal site consisting mainly of heath but with bogs, marshes, water fringed vegetation and fens. It is located 4km from the RBD in Dorset.

4.22 Having identified the European sites within 10km that are likely to be hydrologically linked to flood risk management activities, consideration was next given to the potential impact sources from the FRMP at all stages and pathways to European sites (including those located at distances of more than 10km if there is connectivity) by which effects could arise on qualifying features.

4.23 Based on all possible impacts, pathways, and receptors, the Test of Likely Significant Effects for each measure in the FRMP is undertaken in the following tables.

Table 3. Screening table showing the Test of Likely Significant Effects results for Lead Local Flood Authority (LLFA) national measures contained within all Flood Risk Management Plans

Measure ID	Measure	Likely Significant Effects on European sites
0299999007	Act as a consultee for major planning applications in their area	No likely significant effect – This measure describes the role of LLFAs
0299999011	Designate third party flood risk assets and maintain a register of designated flood risk assets in their area	No likely significant effect – Designating assets and maintaining a register will not affect European sites
0299999003	Implement relevant government guidance on taking climate change into account where necessary for flood risk decision making in their area	No likely significant effect – Taking climate change into account will not affect European sites
0299999018	Investigate local flood events where appropriate and necessary in their area	No likely significant effect – Investigating local flood events will not affect European sites
0299999002	Maintain, keep under review, apply and monitor a local flood risk management strategy in their area	No likely significant effect – The production of a local flood risk management strategy will not itself affect European sites
0299999015	Plan flood risk management projects to achieve wider environmental benefits where appropriate in their area	No likely significant effect – Ensuring that flood risk projects achieve wider environmental benefits will not negatively affect European sites
0299999006	Provide information to inform spatial and infrastructure planning, development and regeneration in their area	No likely significant effect – The provision of information will not affect European sites

Measure ID	Measure	Likely Significant Effects on European sites
0299999013	Regulate the condition of, and third party activity on, ordinary watercourses and review new works on ordinary watercourses in their area	No likely significant effect – Regulating activities and works will not affect European sites
0299999004	Start implementing steps to work towards net zero carbon in their area	No likely significant effect – Implementing net zero carbon will not affect European sites
0299999016	Support communities to increase their resilience to flooding in their area	No likely significant effect – Supporting communities to increase resilience to flooding will not affect European sites
0299999017	Support emergency response partners and communities to plan, prepare and exercise for future flood scenarios in their area	No likely significant effect – Supporting planning for emergency response to flooding will not affect European sites
0299999012	Take a risk based approach to develop and maintain a register of flood risk assets/features in their area	No likely significant effect – Maintaining a register of assets will not affect European sites
0299999005	Work in partnership with other risk management authorities to reduce the risk of flooding from all sources in their area	No likely significant effect – This is a wide-ranging measure and the details include that by 2027, risk management authorities will have developed and/or delivered a programme of flood risk management capital schemes and/or maintenance to reduce risk of flooding and coastal change and its adverse consequences for human health and wellbeing. Individual capital schemes may have an effect on European sites depending on what and where they are and how they are to be delivered. However, developing a programme of capital schemes will not itself lead to likely significant effects on European sites. Any individual capital schemes will need to be subject to HRA before being consented, in order to comply with legislation.

Measure ID	Measure	Likely Significant Effects on European sites
0299999009	Work with other flood asset owners and riparian landowners to raise awareness of, and where necessary enforce, maintenance responsibilities in their area	No likely significant effect – specific maintenance measures could have an adverse effect on European sites (although they are unlikely to be approved measures if so) but a requirement to raise awareness of, and enforce where required, necessary flood asset maintenance will not adversely affect European sites.
0299999010	Work with other risk management authorities to identify a programme of nature based approaches in their area	No likely significant effect – working with other authorities to identify a programme of nature-based approaches will not adversely affect European sites.
0299999008	Work with other risk management authorities to provide information where necessary to update flood maps in their area	No likely significant effect – providing information will not adversely affect European sites.
0299999014	Work with other risk management authorities to support the delivery of flood projects in their area	No likely significant effect – providing support to other authorities will not adversely affect European sites.
0299999019	Work with others to support communities through the recovery phase of a significant flood event in their area	No likely significant effect – supporting communities will not adversely affect European sites.

Table 4. Screening table showing the Test of Likely Significant Effects results for Environment Agency national measures contained within all Flood Risk Management Plans

Measure ID	Measure	Likely Significant Effects on European sites
0299999041	Continue to review flood events to improve and develop flood services in England	No likely significant effect – reviewing flood events will not adversely affect European sites.
0299999025	Designate flood risk assets where necessary in England	No likely significant effect – designating flood risk assets will not adversely affect European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0299999046	Drive down carbon emissions and deliver the required flood risk management outcomes when planning and carrying out flood risk management works in England	No likely significant effect – driving down carbon emissions will not adversely affect European sites.
0299999030	In its strategic overview role, work with risk management authorities, including facilitating effective partnerships in local places in England	No likely significant effect – working with risk management authorities will not adversely affect European sites.
0299999044	Invest in flood risk management projects to contribute to improving the natural, built and historic environments	No likely significant effect – investing in projects will not adversely affect European sites.
0299999035	Issue and maintain guidance on taking climate change into account for flood risk decision making in England	No likely significant effect – issuing guidance will not adversely affect European sites.
0299999026	Maintain and update a database of its flood risk assets in England	No likely significant effect – maintaining a database will not adversely affect European sites.
0299999020	Monitor weather, tidal, rainfall and river conditions to provide flood forecasts in England	No likely significant effect – monitoring will not adversely affect European sites.
0299999042	Plan all flood risk management projects in England to achieve biodiversity net gain and wider environmental benefits	No likely significant effect – planning for biodiversity net gain will not adversely affect European sites.
0299999043	Plan all flood risk management projects in England to help achieve river basin management plan objectives	No likely significant effect – this measure is about achieving the environmental objectives of river basin management plans. This will not adversely affect European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0299999033	Provide quality and timely planning advice to help avoid inappropriate development in areas at risk of flooding in England	No likely significant effect – provision of planning advice will not adversely affect European sites.
0299999031	Regulate large, raised reservoirs in England	No likely significant effect – regulating reservoirs to reduce the risk of flooding from dam and reservoir failures will not adversely affect European sites.
0299999028	Regulate new works to main rivers and sea defences in England	No likely significant effect – regulating new works to reduce the likelihood of flooding will not adversely affect European sites.
0299999039	Respond to flood events and support other emergency responders in England	No likely significant effect – responding to flood events to reduce the consequences of flooding will not adversely affect European sites.
0299999040	Support communities to increase their resilience to flooding in England	No likely significant effect – supporting communities to help them increase their resilience will not adversely affect European sites.
0299999023	Take a risk based approach to inspect, maintain and operate assets in England	No likely significant effect – adopting a risk based approach will not adversely affect European sites.
0299999027	Take targeted enforcement action where there are blockages or unpermitted structures in England	No likely significant effect – taking enforcement action regarding blockages or unpermitted structures will not adversely affect European sites.
0299999024	Understand the long term needs of its assets and plan for their whole life management in England	No likely significant effect – developing an understanding of long-term asset needs will not adversely affect European sites.
0299999045	Work with catchment partnerships, communities and other risk management authorities to maximise the use of nature based solutions in England	No likely significant effect – working to maximise the use of nature-based solutions rather than other methods of flood risk management will not adversely affect European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0299999021	Work with emergency response partners to issue appropriate flood warnings in England	No likely significant effect – issuing flood warnings will not adversely affect European sites.
0299999022	Work with emergency response partners to plan, prepare and exercise for future flood scenarios in England	No likely significant effect – preparing for flood scenarios will not adversely affect European sites.
0299999032	Work with local planning authorities, developers and other place makers in England	No likely significant effect – working with other authorities to ensure all new development is resilient to flooding will not adversely affect European sites.
0299999029	Work with research partners and the wider scientific community in England	No likely significant effect – working with research partners into new approaches to reduce risk of flooding will not adversely affect European sites.
0299999036	Work with risk management authorities and other partners to implement the National Flood and Coastal Erosion Risk Management Strategy in England	No likely significant effect – individual proposals within the National Flood and Erosion Risk Management Strategy may pose likely significant effects to European sites but the Strategy has been subject to its own HRA. The measure concerns working with other authorities to implement the Strategy, which will not itself adversely affect European sites.
0299999038	Work with risk management authorities to identify a programme of future flood risk management projects in England	No likely significant effect – a commitment to identify a programme of future projects will not adversely affect European sites. Individual schemes and projects may have an effect on European sites depending on what and where they are and how they are to be delivered. However, all schemes will need to be subject to HRA before being consented, in order to comply with legislation.
0299999034	Work with risk management authorities to maintain and update where necessary flood maps in England	No likely significant effect – maintaining and updating flood maps will not adversely affect European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0299999037	Work with risk management authorities to support the delivery of flood risk management projects in England	No likely significant effect – supporting risk management authorities in delivering flood risk management projects will not itself adversely affect European sites. Individual schemes and projects may have an effect on European sites depending on what and where they are and how they are to be delivered. However, all schemes will need to be subject to HRA before being consented, in order to comply with legislation.

Table 5. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Canterbury Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0201707015	Carry out a Flood Action Campaign in Canterbury	No Likely significant effect – Raising awareness of flooding will not impact on the nearby European sites.
0201707011	Investigate measures to reduce flood risk along the Great Stour and achieve environmental improvements in the Ashford to Fordwich area	No Likely significant effect – This is a management measure that does not in itself have any impact on European sites.

Table 6. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the City of Brighton and Hove Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0205907002	Update the Local Flood Risk Management Strategy in Brighton and Hove	No Likely Significant Effect – Updates to the Local Flood Risk Management Strategy will not be associated with impact pathways linking to European sites. Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.

Measure ID	Measure	Likely Significant Effects on European sites
0205907003	Update the Surface Water Management Plan in Brighton and Hove	No Likely significant effect - Update of the Surface Water Management Plan in Brighton and Hove is not associated with impact pathways linking to European sites.
0205907004	Conduct a City Wide Property Flood Resilience Scheme in Brighton and Hove	No Likely significant effect - Conducting a City Wide Property Flood Resilience Scheme in Brighton and Hove is not associated with impact pathways linking to European sites.
0205907005	Produce a written protocol to respond to reports of flooding and investigate flood events in Brighton and Hove	No Likely significant effect - Producing a written protocol to respond to reports of flooding and investigate flood events in Brighton and Hove is not associated with impact pathways linking to European sites.
0205907006	Implement a surface water management scheme, incorporating principles of sustainable drainage or wider catchment solutions as appropriate, in the Preston Park area	No Likely significant effect – Implementation of a surface water management scheme, incorporating principles of sustainable drainage or wider catchment solutions as appropriate, in the Preston Park area is not associated with impact pathways linking to European sites.
0205907007	Complete a groundwater and telemetry study in Brighton and Hove	No Likely Significant Effect – Completing a groundwater and telemetry study in Brighton and Hove will not be associated with impact pathways linking to European sites. Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.

Table 7. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Eastbourne and Pevensey Bay Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0202607003	Assess the standard of service of existing defences along the Eastbourne to Cooden frontage and investigate options for future beach management in Eastbourne to Cooden	No Likely significant effect, but down-the-line HRA needed – Assessment of the standard of service of existing defences and investigating options for future beach management along the Eastbourne to Cooden frontage is not associated with impact pathways linking to European sites as it is essentially a desk-based activity. Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA. Depending on what options for beach management are identified, down-the-line HRA may be required. In line with the guidance quoted in paragraph 2.33, down-the-line assessment will be required as further details emerge regarding what will be done to deliver this measure.
0202607007	Investigate, and implement where feasible, a scheme of Natural Flood Management measures in Polegate	No Likely Significant Effect – Development and implementation of natural flood management to address river flooding in Polegate will not be associated with impact pathways linking to European sites. Polegate is 2km west of the Pevensey Levels SAC/Ramsar site but it is understood the watercourses in question are not connected to the SAC/Ramsar site. Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.
0202607013	Remove and control invasive pennywort on the Langney Haven and Crumbles Sewer and monitor for spread on adjoining watercourses in Langney	No Likely significant effect – Removal of invasive plants will not be associated with negative impact pathways linking to European sites. Moreover, works have already begun so the measure has previously undergone HRA.

Measure ID	Measure	Likely Significant Effects on European sites
0202607005	Undertake beach management from Holywell to Langney Point in Eastbourne	No Likely significant effect – Beach management from Holywell to Langney Point in Eastbourne will not be associated with impact pathways linking to European sites. This is because works have already begun so the measure has previously undergone HRA and the frontage is not associated with any coastal sensitive European sites.
0202607004	Undertake beach management from Sovereign Harbour to Cooden in Pevensey Bay	No Likely significant effect – Beach management from Sovereign Harbour to Cooden in Pevensey Bay will not be associated with impact pathways linking to European sites. This is because this measure is carried over from the cycle 1 FRMP and has previously undergone HRA and the frontage is not associated with any coastal sensitive European sites (Pevensey Levels interest features are not dependent on Pevensey Bay).

Measure ID	Measure	Likely Significant Effects on European sites
0202607006	Undertake works to better manage the coastal flood and erosion risk from Holywell, Eastbourne to Cooden in East Sussex	No Likely significant effect, but down-the-line HRA assessment required - Implementing coastal flood management from Holywell, Eastbourne to Cooden in East Sussex will occur close to the Pevensey Levels SAC / Ramsar, which is less than 50m from the affected coastline at its closest point. However, the SAC is not a site dependent on coastal influence and the measure is related to implementing part of the South Foreland to Beachy Head SMP. This SMP was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted SMP and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.
0202607014	Update the East Sussex Coastal Modelling to include new climate change allowances for sea level rise in East Sussex	No Likely significant effect – Modelling will not have any impact on European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0202607002	Work with partners to investigate and develop a package of flood risk measures in Eastbourne	No Likely significant effect - flood risk measures in Eastbourne are unlikely to affect Pevensey Levels SAC/Ramsar due to a combination of distance (1.6km) and the fact that there is no hydrological links between sources of flooding in the town and the function of the Pevensey Levels ditches which are controlled by a series of pumping stations and sluices operated by the Environment Agency.

Table 8. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Eastbourne Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0208607006	Identify locations, secure funding and deliver property flood resilience schemes in Eastbourne	No Likely significant effect – This is a planning measure and will not have any impact on European sites.
0208607012	Identify measures in the Bourne Stream catchment to better manage surface water for the benefit of the foul water network in Eastbourne	No Likely significant effect – Removal of invasive plants will not be associated with negative impact pathways linking to European sites. Moreover, works have already begun so the measure has previously undergone HRA.
0208607004	Maintain the Multi Agency Flood Plan for the Sussex Resilience Forum in Eastbourne	No Likely significant effect – Maintaining the Multi Agency Flood Plan for the Sussex Resilience Forum in Eastbourne will not be associated with impact pathways linking to European sites as it is a desk-based activity. Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.
0208607002	Offer training to Eastbourne Borough Council, Wealden DC, developers and their advisors, on the design and operation of Sustainable Drainage Systems in Eastbourne	No Likely significant effect – Training will have no impact on European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0208607008	Review and update recommendations and strategies in the Surface Water Management Plan in Eastbourne	No Likely significant effect – Review and update of recommendations and strategies in the Surface Water Management Plan in Eastbourne will have no impact on European sites as it is a desk-based activity and there is no hydrological linkage between surface water in Eastbourne and any European sites. Moreover, the measure is already being implemented so the measure has previously undergone HRA.
0208607010	Deliver the Blue Heart Project to improve the understanding of flood risk in Eastbourne	No Likely significant effect – Delivery of a project to improve the understanding of flood risk in Eastbourne will have no impact on European sites as it is a desk-based activity and there is no hydrological linkage between surface water in Eastbourne and any European sites. Moreover, the measure is already being implemented so the measure has previously undergone HRA.

Table 9. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Hastings Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0202607010	Extend a scheme of Natural Flood Management measures in the Combe Haven sub-catchment	No Likely significant effect – Extension of natural flood management in Combe Haven will not be associated with impact pathways linking to European sites. This is because works have already begun so the measure has previously undergone HRA and there are no hydrological linkages between Hastings and any sensitive European sites. Hastings Cliffs SAC is a freely draining site designated for its dry habitats and the adjacent part of Dungeness, Romney Marsh and Rye Bay SPA is designated solely to protect its marine plunge-diving habitat for tern species (the SPA is designated for a wide range of features but this part of the SPA is open water marine habitat added to cover foraging tern habitat).
0202607011	Review the effectiveness of the Combe Haven Sea Outfall in Bulverhythe	No Likely significant effect – Review of the effectiveness of the Combe Haven Sea Outfall in Bulverhythe will not be associated with impact pathways linking to European sites. There are no hydrological linkages between Hastings and any sensitive European sites. Hastings Cliffs SAC is a freely draining site designated for its dry habitats and the adjacent part of Dungeness, Romney Marsh and Rye Bay SPA is designated solely to protect its marine plunge-diving habitat for tern species (the SPA is designated for a wide range of features but this part of the SPA is open water marine habitat added to cover foraging tern habitat). Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.

Measure ID	Measure	Likely Significant Effects on European sites
0202607008	Undertake beach management from Galley Hill to West Marina Gardens in Bulverhythe	No Likely significant effect – Beach management activities from Galley Hill to West Marina Gardens in Bulverhythe will not be associated with impact pathways linking to European sites. There are no hydrological linkages between Hastings and any sensitive European sites. Hastings Cliffs SAC is a freely draining site designated for its dry habitats and the adjacent part of Dungeness, Romney Marsh and Rye Bay SPA is designated solely to protect its marine plunge-diving habitat for tern species (the SPA is designated for a wide range of features but this part of the SPA is open water marine habitat added to cover foraging tern habitat). Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.
0202607012	Undertake regular debris clearance of watercourse grilles to prevent blockages and maintain conveyance on the Hollington Stream in St. Leonards-on-Sea	No Likely significant effect – Regular debris clearance at Hollington Stream in St. Leonards-on-Sea will not be associated with impact pathways linking to European sites. This is because works have already begun so the measure has previously undergone HRA and there are no hydrological linkages between Hastings and any sensitive European sites. Hastings Cliffs SAC is a freely draining site designated for its dry habitats and the adjacent part of Dungeness, Romney Marsh and Rye Bay SPA is designated solely to protect its marine plunge-diving habitat for tern species (the SPA is designated for a wide range of features but this part of the SPA is open water marine habitat added to cover foraging tern habitat).
0202607009	Update the East Sussex Coastal Modelling to include new climate change allowances for sea level rise in East Sussex	No Likely significant effect – Modelling will not have any impact on European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0208607007	Identify locations, secure funding and deliver property flood resilience schemes in Hastings	No Likely significant effect – This measure involves planning and will not have any impact on European sites. Property level flood resilience in this area will not affect European sites.
0208607005	Maintain the Multi Agency Flood Plan for the Sussex Resilience Forum in Hastings	No Likely significant effect – Maintenance of the Multi Agency Flood Plan for the Sussex Resilience Forum in Hastings will not be associated with impact pathways linking to European sites as it is a desk-based activity. Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.
0208607003	Offer training to Hastings Borough Council, developers and their advisors, on the design and operation of Sustainable Drainage Systems in Hastings	No Likely significant effect – Training offered to support design and operation of Sustainable Drainage Systems in Hastings will not be associated with impact pathways linking to European sites. This is because it is a desk-based activity.
0208607011	Progress the Hastings Central Flood Alleviation Scheme in Hastings	No Likely significant effect – Work on the Hastings Central Flood Alleviation Scheme in Hastings will not be associated with impact pathways linking to European sites. This is because works have already begun so the measure has previously undergone HRA and there are no hydrological linkages between Hastings and any sensitive European sites. Hastings Cliffs SAC is a freely draining site designated for its dry habitats and the adjacent part of Dungeness, Romney Marsh and Rye Bay SPA is designated solely to protect its marine plunge-diving habitat for tern species (the SPA is designated for a wide range of features but this part of the SPA is open water marine habitat added to cover foraging tern habitat).

Measure ID	Measure	Likely Significant Effects on European sites
0208607009	Review and update recommendations and strategies in the Surface Water Management Plan in Hastings	No Likely significant effect – Work on the recommendations and strategies in the Surface Water Management Plan in Hastings will not be associated with impact pathways linking to European sites. This is because it is a desk-based activity.

Table 10. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Herne Bay Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0201707013	Carry out a Flood Action Campaign in Herne Bay	No Likely significant effect – Raising awareness of flooding will not impact on the nearby European sites.
0201707008	Investigate and develop a scheme to manage the risk of fluvial flooding from the Plenty Brook in Herne Bay	No Likely significant effect, but down-the-line HRA required – This measure involves planning and will not have any impact on European sites. It is unknown at this stage what scheme might arise from the study but any scheme will need to be subject to its own HRA before being consented to ensure there are no adverse effects on Thanet Coast & Sandwich Bay Ramsar site and Tankerton Slopes and Swalecliffe SAC which both lie on the coastal side of Herne Bay. Given the nature of both European sites in this location an adverse effect from any scheme is unlikely.

Measure ID	Measure	Likely Significant Effects on European sites
0201707009	Investigate and develop a scheme to manage the risk of fluvial flooding from the West Brook in Herne Bay	No Likely significant effect, but down-the-line HRA required – This measure involves planning and will not have any impact on European sites. It is unknown at this stage what scheme might arise from the study but any scheme will need to be subject to its own HRA before being consented to ensure there are no adverse effects on Thanet Coast & Sandwich Bay Ramsar site and Tankerton Slopes and Swalecliffe SAC which both lie on the coastal side of Herne Bay. Given the nature of both European sites in this location an adverse effect from any scheme is unlikely.
0201707017	Undertake a Flood Warning Expansion Project to launch a new flood warning area in Herne Bay	No Likely significant effect – Undertaking a flood warning expansion project in Herne Bay will not be associated with impact pathways linking to European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0201707004	Undertake coast protection works in Tankerton	No Likely significant effect – Undertaking coast protection works in Tankerton will not be associated with impact pathways linking to European sites. Tankerton Slopes & Swalecliffe SAC is local to the works area. However, this is a measure identified in the Isle of Grain to South Foreland SMP. This SMP was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted SMP and therefore no likely significant effects will arise from including the measure in the FRMP.. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.

Table 11. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Hythe Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0201707012	Carry out a Flood Action Campaign in Hythe	No Likely significant effect – Raising awareness of flooding will not impact on the nearby European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0201707007	Dredge the Royal Military Canal from West Hythe Dam to Seapoint Outfall in Hythe	No Likely significant effect - Dredging the Royal Military Canal from West Hythe Dam to Seapoint Outfall in Hythe will not affect any European sites. Although Romney Marsh (part of Dungeness, Romney Marsh & Rye Bay SPA/Ramsar) is hydrologically connected to The Royal Military Canal that is upstream of these works.
0201707002	Investigate and develop a scheme to manage the risk of fluvial flooding in Hythe	No Likely significant effect – This is an investigation and development measure that will have no impact the nearby European sites. Given distance from sensitive European sites any scheme to manage fluvial flooding in Hythe will not affect European sites.
0201707006	Enlarge the culvert through the West Hythe Dam on the Royal Military Canal in West Hythe	No Likely significant effect – Replacing the culvert through the West Hythe Dam on the Royal Military Canal in West Hythe will not affect any European sites. Although Romney Marsh (part of Dungeness, Romney Marsh & Rye Bay SPA/Ramsar) is hydrologically connected to The Royal Military Canal that is upstream of these works.

Measure ID	Measure	Likely Significant Effects on European sites
0201707003	Undertake beach management in Hythe Ranges	No Likely significant effect– this measure is related to implementing part of the South Foreland to Beachy Head SMP. This SMP was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted SMP and therefore no likely significant effects will arise from including the measure in the FRMP.. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented. Moreover, although the Dungeness, Romney Marsh & Rye Bay SPA/Ramsar site is adjacent to the Hythe Ranges, this part of the SPA/Ramsar is designated for plunge-diving habitat for terns and will therefore not be affected by beach management.

Measure ID	Measure	Likely Significant Effects on European sites
0201707005	Undertake beach management in Hythe, Sandgate and Folkestone	No Likely significant effect – Undertaking beach management in Hythe, Sandgate and Folkestone will not be associated with impact pathways linking to European sites. This is partly due to distance from any sensitive European sites (minimum of 1.8km) and partly because the measure is related to implementing part of the South Foreland to Beachy Head SMP. This SMP was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted SMP and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.

Table 12. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Portsmouth Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0202907005	Construct the North Portsea Island Coastal Flood and Erosion Risk Management Scheme, with ecological enhancements, in the Tipner to Milton area	No Likely significant effect – Construction of the North Portsea Island Coastal Flood and Erosion Risk Management Scheme could affect European sites since it is immediately adjacent to Chichester & Langstone Harbour SPA/Ramsar site and could therefore exacerbate coastal squeeze, although it is noted that this measure also includes delivering associated ecological enhancements. However, the measure is related to implementing the Portsea Island Coastal Strategy. This Strategy was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted Strategy and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.

Measure ID	Measure	Likely Significant Effects on European sites
0202907002	Construct the Southsea Coastal Flood and Erosion Risk Management Scheme, with ecological enhancements, in the area from Old Portsmouth to Eastney	No Likely significant effect – Construction of the Southsea Coastal Flood and Erosion Risk Management Scheme could affect European sites since it is immediately adjacent to Solent & Dorset Coast SPA and could therefore exacerbate coastal squeeze, although it is noted that this measure also includes delivering associated ecological enhancements and that the SPA is designated for open water plunge diving habitat for terns which would not be affected by coastal squeeze. According to the Solent Wader & Brent Goose Strategy this frontage also contains supporting habitat for birds of the Portsmouth Harbour SPA. However, the measure is related to implementing the Portsea Island Coastal Strategy. This SMP was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted Strategy and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.

Measure ID	Measure	Likely Significant Effects on European sites
0202907003	Develop a sustainable solution to flood risk management that meets the legal requirement in Farlington Marshes	No Likely significant effect – Developing a sustainable solution to flood risk management that meets the legal requirement in Farlington Marshes could affect European sites since Farlington Marshes is a key part of Chichester & Langstone Harbour SPA/Ramsar site. However, the measure explicitly commits to developing a sustainable solution that complies with legal requirements whereas anything that negatively affected the SPA/Ramsar site would be unsustainable and would not comply with legal requirements. Moreover, the measure is related to implementing the Portchester to Emsworth Coastal Strategy. This Strategy was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted Strategy and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.
0202907009	Update the East Solent Coastal Flood Modelling to include new climate change allowances for sea level rise in the harbours and coast surrounding Portsea Island	No Likely significant effect – Modelling will have no impact the nearby European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0202907007	Work collaboratively with the Environment Agency on reducing coastal erosion and flood risk along the shoreline in the Harbour View to Cador Drive and Fareham Quays areas	No Likely significant effect but down-the-line HRA assessment required – coastal erosion and flood risk management may impact on the Portsmouth Harbour Ramsar/SPA as works may be carried out partially within these designated sites. However, the measure is related to implementing the Hamble to Portchester Coastal Strategy. This Strategy was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted Strategy and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.
0202907008	Work together to improve flood warning threshold triggers so that warnings and operational instructions are more timely and accurate on Portsea Island	No Likely significant effect – This is a flood warning measure and will have no impact on the integrity of European sites.
0202907006	Invest in their pumping station to reduce the risk of sewer flooding in the Little and Great Morass areas in Southsea.	No Likely significant effect – Working to reduce combined sewer flooding in the Little Morass area in Southsea will not be associated with impact pathways linking to European sites. Moreover, this measure is carried over from the cycle 1 FRMP and has previously undergone HRA.

Measure ID	Measure	Likely Significant Effects on European sites
0202907004	Work with a residential developer to seek contributions towards a new flood defence in the Portchester to Paulsgrove area	No Likely significant effect – Working with a residential developer to seek contributions towards a new flood defence in the Portchester to Paulsgrove area will not be associated with impact pathways linking to European sites since it is a desk-based activity. Moreover, the measure is related to implementing the Portchester to Emsworth Coastal Strategy. This Strategy was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted Strategy and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.

Table 13. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Southampton Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0202807004	Identify lessons from the national Property Flood Resilience Pathfinder project to support residents and businesses by promoting flood resilience in Southampton	No Likely significant effect – This is a management measure and will have no impact on the integrity of European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0202807002	Implement the first phase of the Southampton Coastal Flood and Erosion Risk Management Strategy in Southampton between Northam Bridge and Itchen Bridge on the west bank of the River Itchen	No Likely significant effect – A commitment to implementing the first phase of the Southampton Coastal Flood and Erosion Risk Management Strategy in Southampton between Northam Bridge and Itchen Bridge on the west bank of the River Itchen will not be associated with impact pathways linking to European sites. While European sites (Solent Maritime SAC and Solent & Southampton Water SPA/Ramsar site) could be affected by strategy elements, the measure is related to implementing the Southampton Coastal Strategy. This Strategy was subject to its own HRA and this confirmed any mitigation needed to avoid adverse effects on the integrity of European sites or identified any need for compensation for those impacts where adverse effects on integrity cannot be avoided or mitigated but an Imperative Reasons of Overriding Public Interest/No Alternatives justification can be made, with compensation being/to be delivered in the form of the Habitat Compensation Programme. This measure in the FRMP is simply a commitment to implement the adopted Strategy and therefore no likely significant effects will arise from including the measure in the FRMP. This will include developing the specific coastal strategies and schemes needed to implement the SMP, which will be subject to their own HRAs once devised and before they are consented.
0202807003	Investigate innovative ways of managing flows and runoff into watercourses (including Natural Flood Management) and implement plans and policies in Southampton	No Likely significant effect – This is a planning and investigation measure and will have no impact on the integrity of European sites.
0202807006	Investigate the potential for, and where possible implement, innovative new planning policies in the city of Southampton	No Likely significant effect – This is a planning and investigation measure and will have no impact on the integrity of European sites.

Measure ID	Measure	Likely Significant Effects on European sites
0202807007	Update the Southampton Water Coastal Modelling to include new climate change allowances for sea level rise in Southampton	No Likely significant effect – Modelling will have no impact the nearby European sites.
0202807005	Work with partners and the Local Resilience Forum in areas of high flood risk with vulnerable communities in Southampton (including St Denys)	No Likely significant effect – Preparedness work will not impact the nearby European sites.

Table 14. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Whitstable Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0201707010	Assess standard of service of existing defences along the frontage and investigate options available within current Shoreline Management Plan policy in Seasalter	No Likely significant effect – This is a planning and investigation measure and will have no impact on the integrity of European sites.
0201707014	Carry out a Flood Action Campaign in Whitstable	No Likely significant effect – Raising awareness of flooding will not impact on the nearby European sites.
0201707016	Undertake a Flood Warning Expansion Project to launch a new flood warning area in Whitstable	No Likely significant effect – Undertaking a Flood Warning Expansion Project to launch a new flood warning area in Whitstable will not be associated with impact pathways linking to European sites. This is because works have already begun so the measure has previously undergone HRA.

Table 15. Screening table showing the Test of Likely Significant Effects results for measures contained within the South East Flood Risk Management Plan for the Worthing Flood Risk Area

Measure ID	Measure	Likely Significant Effects on European sites
0218707004	Hold consultation and exhibition events, and work with residents, to support the delivery of local flood actions or local Operation Watershed Projects in Salvington, Durrington and West Tarring	No Likely significant effect – An education/raising awareness campaign will not be associated with impact pathways linking to European sites.
0218707002	Investigate and record any current or emerging surface water or groundwater issues with the West Tarring Flood Action Group in Salvington, Durrington and West Tarring	No Likely significant effect – This is a planning and investigation measure and will have no impact on the integrity of European sites.
0218707003	Promote sustainable surface water drainage arrangements for new and future development, in their role as statutory consultees, in Salvington, Durrington and West Tarring	No Likely significant effect – An education/raising awareness campaign will not be associated with impact pathways linking to European sites.
0218707005	Set up specific sub-groups to investigate opportunities for nature based solutions within catchments in Salvington, Durrington and West Tarring	No Likely significant effect – This is a planning and investigation measure and will have no impact on the integrity of European sites.

5. Other plans and projects

5.1 This section covers potential for effects in combination with other plans and projects. While the potential for the FRMP to occur 'in combination' with other FRMPs was considered for inclusion, each FRMP is specific to a relatively hydrologically self-contained River Basin District, meaning that potential for effects in combination with each other generally only exists where a European site straddles multiple RBDs. In this case the Solent & Dorset Coast SPA, Outer Thames Estuary SPA and Margate & Long Sands SAC straddle the boundary between the South East FRMP and the Severn, Thames and Anglian FRMPs respectively. However, no mechanism has been identified for the actual measures in this FRMP (rather than any schemes that may emerge down-the-line) to operate in combination with those in the other FRMPs.

5.2 Natural England suggested inclusion of Diffuse Water Pollution Plans in the 'in combination' assessment of FRMP HRAs. Diffuse Water Pollution Plans are environmentally positive and intended to reduce diffuse pollution through fairly broad measures such as 'influencing management of farm infrastructure such as farm tracks, yards, buildings etc' through agri-environment schemes and similar. As such, no adverse likely significant effects or conflicts are expected to arise with the FRMP HRAs.

5.3 Potential in combination effects with Minerals and Waste Local Plans were also considered. However, Waste Local Plans are rarely technology-specific and potential impacts depend very much on the type of facility the market decides to bring forward on a given allocated site, or within a broad area of search where these exist. Minerals excavation can affect hydrologically sensitive European sites through dewatering for example. However, many minerals allocations are extensions to existing consented facilities to enable the site to be worked for longer (rather than to enable a net increase in consented extraction) and whose acceptability of effects on European sites are kept under review through the minerals planning authorities' Review of Consents process as required by the Conservation of Habitats and Species Regulations 2017 (as amended). In addition, many Minerals Plans include 'areas of search' for minerals rather than making specific allocations, leaving the market to bring forward proposals at the planning application level. As such, no specific likely significant effects in combination with the FRMP measures have been identified.

Local Plans

5.4 The delivery of c. 204,000 dwellings to 2030 across the South East area will result in the potential for a range of likely significant effects on the European sites surrounding the sub-region over the same timescale as the FRMP. Potential impact pathways include recreational pressure, a potential for increased atmospheric pollution from an increase in traffic on the road network close to European sites, possible loss of functionally-linked habitat for SPAs (depending on where the development takes place) and water quality impacts on European sites. Depending on where construction takes place direct disturbance impacts on SPA birds could also occur.

5.5 This section focusses only on hydrologically sensitive European sites and on the main European sites where adverse effects from residential and employment development have been identified in Local Plan HRAs. In this RBD the hydrologically sensitive sites most at risk of being affected by housing and employment growth as set out in Local Plans are the string of coastal European sites. Much of the south-

east coast is internationally designated from The Solent SAC and Solent & Southampton Water SPA in the west to Thanet Coast & Sandwich Bay SPA in the east.

5.6 The Solent European sites in particular are subject to increased levels of recreational pressure that has potential to result in increased levels of disturbance to sensitive species, particularly ground-nesting birds and wintering wildfowl, erosion from mechanical and abrasive damage and nutrient enrichment to sensitive species and habitats, and prevention of appropriate management or exacerbation of existing management difficulties, nutrient enrichment from dog walkers. To help address this issue in relation to increased recreational pressure stemming from new residential development the Solent Recreation Mitigation Strategy has been formed. It requires developer contributions that are used to manage recreation and habitats and species. This includes the provision of rangers, communications, marketing and education initiatives, initiatives to encourage responsible dog walking, new/enhanced strategic greenspaces, site-specific visitor management and bird refuge projects and monitoring

5.7 Other coastal sites are also noted to be sensitive to excessive recreational pressure due to population growth and are also covered by varying mitigation strategies: Dungeness SAC/Dungeness, Romney Marsh & Rye Bay SPA, and Thanet Coast & Sandwich Bay SPA. The coastal SPAs are also vulnerable to losses as a result of development for housing and employment of inland functionally-linked habitat that are used by SPA birds for foraging and roosting at high tide. Most Local Plans in the coastal regions identify this issue and set out mitigation strategies for addressing them, of which the most developed is the Solent Wader & Brent Goose Strategy which has systematically identified areas of roosting habitat of importance throughout the Solent. Areas of functionally linked land are also important for some inland wetland European sites, particularly the Arun Valley SPA/Ramsar site in Sussex and Stodmarsh SPA/Ramsar site in Kent.

5.8 Another key anthropological pressure relating to European sites in the RBD is excessive nitrogen and/or phosphorus inputs, particularly from agriculture and also from treated sewage effluent. In advice to local planning authorities in March 2022 Natural England flagged that the following European sites of relevant to the RBD were suffering from excessive nutrients leading to eutrophication: the River Itchen SAC, Stodmarsh SAC/SPA/Ramsar site and the Solent European sites (Solent & Southampton Water SPA/Ramsar site, Solent Maritime SAC, Portsmouth Harbour SPA/Ramsar site and Chichester & Langstone Harbours SPA/Ramsar site).

5.9 However, it is considered that the nature of the FRMP is such that no in combination effects will arise between adoption of the FRMP and delivery of housing and associated development across the sub-region. This is due either to the fact that the measures in the FRMP do not pose mechanisms to connect negatively to European sites, or because the measures of the FRMP are sufficiently high level (generally consisting of identifying a scheme and committing to its further development, design and implementation without committing to details) that they allow flexibility for measures necessary to be designed into schemes to protect European sites to be incorporated at further planning tiers as each scheme is devised.

Drought Plans, Orders and Permits

Solent Maritime SAC and Solent, Southampton Water SPA and Ramsar, Portsmouth Harbour SPA and Ramsar, and Chichester and Langstone Harbours SPA and Ramsar

5.10 Five Southern Water Drought Plan Permits/ Orders have connecting impact pathways to the Solent sites. These are: Caul Bourne WSW Drought Permit, Eastern Yar augmentation scheme Drought Permit, Lukely Brook Drought Permit, Lowe Itchen Sources and Test Surface Water. These EARs all have the potential to act in combination upon the SAC, along with plans and projects (discussed in the subsequent sections of this chapter), and also existing anthropogenic pressures acting upon the European designated sites.

5.11 The Solent Maritime SAC is already under pressure from many existing anthropological pressures and is currently failing its conservation objectives in relation to water quality and geomorphology changing flows to estuary features. The Solent and Southampton Water SPA and Ramsar site and Portsmouth Harbour SPA and Ramsar are already failing their Conservation Objectives in relation to water quality and recreational pressure. Existing hydrological conditions within the SAC are also sub-optimal, as the fluctuations in freshwater flows are resulting in increased saltwater intrusion into designated freshwater environments which negatively effects the freshwater communities.

5.12 Similar to the Solent sites, the Chichester and Langstone Harbour sites are already under pressure from many existing anthropological pressures and are failing their Conservation Objectives due in relation to water quality and recreational pressure. However, none of the EARs interact with the Chichester or Langstone Harbours and is not discussed further.

Arun Valley SPA SAC and Ramsar site

5.13 Natural England has highlighted existing concerns regarding water levels within the Arun Valley sites as a result of existing abstractions and water poor quality from point source and defuse source inputs. Drought conditions will already be putting additional pressure on this site by reducing water quality (increased concentrations of nutrients during drought conditions due to reduced flows), and already reduced water flows. In addition, climate change has the potential to increase the frequency and severity of drought conditions.

River Itchen SAC

5.14 The River Itchen is already under pressure from a variety of inputs, including poor water quality and reduced water flows. Similar to the Arun Valley designated sites, drought conditions will already be putting additional pressure on this site by reducing water quality (increased concentrations of nutrients during drought conditions due to reduced flows), and already reduced water flows. In addition, climate change has the potential to increase the frequency and severity of drought conditions.

Stodmarsh SAC, SPA Ramsar site

5.15 The Stour catchment receives high levels of nitrogen and phosphorus input to this water environment. Evidence has identified that these nutrients are causing eutrophication at part of the Stodmarsh designated sites, notably in the areas of

standing open water and canals. The most recent Site of Special Scientific Interest (SSSI) condition assessment identified that high nutrient levels within the main lake resulted in algal bloom and fish kills. The Natural England SSSI assessment identified that within the standing open water and canals within the internationally designated site the total phosphorous (TP) level is 1 mg/ (1000 ug/l), where the target for the SSSI lakes is 50ug/l, and thus greatly in exceedance of environmentally acceptable levels. These nutrient inputs are considered to be caused mostly by wastewater from housing and agricultural sources, though recycling of nutrients within the lake habitats cannot be ruled out as a contributing factor. Natural England advice is clear that the resulting nutrient enrichment is impacting on the Stodmarsh designated sites' protected habitats and species.

5.16 Similar to the Arun Valley and River Itchen designated sites, drought conditions will already be putting additional pressure on this site by reducing water quality (increased concentrations of nutrients during drought conditions due to the reduced flows), and already reduced water flows. In addition, climate change has the potential to increase the frequency and severity of drought conditions. The Woodnesborough Drought Permit/ Order has the potential to exacerbate these existing pressures.

Water Resource Management Plans

5.17 There are also potential hydrological impacts. For example, Southern Water's supply area is bounded by eight other water companies (Thames Water; Wessex Water; Cholderton and District Water; South East Water; Affinity Water – South East; SES Water; Bournemouth Water (part of South West Water); and Portsmouth Water). A number of bulk water supplies are made between Southern Water and several of these adjacent water companies. In addition to these, many of the European sites are already under threat from existing pressures such as climate change, nutrient neutrality issues and recreational activities.

5.18 Southern Water published its Water Resource Management Plan 2019 (WRMP19) in December 2019. The WRMP19 Fawley desalination and Sandown indirect potable reuse schemes are not expected to be completed until 2027 at earliest and therefore the operation of these schemes may overlap with the final year of the Drought Plan timeframe of 2022 to 2027. Construction activities for these two schemes will also take place during the lifetime of the Drought Plan. However, the Sandown emergency desalination plant construction activity and operational abstraction will take place on the south-eastern coastline of the Isle of Wight which is geographically remote from the European sites that may be affected by the Fawley construction work or by the three Isle of Wight drought measures.

5.19 Construction of the Fawley scheme will be geographically remote from the nearest drought measure included in the South East FRMP. As such, the construction zone of influence will not overlap with that of any Drought Plan 2022 measures.

5.20 The operational phase of the Fawley desalinisation plant has the theoretical potential to result in likely significant effects on Solent & Southampton Water SPA/Ramsar in combination with the Test Surface Water drought measure. However, in practice the abstraction from Southampton Water at Fawley for desalination will have a negligible impact on water volumes or salinity in Southampton Water and the operation of the drought order is very unlikely to impact breeding, feeding and overwintering success of such species significantly more than the prevailing drought conditions. A revised screening assessment will nonetheless be required within the scheme specific HRA that accompanies the planning application for the Fawley desalinisation plant. In the

absence of a scheme level HRA for the Fawley desalinisation plant, due to the distances involved and the presence of the twice tidal Solent and Southampton Water separating areas that could be impacted upon by the Draft Drought Plan schemes and the desalinisation plant, it is considered that there are no in combination effects to consider further.

5.21 The Test Estuary WwTW industrial reuse scheme is forecast to be operational by 2023. In-combination impacts on the above listed European sites from operation of this scheme and the Drought Plan measures are considered unlikely given (a) the volumes of water in Southampton Water relative to the combined abstractions under the Drought Plan options and WRMP scheme; (b) the hydrographic regime of Southampton Water and the Solent; and (c) the spatial distance between most of the options which are located on different estuaries/coastlines draining to the Solent/Southampton Water as applicable. Cumulative effects will however arise in spatial proximity between the Test Surface Water Drought Permit or Drought Order and the Test Estuary WwTW industrial water reuse scheme on flows from the Test Estuary to Southampton Water, but the relative reduction in flow arising from these schemes compared to the hydrographic regime and volume of water in Southampton Water is not considered to lead to any likely significant effects on these European sites.

5.22 The WRMP19 Bournemouth Water import scheme (abstraction from the Hampshire River Avon and new pipeline to Hampshire Southampton West Water Resource Zone) is anticipated to be implemented in the 2025 to 2030 period, subject to infrastructure improvements and a detailed feasibility study in the 2020 to 2025 period. As the detailed feasibility study is not yet available, a detailed assessment is not possible at this time.

5.23 The River Itchen SAC is within the zone of influence of WRMP19 schemes to further increase bulk supplies from Portsmouth Water and works to provide greater supply interconnections within south Hampshire. The only potential effects of the WRMP19 schemes on the SAC is during construction work to lay pipelines and there will not be any likely cumulative effects on the SAC with the South East FRMP.

5.24 The WRMP scheme for carrying out in-stream river restoration works on the Lower Itchen could have cumulative beneficial effects with the FRMP on the River Itchen SAC.

5.25 The Arun Valley SAC, SPA and Ramsar is within the zone of influence of two WRMP19 schemes: the Pulborough winter transfer scheme and the Littlehampton water reuse scheme. The WRMP19 schemes are not expected to be completed until 2027 at earliest and therefore operationally do not overlap with the Drought Plan timeframe of 2022-2027. Consequently, there is no potential for cumulative effects during the lifetime of the Drought Plan; the potential for cumulative effects will be further reviewed as part of the next Drought Plan update.

5.26 On 16/12/19 Natural England issued a letter to Southern Water setting out their concerns regarding the existing Pulborough boreholes and Groundwater licence and the drawdown effect they were having on some of the ditches of Arun Valley SAC and Ramsar site.

5.27 All of the neighbouring water companies to Southern Water have published 2019 WRMPs which have been examined along with outputs of a Water Resources South East Group (WRSE) environmental assessment project. The WRSE group includes six south east water companies (Affinity Water, Portsmouth Water, South East Water,

Southern Water, SES Water and Thames Water). The purpose of the project was to input to the development of long-term best value plans for securing water supplies in the south east. Since 2016 the WRSE has been working to improve the approach to undertaking cumulative effects assessment for WRMP options developed by neighbouring water companies in the South East of England.

5.28 The latest piece of work aimed to identify the potential for cumulative effects between the six WRSE water companies, to support their WRMP19 and related SEAs in a regional context. It provided a unique opportunity for communication between the six water companies and sharing of respective WRMP19 geographical information.

5.29 Information sharing facilitated through WRSE together with the information contained in the published WRMP19 strategies highlighted the following WRMP19 schemes that required in-combination assessment:

- joint Southern Water / South East Water Medway water reuse scheme: the potential for in-combination cumulative effects of this scheme are the same as those already identified above under the Southern Water WRMP19 assessment
- three groundwater options included in the Affinity Water WRMP19 would involve increased abstraction from the East Kent Chalk - Stour WFD groundwater body together with the Southern Water Sandwich Drought Permit option are considered unlikely to lead to any likely significant in-combination effects on the Stodmarsh SAC, the Stodmarsh SPA and Ramsar site, or the Thanet Coast and Sandwich Bay SPA and Ramsar.

5.30 For other water companies outside of the WRSE group, but neighbouring Southern Water (Bournemouth Water, Cholderton and District Water and Wessex Water), the review of published WRMP19 strategies have indicated no potential in-combination likely significant effects on any European sites with the revised draft Drought Plan.

5.31 Bournemouth Water's 2019 WRMP scheme to provide a bulk supply to Southern Water's Western operational area has already been discussed above and has no likely in-combination effects on any European sites.

5.32 As such, no likely significant effects on European sites are anticipated in relation to the WRMPs of these other three water companies.

River Basin Management Plans

5.33 River Basin Management Plans (RBMPs) describe the challenges that threaten the water environment and how these challenges can be managed and funded. The South East FRMP covers the same area as the South East River Basin Management Plan.

5.34 The 2022 RBMP sets out a series of measures to bring about improvements in the waterbodies covered by the RBMP. By definition, the measures in the RBMP are positive and includes the following initiatives: partnership working with farmers and land managers, sustainable management of water resources, restoring rivers and removing man-made barriers to fish migration and controlling invasive non-native species.

5.35 The RBMPs generally include projects that improve the water environment, for example by:

- enhancing and restoring rivers and floodplains
- creating sustainable drainage
- cleaning up metal pollution
- improving habitats and water quality by addressing diffuse pollution issues
- adapting weirs to provide fish passage
- involving the community
- using existing regulations to tackle agricultural and rural land pollution, such as lagoon construction

5.36 Since the measures within RBMPs are positive and are often necessary to restore freshwater aquatic European sites to favourable condition, there is no mechanism for them to have a negative effect on European sites in combination with the measures in the FRMP.

Shoreline Management Plans and Local Flood Risk Management Plans

5.37 SMPs provide a policy context for shoreline/coastal zone management and development. As acknowledged throughout this document, SMPs and the Coastal Strategies that result from them often result in adverse effects on the integrity of European sites through a combination of coastal squeeze, loss of functionally-linked land for SPA/Ramsar birds, direct habitat loss due to defence footprint and changes to long-shore sediment transport and other aspects of natural sediment dynamics. They also present opportunities for positive effects on European sites if opportunities for managed realignment are included that will enable a more natural coastline to be established.

5.38 The following SMPs apply to the South East RBD were considered for in-combination impacts:

- SMP 10 Isle of Grain to South Foreland
- SMP 11 South Foreland to Beachy Head
- SMP 12 Beachy Head to Selsey Bill (South Downs)
- SMP 13 Selsey Bill to Hurst Spit (North Solent)
- SMP 14 Isle of Wight

5.39 The assessments for any potential in-combination impacts between these plans and the measures contained within the South East FRMP were considered with regards to spatial proximity and/or hydrological and/or hydrographical connectivity. No in-combination likely significant effects were identified in respect of the policies set out in the plans because the FRMP essentially draws upon measures in the SMP and subsequent Coastal Strategies for its measures in the coastal environment.

5.40 Similarly, Local Flood Risk Management Plan measures for relevant areas within the River Basin District have been included within the FRMP so there is no potential for in combination effects as the same measures are contained in both sets of plans.

Conclusion

5.41 It is considered that the nature of the FRMP is such that no in combination effects will arise between adoption of the FRMP and delivery of housing and associated

development across the sub-region. This is due either to the fact that the measures in the FRMP do not pose mechanisms to connect negatively to European sites, or because the measures of the FRMP are sufficiently high level (generally consisting of identifying a scheme and committing to its further development, design and implementation without committing to details) that they allow flexibility for measures necessary to be designed into schemes to protect European sites to be incorporated at further planning tiers as each scheme is devised.

6. Conclusion

6.1 All European sites have been screened out of further assessment. There are no likely significant effects on any European site as a result of the South East Flood Risk Management Plan 2021-2027, either alone or in combination with other projects and plans. This is due either to the fact that the measures in the FRMP do not pose mechanisms to connect negatively to European sites, or because the measures of the FRMP are sufficiently high level (generally consisting of identifying a scheme and committing to its further development, design and implementation without committing to details) that they allow flexibility for measures necessary to be designed into schemes to protect European sites to be incorporated at further planning tiers as each scheme is devised. It should be noted that notwithstanding references in the FRMP, scheme level HRAs will be undertaken as part of the business case for all schemes, and many schemes will also need planning consent, which will also be accompanied by an HRA, thus ensuring legal requirements are met.

Appendix A Information on European Sites

Details pertaining to European sites (SACs, SPAs and Ramsar sites) such as qualifying features, Conservation Objectives and threats and pressures are taken from the Natural England Website[25].

A.1 Arun Valley SPA

Qualifying Features

- annex I species: *Cygnus columbianus bewickii,* Bewick's swan (non-breeding)
- qualifying assemblage of species

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- human induced changes in hydraulic conditions

A.2 Arun Valley SAC

Qualifying Features

- the Ramshorn snail, *Anisus vorticulus*

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the habitats of qualifying species
- the structure and function of the habitats of qualifying species
- the supporting processes on which the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site

Pressures/threats

- human induced changes in hydraulic conditions

A.3 Arun Valley Ramsar

Qualifying Features

Ramsar criterion 2

- seven threatened or endangered invertebrate species and four nationally rare and four nationally scarce plant species

Ramsar criterion 3

- ditches intersecting the site have a particularly diverse and rich flora

Ramsar criterion 5

- internationally important waterfowl assemblage

Pressures/threats

- water extraction for public water supply

A.4 Ashdown Forest SAC

Qualifying Features

- Northern Atlantic wet heaths with *Erica tetralix*
- European dry heaths
- Great crested newt *Triturus cristatus*

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of qualifying species, and,
- the distribution of qualifying species within the site.

Pressures/threats

- human induced changes in hydraulic conditions
- modification of cultivation practices
- outdoor sports and leisure activities, recreational activities
- pollution to surface waters (limnic & terrestrial, marine & brackish)

A.5 Ashdown Forest SPA

Qualifying Features

- *Caprimulgus europaeus*; European nightjar (Breeding)
- *Sylvia undata*; Dartford warbler (Breeding)

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- human induced changes in hydraulic conditions
- modification of cultivation practices
- outdoor sports and leisure activities, recreational activities
- air pollution, air-borne pollutants

A.6 Chichester and Langstone Harbours SPA

Qualifying Features

- Branta bernicla bernicla; Dark-bellied brent goose (Non-breeding)
- Tadorna tadorna; Common shelduck (Non-breeding)
- Anas penelope; Eurasian wigeon (Non-breeding)
- Anas crecca; Eurasian teal (Non-breeding)
- Anas acuta; Northern pintail (Non-breeding)
- Anas clypeata; Northern shoveler (Non-breeding)
- Mergus serrator; Red-breasted merganser (Non-breeding)
- Charadrius hiaticula; Ringed plover (Non-breeding)
- Pluvialis squatarola; Grey plover (Non-breeding)
- Calidris alba; Sanderling (Non-breeding)
- Calidris alpina alpina; Dunlin (Non-breeding)
- Limosa lapponica; Bar-tailed godwit (Non-breeding)
- Numenius arquata; Eurasian curlew (Non-breeding)
- Tringa totanus; Common redshank (Non-breeding)
- Arenaria interpres; Ruddy turnstone (Non-breeding)
- Sterna sandvicensis; Sandwich tern (Breeding)

- Sterna hirundo; Common tern (Breeding)
- Sterna albifrons; Little tern (Breeding)
- Waterbird assemblage

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- pollution to groundwater (point sources and diffuse sources)
- changes in abiotic conditions
- changes in biotic conditions
- fishing and harvesting aquatic resources
- outdoor sports and leisure activities, recreational activities

A.7 Chichester and Langstone Harbours Ramsar

Qualifying Features

Ramsar criterion 1

- two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes

Ramsar criterion 5

- assemblages of international importance

Ramsar criterion 6

- species/populations occurring at levels of international importance including Ringed plover, *Charadrius hiaticula,* Black-tailed godwit*, Limosa limosa islandica* and Common redshank, *Tringa totanus tetanus*

Pressures/threats

- erosion
- eutrophication
- pollution – domestic sewage

A.8 Dungeness SAC

Qualifying Features

- annual vegetation of drift lines
- perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves
- *Triturus cristatus;* Great crested newt

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site.

Pressures/threats

- changes in biotic conditions
- interspecific faunal relations
- invasive non-native species
- other human intrusions and disturbances
- military use and civil unrest

A.9 Dungeness, Romney Marsh and Rye BaySPA and extension

Qualifying Features

- *Botaurus stellaris;* Great bittern (Non-breeding)
- *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)
- *Anas clypeata*; Northern shoveler (Non-breeding)
- *Circus aeruginosus;* Eurasian marsh harrier (Breeding)
- *Circus cyaneus;* Hen harrier (Non-breeding)
- *Recurvirostra avosetta;* Pied avocet (Breeding)
- *Pluvialis apricaria*; European golden plover (Non-breeding)

- *Philomachus pugnax*; Ruff (Non-breeding)
- *Larus melanocephalus*; Mediterranean gull (Breeding)
- *Sterna sandvicensis*; Sandwich tern (Breeding)
- *Sterna hirundo;* Common tern (Breeding)
- *Sterna albifrons*; Little tern (Breeding)
- *Acrocephalus paludicola*; Aquatic warbler (Non-breeding)
- Waterbird assemblage

Qualifying features that also apply to the extension

- *Sterna sandvicensis*; Sandwich tern (Breeding)
- *Sterna hirundo;* Common tern (Breeding)
- *Sterna albifrons*; Little tern (Breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change,

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- invasive non-native species
- interspecific faunal relations
- other human intrusions and disturbances
- military use and civil unrest
- changes in biotic conditions

A.10 Dungeness, Romney Marsh and Rye Bay Ramsar

Qualifying Features

Ramsar criterion 1

- contains representative, rare, or unique examples of natural or near-natural wetland types.

Ramsar criterion 2

- supports threatened ecological communities including saltmarsh, natural freshwater pits, fens, ponds, gravel pits, and grazing marsh and ditches that

support rich and diverse assemblages of bryophytes, vascular plants and invertebrates that are rare, threatened, listed as priority species in the UK Biodiversity Action Plan (BAP) or specially protected under the Wildlife and Countryside Act 1981

Ramsar criterion 5

- regularly supports 20,000 or more waterbirds

Pressures/threats

- invasive non-native species
- interspecific faunal relations
- other human intrusions and disturbances
- military use and civil unrest
- changes in biotic conditions

A.11 Emer Bog SAC

Qualifying Features

- Transition mires and quaking bogs

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the qualifying natural habitat
- the structure and function (including typical species) of the qualifying natural habitat
- the supporting processes on which the qualifying natural habitat rely

Pressures/threats

- air pollution, air-borne pollutants
- outdoor sports and leisure activities, recreational activities
- human induced changes in hydraulic conditions

A.12 Hastings Cliffs SAC

Qualifying Features

- vegetated sea cliffs of the Atlantic and Baltic Coasts

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the qualifying natural habitat
- the structure and function (including typical species) of the qualifying natural habitat
- the supporting processes on which the qualifying natural habitat rely

Pressures/threats

- pollution to groundwater (point sources and diffuse sources)
- air pollution, air-borne pollutants
- human induced changes in hydraulic conditions

A.13 New Forest SPA

Qualifying Features

- *Pernis apivorus*; European honey-buzzard (Breeding)
- *Circus cyaneus*; Hen harrier (Non-breeding)
- *Falco subbuteo*; Eurasian hobby (Breeding)
- *Caprimulgus europaeus*; European nightjar (Breeding)
- *Lullula arborea;* Woodlark (Breeding)
- *Sylvia undata;* Dartford warbler (Breeding)
- *Phylloscopus sibilatrix*; Wood warbler (Breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- fishing and harvesting aquatic resources
- human induced changes in hydraulic conditions
- air pollution, air-borne pollutants
- biocenotic evolution, succession

A.14 New Forest Ramsar

Qualifying Features

Ramsar 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 buffer the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain.

Ramsar criterion 2

- The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plants are found on the site, as are at least 65 British Red Data Book species of invertebrate. The higher plants *Cicendia filiformis, Illecebrum verticillatum* and *Myosurus minimus* are considered vulnerable by the GB Red Book; while *Mentha pulegium* and *Ranunculus tripartitus* are included as endangered; and *Pulicaria vulgaris* as critically endangered. The Dark Guest Ant *Anergates atratulus* is also considered vulnerable by the IUCN Red List.

Ramsar 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. The site contains a rich invertebrate fauna.

Pressures/threats

- commercial scale forest exploitation
- drainage/reclamation: (unspecified)
- introduction/invasion of exotic plant species
- recreational/tourism disturbance (unspecified)

A.15 New Forest SAC

Qualifying Features

- 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 shrub layer (*Quercion robori-petraeae* or *Ilici-Fagenion*); Beech forests on acid soils
- Asperulo-Fagetum beech forests; Beech forests on neutral to rich soils
- Old acidophilous oak woods with Quercus robur on sandy plains
- Bog woodland
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae,*
- *Salicion albae);* Alder woodland on floodplains
- Alkaline fens; Calcium-rich springwater-fed fens
- Transition mires and quaking bogs
- Coenagrion mercuriale; Southern damselfly
- Lucanus cervus; Stag beetle
- *Triturus cristatus*; Great crested newt

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site

Pressures/threats

- forest and Plantation management & use
- biocenotic evolution, succession
- outdoor sports and leisure activities, recreational activities
- human induced changes in hydraulic conditions
- problematic native species

A.16 Outer Thames Estuary SPA

Qualifying Features

- *Gavia stellata*; Red-throated diver (Non-breeding)

- *Sterna hirundo*; Common tern (Breeding)
- *Sternula albifrons*; Little tern (Breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- shipping lanes, ports, marine constructions
- military use and civil unrest
- renewable abiotic energy use
- fishing and harvesting aquatic resources
- marine water pollution

A.17 Pagham Harbour SPA

Qualifying Features

- *Branta bernicla bernicla;* Dark-bellied brent goose (Non-breeding)
- *Philomachus pugnax*; Ruff (Non-breeding)
- *Sterna hirundo;* Common tern (Breeding)
- *Sterna albifrons;* Little tern (Breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features

- the distribution of the qualifying features within the site

Pressures/threats

- outdoor sports and leisure activities, recreational activities
- human induced changes in hydraulic conditions
- pollution to groundwater (point sources and diffuse sources)
- fishing and harvesting aquatic ressources

A.18 Pagham Harbour Ramsar

Qualifying Features

Ramsar criterion 6

- species/populations occurring at levels of international importance: Dark-bellied brent goose, *Branta bernicla bernicla*

A.19 Pevensey Levels SAC

Qualifying Features

- *Anisus vorticulus*; Little whorlpool ram's-horn snail

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the habitats of qualifying species
- the structure and function of the habitats of qualifying species
- the supporting processes on which the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site

Pressures/threats

- pollution to groundwater (point sources and diffuse sources)
- invasive non-native species
- human induced changes in hydraulic conditions

A.20 Pevensey Levels Ramsar

Qualifying Features

Ramsar criterion 2

- The site supports an outstanding assemblage of wetland plants and invertebrates including many British Red Data Book species.

Ramsar criterion 3

- The site supports 68% of vascular plant species in Great Britain that can be described as aquatic. It is probably the best site in Britain for freshwater molluscs, one of the five best sites for aquatic beetles Coleoptera and supports an outstanding assemblage of dragonflies Odonata.

Pressures/threats

- introduction/invasion of non-native plant species
- pollution – domestic sewage

A.21 Portsmouth Harbour Ramsar

Qualifying Features

Ramsar criterion 3

- The intertidal mudflat areas possess extensive beds of eelgrass *Zostera angustifolia* and *Zostera noltei* which support the grazing dark-bellied brent geese populations. The mud-snail *Hydrobia ulvae* is found at extremely high densities, which helps to support the wading bird interest of the site. Common cord-grass *Spartina anglica* dominates large areas of the saltmarsh and there are also extensive areas of green algae Enteromorpha spp. and sea lettuce *Ulva lactuca*. More locally the saltmarsh is dominated by sea purslane *Halimione portulacoides* which gradates to more varied communities at the higher shore levels. The site also includes a number of saline lagoons hosting nationally important species.

Ramsar criterion 6

- Species/populations occurring at levels of international importance: Dark-bellied brent goose, *Branta bernicla bernicla*

Pressures/threats

- eutrophication
- unspecified development: urban use
- coastal engineering, e.g. construction of sea defences for coastal protection

A.22 Portsmouth Harbour SPA

Qualifying Features

- *Branta bernicla bernicla;* Dark-bellied brent goose (Non-breeding)
- *Mergus serrator;* Red-breasted merganser (Non-breeding)
- Calidris alpina alpina; Dunlin (Non-breeding)
- *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the ‘Qualifying Features’ listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- fishing and harvesting aquatic ressources
- pollution to groundwater (point sources and diffuse sources)
- changes in abiotic conditions
- outdoor sports and leisure activities, recreational activities
- changes in biotic conditions

A.23 River Itchen SAC

Qualifying Features

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot
- Coenagrion mercuriale; Southern damselfly
- *Austropotamobius pallipes*; White-clawed (or Atlantic stream) crayfish
- Lampetra planeri; Brook lamprey
- *Salmo salar;* Atlantic salmon
- Cottus gobio; Bullhead
- Lutra lutra; Otter

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of qualifying species

- the distribution of qualifying species within the site

Pressures/threats

- human induced changes in hydraulic conditions
- pollution to groundwater (point sources and diffuse sources)
- grazing

A.24 Sandwich Bay SAC

Qualifying Features

- embryonic shifting dunes
- shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram
- fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland*
- dunes with Salix repens ssp. argentea (*Salicion arenariae*); Dunes with creeping willow
- humid dune slacks

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats
- the structure and function (including typical species) of qualifying natural habitats
- the supporting processes on which qualifying natural habitats rely

Pressures/threats

- outdoor sports and leisure activities, recreational activities
- invasive non-native species
- air pollution, air-borne pollutants
- human induced changes in hydraulic conditions
- changes in biotic conditions

A.25 Thanet Coast & Sandwich Bay Ramsar

Qualifying Features

Ramsar criterion 2

- Supports 15 British Red Data Book wetland invertebrates

Ramsar criterion 6

- species/populations occurring at levels of international importance: Ruddy turnstone, *Arenaria interpres interpres*

Pressures/threats

- vegetation succession
- water diversion for irrigation/domestic/industrial use
- eutrophication
- pollution – pesticides/agricultural runoff
- recreational/tourism disturbance (unspecified)
- unspecified development: urban use

A.26 Thanet Coast & Sandwich Bay SPA

Qualifying Features

- *Pluvialis apricaria;* European golden plover (Non-breeding)
- *Arenaria interpres;* Ruddy turnstone (Non-breeding)
- *Sterna albifrons;* Little tern (Breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- outdoor sports and leisure activities, recreational activities
- invasive non-native species
- changes in biotic conditions
- pollution to groundwater (point sources and diffuse sources)
- human induced changes in hydraulic conditions

A.27 Thanet Coast SAC

Qualifying Features

- reefs

- submerged or partially submerged sea caves

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats
- the structure and function (including typical species) of qualifying natural habitats
- the supporting processes on which qualifying natural habitats rely

Pressures/threats

- outdoor sports and leisure activities, recreational activities
- invasive non-native species
- changes in biotic conditions
- pollution to groundwater (point sources and diffuse sources)
- human induced changes in hydraulic conditions

A.28 Solent and Dorset Coast SPA

Qualifying Features

- *Sterna sandvicensis;* Sandwich tern (Breeding)
- *Sterna hirundo*; Common tern (Breeding)
- *Sternula albifrons;* Little tern (Breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- military use and civil unrest
- exploration and extraction of oil or gas

- shipping lanes, ports, marine constructions
- urbanised areas, human habitation
- fishing and harvesting aquatic resources
- outdoor sports and leisure activities, recreational activities
- renewable abiotic energy use
- discharges

A.29 Solent Maritime SAC

Qualifying Features

- sandbanks which are slightly covered by sea water all the time
- estuaries
- mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats
- coastal lagoons
- annual vegetation of drift lines
- perennial vegetation of stony banks: coastal shingle vegetation outside the reach of waves
- Salicornia and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand
- Spartina swards (*Spartinion maritimae*); Cord-grass swards
- Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
- shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes withmarram
- *Vertigo moulinsiana*; Desmoulin`s whorl snail

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site

Pressures/threats

- pollution to groundwater (point sources and diffuse sources)
- outdoor sports and leisure activities, recreational activities
- changes in biotic conditions
- fishing and harvesting aquatic resources
- changes in abiotic conditions

A.30 South Wight Maritime SPA

Qualifying Features

- reefs
- vegetated sea cliffs of the Atlantic and Baltic coasts
- submerged or partially submerged sea caves

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats
- the structure and function (including typical species) of qualifying natural habitats
- the supporting processes on which qualifying natural habitats rely

Pressures/threats

- human induced changes in hydraulic conditions
- outdoor sports and leisure activities, recreational activities
- invasive non-native species

A.31 Stodmarsh SPA

Qualifying Features

- *Botaurus stellaris*; Great bittern (Non-breeding)
- *Anas strepera;* Gadwall (Breeding)
- *Anas strepera*; Gadwall (Non-breeding)
- *Anas clypeata;* Northern shoveler (Non-breeding)
- *Circus cyaneus*; Hen harrier (Non-breeding)
- Waterbird assemblage
- Breeding bird assemblage

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- invasive non-native species
- air pollution, air-borne pollutants
- biocenotic evolution, succession
- pollution to groundwater (point sources and diffuse sources)

A.32 Stodmarsh SAC

Qualifying Features

- *Vertigo moulinsiana;* Desmoulin`s whorl snail

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the habitats of qualifying species
- the structure and function of the habitats of qualifying species
- the supporting processes on which the habitats of qualifying species rely
- the populations of the qualifying species
- the distribution of the qualifying species within the site

Pressures/threats

- invasive non-native species
- air pollution, air-borne pollutants
- biocenotic evolution, succession
- pollution to groundwater (point sources and diffuse sources)

A.33 Stodmarsh Ramsar

Qualifying Features

Ramsar criterion 2

- Six British Red Data Book wetland invertebrates. Two nationally rare plants, and five nationally scarce species. A diverse assemblage of rare wetland birds

A.34 Tankerton Slopes and Swalecliffe SAC

Qualifying Features

- *Gortyna borelii lunata;* Fisher's estuarine moth

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the habitats of qualifying species
- the structure and function of the habitats of qualifying species
- the supporting processes on which the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site

A.35 The Swale Ramsar

Qualifying Features

Ramsar criterion 2

- the site supports nationally scarce plants and at least seven British Red data book invertebrates

Ramsar criterion 5

- assemblages of international importance

Ramsar criterion 6

- species/populations occurring at levels of international importance: Common redshank, *Tringa totanus tetanus*, Dark-bellied brent goose, *Branta bernicla bernicla* and Grey plover, *Pluvialis squatarola*,

Pressures/threats

- erosion

A.36 The Swale SPA

Qualifying Features

- *Branta bernicla bernicla;* Dark-bellied brent goose (Non-breeding)
- Calidris alpina alpina; Dunlin (Non-breeding)
- Breeding bird assemblage
- Waterbird assemblage

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- invasive non-native species
- fishing and harvesting aquatic resources
- changes in biotic conditions
- changes in abiotic conditions
- outdoor sports and leisure activities, recreational activities

A.37 Woolmer Forest SAC

Qualifying Features

- Natural dystrophic lakes and ponds; Acid peat-stained lakes and ponds
- Northern Atlantic wet heaths with Erica tetralix; Wet heathland with cross-leaved heath
- European dry heaths
- Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking`surface
- Depressions on peat substrates of the Rhynchosporion

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the qualifying natural habitats
- the structure and function (including typical species) of the qualifying natural habitats
- the supporting processes on which the qualifying natural habitats rely

Pressures/threats

- outdoor sports and leisure activities, recreational activities
- invasive non-native species
- human induced changes in hydraulic conditions
- unknown threat or pressure
- modification of cultivation practices

A.38 River Avon SAC

Qualifying Features

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot
- *Vertigo moulinsiana*; Desmoulin`s whorl snail
- Petromyzon marinus; Sea lamprey
- Lampetra planeri; Brook lamprey
- *Salmo salar;* Atlantic salmon
- Cottus gobio; Bullhead

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site

Pressures/threats

- changes in biotic conditions
- human induced changes in hydraulic conditions
- pollution to groundwater (point sources and diffuse sources)

A.39 Thursley, Ash, Pirbright & Chobham SAC

Qualifying Features

- Northern Atlantic wet heaths with Erica tetralix; Wet heathland with cross-leaved heath
- European dry heaths
- Depressions on peat substrates of the Rhynchosporion

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats
- the structure and function (including typical species) of qualifying natural habitats
- the supporting processes on which qualifying natural habitats rely

Pressures/threats

- human induced changes in hydraulic conditions
- grazing
- biocenotic evolution, succession
- air pollution, air-borne pollutants
- other human intrusions and disturbances

A.40 Shortheath Common SAC

Qualifying Features

- European dry heaths
- Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface
- Bog woodland

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of the qualifying natural habitats
- the structure and function (including typical species) of the qualifying natural habitats
- the supporting processes on which the qualifying natural habitats rely

Pressures/threats

- outdoor sports and leisure activities, recreational activities
- other human intrusions and disturbances
- biocenotic evolution, succession

A.41 Thursley & Ockley Bogs Ramsar

Qualifying Features

Ramsar criterion 2

- supports a community of rare wetland invertebrate species including notable numbers of breeding dragonflies

Ramsar criterion 3

- It is one of few sites in Britain to support all six native reptile species. The site also supports nationally important breeding populations of European nightjar *Caprimulgus europaeus* and woodlark *Lullula arborea*

A.42 Avon Valley SPA

Qualifying Features

- *Cygnus columbianus bewickii;* Bewick's swan (Non-breeding)
- *Anas strepera;* Gadwall (Non-breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- human induced changes in hydraulic conditions
- pollution to groundwater (point sources and diffuse sources)
- changes in biotic conditions

A.43 Avon Valley Ramsar

Qualifying Features

Ramsar criterion 1

- The site shows a greater range of habitats than any other chalk river in Britain, including fen, mire, lowland wet grassland and small areas of woodland.

Ramsar criterion 2

- The site supports a diverse assemblage of wetland flora and fauna including several nationally-rare species.

Ramsar criterion 6

- species/populations occurring at levels of international importance: Gadwall, *Anas strepera strepera*

Pressures/threats

- disturbance to vegetation through cutting / clearing
- vegetation succession
- drainage/land-claim for agriculture
- sedimentation/siltation
- introduction/invasion of non-native plant species
- pollution – domestic sewage
- pollution – agricultural fertilisers
- recreational/tourism disturbance (unspecified)
- reservoir/barrage/dam impact: flow regime

A.44 Dorset Heaths SAC

Qualifying Features

- Northern Atlantic wet heaths with Erica tetralix; Wet heathland with cross-leaved heath
- European dry heaths
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae); Purple
- moor-grass meadows
- Depressions on peat substrates of the Rhynchosporion; Depressions on peat substrates

- Calcareous fens with Cladium mariscus and species of the Caricion davallianae; Calcium-rich fen dominated by great fen sedge (saw sedge)
- Alkaline fens; Calcium-rich springwater-fed fens
- Old acidophilous oak woods with Quercus robur on sandy plains; Dry oak-dominated woodland
- Coenagrion mercuriale; Southern damselfly
- Triturus cristatus; Great crested newt

Conservation Objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of qualifying species
- the distribution of qualifying species within the site

Pressures/threats

- human induced changes in hydraulic conditions
- biocenotic evolution, succession
- invasive non-native species
- outdoor sports and leisure activities, recreational activities
- grazing

A.45 Dorset Heathlands SPA

Qualifying Features

- *Circus cyaneus*; Hen harrier (Non-breeding)
- *Falco columbarius*; Merlin (Non-breeding)
- *Caprimulgus europaeus*; European nightjar (Breeding)
- *Lullula arborea;* Woodlark (Breeding)
- *Sylvia undata*; Dartford warbler (Breeding)

Conservation Objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the population of each of the qualifying features
- the distribution of the qualifying features within the site

Pressures/threats

- human induced changes in hydraulic conditions
- outdoor sports and leisure activities, recreational activities
- invasive non-native species
- grazing
- biocenotic evolution, succession

References

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[2] https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

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