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Appendix J Appropriate Assessment

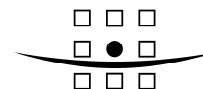


Suffolk Shoreline Management Plan II

Appropriate Assessment Report

Suffolk Shoreline Management Plan II (SMP2)
Client Steering Group (CSG)
January 2010
Final Report
9S4195

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1 INTRODUCTION

1.1 Background

The need for an 'Appropriate Assessment' arises under the requirements of the EC Habitats Directive (92/43/EEC) and its implementation in the UK under the Conservation (Natural Habitats &c.) Regulations 1994. Under Regulation 48(1), Appropriate Assessment is required for a plan or project, which either alone or in combination with other plans or projects, is likely to have a significant effect on a European site and is not directly connected with or necessary for the management of the site. A European site is either a Special Area of Conservation (SAC) (designated under Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) or a Special Protection Area (SPA) (designated under Council Directive 79/409/EEC on the conservation of wild birds). Government policy as outlined in the addendum to Planning Policy Statement 9 (PPS 9) (see ODPM 2005a; b) is that Wetlands of international importance designated under the Ramsar Convention (Ramsar sites) should also be subject to the provisions of the Habitats Regulations. Ramsar sites, SPAs and SACs are collectively referred to hereafter as 'International sites'.

Appropriate Assessment is the process to support a decision by the 'Competent Authority', in this case the Environment Agency[†] (see also **Section 1.4**), as to whether the proposed plan or project would have an adverse effect on the integrity of any International site. The phrase "the integrity of the site" is not defined in the Habitats Directive or the Habitats Regulations; it is defined by ODPM (2005b) which states that it is taken to mean the coherence of the site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified. An adverse effect on integrity (AEIOI) is likely to be one that prevents the site from maintaining the same contribution to favourable conservation status of the qualifying feature(s) for which it was designated.

The assessment of effects on International sites follows the reverse burden of proof paradigm, where if any doubt exists as to the effect of policy, then "no adverse effect on integrity" (NAEIOI) cannot be concluded. As such, only those sites where NAEIOI can be proven (with or without compensatory or mitigatory measures) can be assessed as "passing" the Appropriate Assessment test. Where it is not possible to determine that a plan or project under consideration will not have an adverse effect on the integrity of a European or Ramsar site, then alternative solutions which avoid harming site integrity must be sought. If alternatives are not possible, then the plan or project can only proceed on the basis of imperative reasons of over-riding public importance (IROPI). If IROPI is agreed by the Secretary of State, then compensatory measures must be secured to offset damage done by the plan or project, such that the overall coherence of the SAC/SPA network is maintained.

The conservation status and integrity of the site is defined through the site's conservation objectives and it is against these objectives that the effects of the plan or project must be assessed. Conservation objectives set out the physical, chemical and

[†] Normally, the operating authority (Suffolk Coastal DC) would be deemed to be the competent authority; however, in this instance and in consultation with statutory consultees, the National Environmental Assessment Agency (NEAS) advised that the competent authority would be the Environment Agency.

biological thresholds, and limits of anthropogenic activity and disturbance, which must be met to achieve the integrity of the site. Conservation objectives serve both as criteria against which site condition can be assessed and reported against, and also as a basis for assessing plans or projects which may affect the site. Conservation objectives for European Marine Sites are set out in the relevant Regulation 33 documents (so called as their production is a requirement of Regulation 33 (2) of the Habitats Regulations), which for English European Marine Sites are the responsibility of Natural England.

A requirement of the SMP process as stipulated in “The Assessment of Regional Spatial Strategies under the Provisions of the Habitats Regulations – Draft Guidance” (English Nature, 2006) has been consultation with Natural England regarding the potential impacts of preferred SMP policies on International sites within or adjacent to the SMP Management Areas.

1.2 Shoreline Management Plans (SMPs)

1.2.1 SMP aims and objectives

A Shoreline Management Plan (SMP) is a large-scale assessment of the risks associated with coastal processes. They aim to reduce the risks to the social, economic, natural and historical environment, managing risk by using a range of methods which reflect both national and local priorities, to:

- Reduce the threat of flooding and erosion to people and their property; and
- Benefit the environment, society and the economy as far as possible, in line with the Government’s ‘sustainable development principles’ (Defra, 2006).

The first generation of SMPs were produced for the coastline of England and Wales in the late 1990s and were based on sediment cell boundaries which related to the movement of sand and shingle along the coast. The boundaries of these cells were originally set at locations where the net ‘along shore’ movement of sand and shingle changed direction. In some instances, the area covered by an SMP differed due to different requirements, such as the area covered by a coastal authority. However, for the SMP reviews a behavioural systems[‡] approach was recommended, leading to slightly different boundaries compared to the first generation (Defra, 2006). The objectives of an SMP must be in line with the Government’s strategy for managing risks from floods and coastal erosion and should:

- Set out the risks from flooding and erosion, to people and the developed, historic and natural environment within the SMP area;
- Identify opportunities to maintain and improve the environment by managing the risks from floods and coastal erosion;
- Identify the preferred policies for managing risks from floods and erosion over the next century;
- Identify the consequences of putting the preferred policies into practice;
- Set out procedures for monitoring how effective these policies are;

[‡] The current program of SMPs around the coast is a review of the first generation of reports produced in the 1990s and reflects the availability of new coastal processes information, new considerations (site designations etc) and less uncertainty about climate change.

- Inform others so that future land use, planning and development of the shoreline takes account of the risks and the preferred policies;
- Discourage inappropriate development in areas where the flood and erosion risks are high; and
- Meet international and national nature conservation legislation and aim to achieve the biodiversity objectives (Defra, 2006).

The most appropriate option for shoreline management will depend on the section of coastline in question and on technical, environmental, social and economic circumstances. The four options considered for shoreline management in the second generation SMPs are presented in **Table 1.1**.

Table 1.1 Options used in SMP development

SMP option	Description of option
Hold the line (HTL)	Hold the existing defence line by maintaining or changing the standard of protection. This policy will cover those situations where work or operations are carried out in front of the existing defences (such as beach recharge, rebuilding the toe of a structure, building offshore breakwaters and so on), to improve or maintain the standard of protection provided by the existing defence line. You should include in this policy other policies that involve operations to the back of existing defences (such as building secondary floodwalls) where they form an essential part of maintaining the current coastal defence system.
Advance the line (ATL)	Advance the existing defence line by building new defences on the seaward side of the original defences. Using this policy should be limited to those policy units where significant land reclamation is considered.
Managed realignment (MR)	Managed realignment by allowing the shoreline to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences).
No active intervention (NAI)	No active intervention, where there is no investment in coastal defences or operations.

Within the development of an SMP, an epoch (time period) based approach is used for planning purposes, with the three epochs being 0 – 20 (2005 – 2025), 20 – 50 (2025 – 2055) and 50 – 100 (2055 – 2105) years hence.

1.2.2 Implications of SMP policy on the wider environment

Each of the SMP policies presented in **Table 1.1** has the potential to impact the wider environment in one or more ways. **Table 1.2** presents potential implications of each option.

Table 1.2 Potential generic implications of each SMP option

SMP option	Positive impacts	Negative impacts
Hold the line (HTL)	<ul style="list-style-type: none"> • Protection of communities and infrastructure located within the coastal flood zone; • Protection of habitat landward of defences; • Protects freshwater resources (e.g. abstractions & boreholes); • Provides stability to areas of coastline, within a wider management context; • Protects economic assets located behind defences; and • Provides protection to ecological, cultural and historical assets landward of the defences. 	<ul style="list-style-type: none"> • Coastal squeeze (loss of habitat); • Interruption of coastal processes; • May increase flood and coastal erosion risk elsewhere; • Promotes unsustainable land use practices with the coastal flood zone; • Diverts limited resources away from an adaptation response to rising sea levels; and • Requires ongoing commitment to future investment in maintenance and improvement.
Advance the line (ATL)	<ul style="list-style-type: none"> • Provides additional space for communities; • Protection of communities and infrastructure located within the coastal flood zone; • Protection of habitat landward of defences; • Protects freshwater resources (e.g. abstractions & boreholes); • Protects economic assets located behind defences; and • Provides protection to ecological, cultural and historical assets landward of the defences. 	<ul style="list-style-type: none"> • Reduction in extent of coastal habitat; • Change in functionality of habitat; • Increased coastal squeeze; • Interruption of coastal processes; • Effect on marine habitat; and • May increase rate of coastal erosion either side of the advanced line.
Managed realignment (MR)	<ul style="list-style-type: none"> • Coastal habitats allowed to move landward under rising sea levels; • Creation of habitat to aid UKBAP; (United Kingdom Biodiversity Action Plan) and local BAP (Biodiversity Action Plan) targets; • Habitat created for juvenile fish and other aquatic organisms (benefits to environment and fishing communities); • Reduces flood risk; • Promotes natural coastal processes; • Contributes towards a more natural management of the coast; and • Creation of high tide roosts and feeding areas. 	<ul style="list-style-type: none"> • Reduction in extent of habitat landward of defences; • Change in nature of habitat to landward of defence; • Impact upon aquifers and abstractions; • Loss of communities or community assets; and • Loss of heritage and cultural features;

SMP option	Positive impacts	Negative impacts
No active intervention (NAI)	<ul style="list-style-type: none"> • Coastal habitats allowed to move landward under rising sea levels; • Promotes natural coastal processes; and • Contributes towards a more natural management of the coast. 	<ul style="list-style-type: none"> • Lack of certainty of effects and time for adaptation; • Increased risk of inundation to landward habitats under rising sea levels; • Impact upon aquifers and abstractions; • Loss of communities or community assets; and • Loss of heritage and cultural features.

1.3 Guidance for the Appropriate Assessment of SMPs

The Department for Communities and Local Government (DCLG) has produced draft guidance on how to determine the need for an Appropriate Assessment for a given plan and the provision of an assessment if one is considered necessary. Additionally, Natural England has provided an internal draft document relating to the provision of Appropriate Assessments for Regional Spatial Strategies (RSS) and Sub-Regional Strategies. More specific guidance (currently draft) on assessing Shoreline Management Plans in terms of the Habitats Regulations is available from the Environment Agency. These three documents: “Planning for the Protection of European Sites: Appropriate Assessment” (DCLG, 2006), “The Assessment of Regional Spatial Strategies under the Provisions of the Habitats Regulations – Draft Guidance” (English Nature, 2006) and “Appropriate Assessment of Flood Risk Management Plans Under the Habitats Regulations” (Environment Agency, 2007) currently provide the most cohesive source of guidance relating to the provision of Appropriate Assessments for Shoreline Management Plans. Although these documents relate explicitly to land use plans this guidance has been applied in this report to SMP policy since SMPs have the potential to influence the development of land. In this respect, there are clear parallels between RSS and SMPs, and the relevant elements of guidance relating to RSSs have therefore been adapted here for SMP use. In 2006 Royal Haskoning provided Defra with a guidance note relating to Appropriate Assessment provision for SMPs, following the completion of an Appropriate Assessment for the River Tyne to Flamborough Head SMP II. This guidance has been a fundamental consideration in establishing the scope of this particular Appropriate Assessment. Accordingly, these documents have been used as a guide in establishing the scope of the Appropriate Assessment for the Suffolk SMP II. In addition, the Environment Agency (2007) work instruction “Appropriate Assessment of Flood Risk Management Plans under the Habitats Regulations” provides specific advice on undertaking Appropriate Assessments of SMPs and as such has been used to undertake this assessment and the approach and methodology adopted here is therefore compliant with this guidance.

The assessment is also structured with regard to the existing suite of additional guidance which is pertinent to the provision of Appropriate Assessment and also SMP production. Key source documents are therefore:

- Managing Natura 2000 Sites – The provisions of Article 6 of the Habitats Directive (EC, 2000);
- Environment Agency work instructions and guidance on SMPs, Catchment Flood Management Plans (CFMPs) and Appropriate Assessment;
- Natural England's Habitats Regulations Guidance Note series; and

- Assessing Projects under the Habitats Directive – A Guide for Competent Authorities (CCW Guidance, Tyldesley & Hoskin, 2008).

Appropriate Assessment is accordingly a mechanism to establish the actual scale and implications of impacts, and to provide a determination on whether a course of action is acceptable or unacceptable, in terms of its impacts on the integrity of international sites.

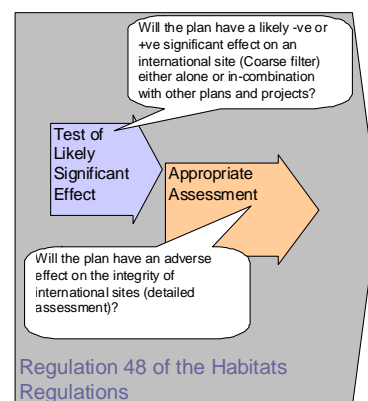
1.4 Identification of Competent Authority for the SMP

One of the first steps in addressing SMPs under the Habitats Regulations is identification of the competent authority. In this instance, Royal Haskoning is undertaking the technical analysis which forms the basis of the Appropriate Assessment, but the ultimate responsibility for signing off the Appropriate Assessment and ensuring compliance with the Habitats Regulations falls to the competent authority.

Following consultation with statutory consultees the National Environmental Assessment Agency (NEAS) advised that for the purposes of this assessment **the competent authority is the Environment Agency**[§].

1.5 Requirement for an Appropriate Assessment for the SMP2

Due to the integrated nature of the SMP process the requirement to adhere to the Habitats Regulations at a policy level has been a critical driver in the development of policies within the Suffolk SMP2. It should be remembered however, that the requirement to have regard to effects on designated habitat is only one of the drivers which shapes the policy of the SMP. The potential exists therefore for policies within the SMP to emerge which may have an adverse effect on the integrity of international sites.



The Habitats Regulations (under Regulation 48(1)) require that any plan or project which (either alone or in combination) is considered **likely to have a significant effect** on an international site must provide an Appropriate Assessment of the implications on international sites. Simply, if the plan either alone or in combination with other plans and projects, is considered likely to have a significant effect (either positive or negative) then an Appropriate Assessment will be required.

The determination of whether the Suffolk SMP2 would have a **likely significant effect** on the international sites on the Suffolk Coast.

The determination of likely significant effect requires a coarse filter approach to be taken in establishing the likely effects of the SMP in relation to the sensitivity of the features on international sites and their conservation objectives (the integrity of the site). This can be addressed through a series of structured questions:

[§] See **Section 1.1**

Q. Does the Suffolk Coast and coastal hinterland contain any sites designated under the Ramsar convention or Habitats or Birds Directives (international sites)?

A. The Suffolk coast contains a wide variety of coastal, freshwater and estuarine sites (as outlined in **Section 3** of this report).

Q. What are the sensitivities of the international sites?

A. The sites are sensitive to changes in their nature as a result of coastal processes and sea level fluctuations. For example:

Freshwater sites are found in numerous locations on the Suffolk coast located to the rear of existing natural or man-made defences. Shifts in coastal form may lead to inundation of these sites and the loss of features due to increased salinisation or wave action.

Coastal sites such as shingle habitat (ground-nesting areas for Little Tern and designated habitat for driftline and perennial vegetation) are dependent on coastal processes. Many such sites have been 'managed' in the past to maintain their structure. Changes to coastal processes through introduction or removal of defence have the potential to alter the function and form of such habitat.

Estuarine sites have typically evolved in response to human habitation, with key habitats occurring in the middle and upper reaches of the tidal estuary adjacent to estuary mouths. These are often constrained by settlement (for example the Blyth and Deben estuaries). Changes to coastal defence or coastal processes, and sea level rise, have the potential to lead to changes in habitat composition or loss through coastal squeeze.

Q. Does the SMP have the potential to affect (either positively or negatively) the integrity of international sites?

A. The SMP has four policy options, which have the potential to lead to changes in the movement of sediment along the coast, levels of inundation and management regimes. Collectively, the SMP has the potential to alter the structure and function of the Suffolk coast, with previously freshwater sites becoming saline through policies of managed realignment or the removal of management. Additionally, the SMP may alter the structure of features which are critically linked to sediment supply, such as shingle ridges. It is important to remember that the question here relates to either positive or negative effects, and to the plan as a whole rather than individual policies.

Q. Is the SMP likely to have a significant effect on the international sites on the Suffolk Coast?

A. Since there are features on the international sites of Suffolk which may be affected by matters which the SMP addresses, it cannot be ruled out that there will be a likely significant effect. This effect may be positive or negative as SMP policy responds to Habitats Regulations or other drivers. **It therefore follows that an Appropriate Assessment is required for the Suffolk SMP.**

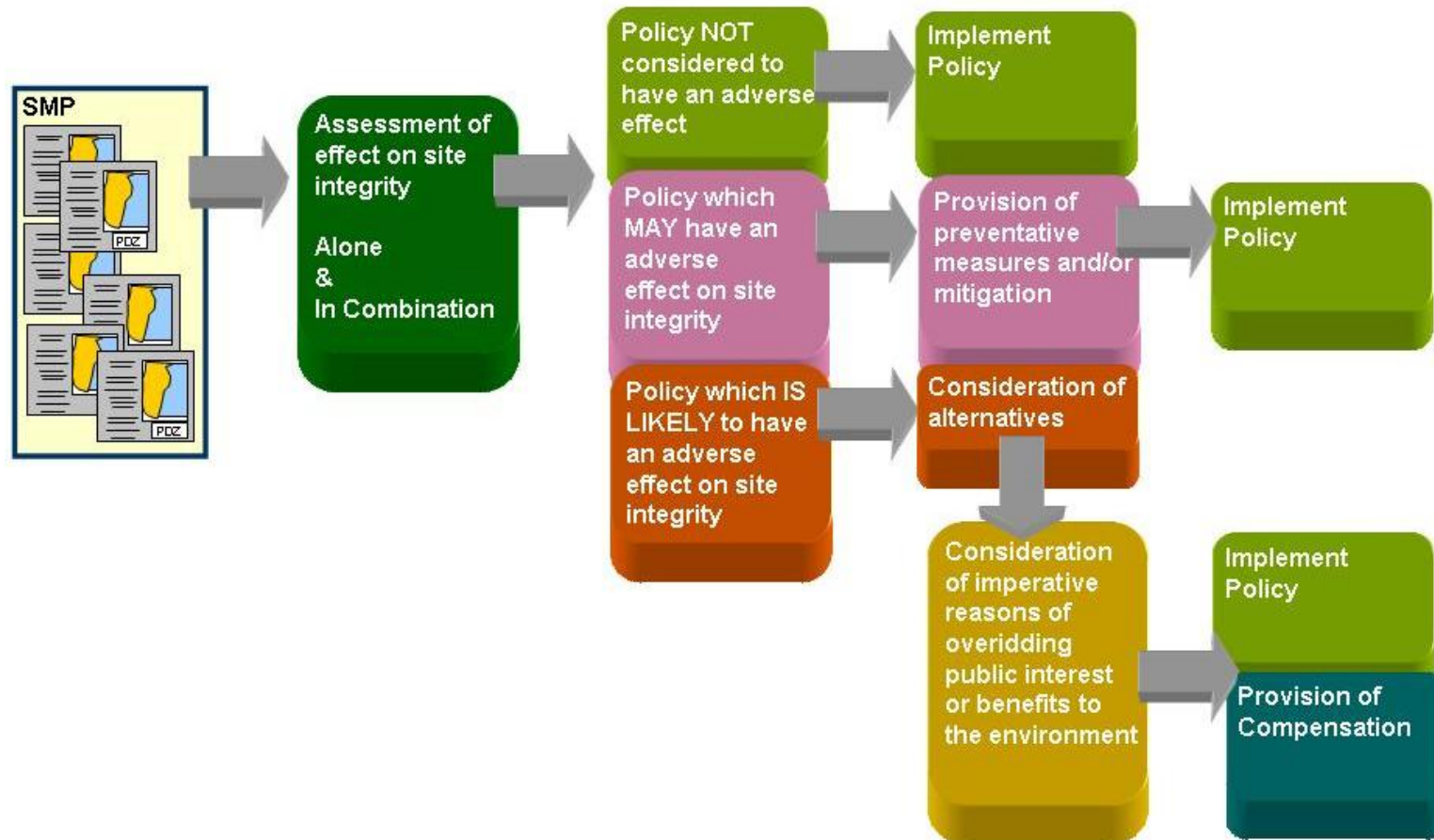
2 METHODOLOGY

As has been stated previously, the methodology for this exercise has been developed in accordance with the guidance listed in **Section 1.3**. Additionally, Appropriate Assessment methodologies devised for large scale developments have been evaluated to ensure that the approach adopted is based on practical implementation of the Habitats Regulations. Equally it ensures that the approach taken meets the requirements of the Habitats Regulations yet is specific to the particulars of an SMP, with the intent of offering a level of assessment which is appropriate for policies of this type.

To ensure that the process builds on the success of the River Tyne to Flamborough Head SMP2 Appropriate Assessment and in an attempt to establish a standard format for SMP2 Appropriate Assessment, a format corresponding to the River Tyne to Flamborough Head SMP Appropriate Assessment has been adopted here. It should be clearly understood that the actual development required to implement coastal defence options, which may occur as policy is implemented, would itself be likely to require an Appropriate Assessment; it is not the intention of this policy level assessment to provide a level of detail which would duplicate a site-specific, proposal based Appropriate Assessment.

The process has been broken down into a series of clearly defined steps that will provide a transparent and accountable assessment of the SMP policies. These steps are outlined below and where necessary references are provided to the specific guidance or the contents of Circular 06/2005 Biodiversity and Geological Conservation (ODPM, 2005b). A summary of the suggested methodology is illustrated in **Figure 2.1**, which shows the manner in which the overall assessment will progress and how key tasks relate to one another.

Figure 2.1 Appropriate Assessment Methodology



2.1 Assessment of the SMP Policies

The assessment of the SMP policies has been supported by a tabulated account based on an adaptation of the Favourable Condition tables for the SSSIs which underpin the European sites. These tables are presented as **Appendix I**. **Appendix I** shows the key features of the site, the attributes relevant to such features, the identified management targets for the site and known sensitivities or management issues. Each policy within the assessment has then been evaluated and tabulated against each feature in regard to the potential impacts of the policy, preventative measures that could be taken, any necessary or suggested mitigation and a commentary on the impacts of the policy on the site features and targets. On the basis of this exercise, an assessment has been provided in regard to the overall impacts of each policy on the overall integrity of the European site. This exercise has been recorded at the Management Area level, so that the policies for each zone have been assessed in regard to the possible impacts on the European features within that zone. Management Areas have been devised to provide discrete, spatial areas for policy application; where a policy may affect a neighbouring Management Area this has been included in the assessment. The favourable condition tables have been refined to the extent that they relate solely to the features relevant to the European sites and not to features which are not covered by the Habitats or Birds Directives.

Although Ramsar features and sites do not have favourable condition tables, conservation objectives set out in the Regulation 33 package have been produced to broadly protect the underlying habitat and environmental conditions required by Annex 1 and 2 habitats and species. Given the close correlation between Ramsar and European features, the conservation objectives within the Regulation 33 package are generally adequate to protect Ramsar features. Nonetheless, where Ramsar features need consideration over and above those of European features, the high-level generic conservation objective for international sites has been applied to Ramsar sites and their features; that is to say 'subject to natural change to maintain in favourable condition the Ramsar features and their supporting habitats'.

The provision of the tables to record and summarise the Appropriate Assessment has been underpinned by any ecological assessment, survey or analysis which supports the assessment process. For each Management Area a commentary and determination has been provided which clearly expresses the likely impacts of the policies on each international site (over three epochs) and illustrates the measures which could be taken to avoid any adverse impacts identified. The level of assessment has been provided at an 'appropriate' level commensurate with a policy based assessment and in recognition of the fact that further assessment would be provided when the actual scheme is undertaken. This acknowledges the need to provide a level of assessment that is 'appropriate' and refers to the European Court of Justice (ECJ) ruling where the Advocate General's opinion was that the assessment for policy should be as rigorous an assessment as can reasonably be undertaken. Our assessment considers the policy provided and does not try to second guess the content and detail of schemes and strategies.

2.2 Assessment of impacts over different SMP epochs

The complications of applying the Habitats Regulations at the policy level are further enhanced by the different timescales (or epochs) over which they apply. The possibility

exists that SMPs or their policies will result in short-term adverse impacts but that in the longer-term they will enable site integrity to be maintained. However in the assessment provided here no such issues relating to temporal adverse effects but longer term benefit have been identified.

2.3 Provision of an ‘in combination’ assessment

The ‘in combination’ assessment builds on the summary tables provided in the ‘alone assessment’ stage and considers the impacts of an SMP policy in combination with all other SMP policies, other plans identified as being relevant to this assessment, and any approved projects yet to be implemented. The specific focus of this stage relates to the consideration of those plans and projects which are likely to have the same effect as the policies of the SMP. In the context of the SMP this is likely to relate to other plans or projects which may have effects on coastal habitat or processes which support habitat or species. The plans and projects which are considered relevant to this study are discussed in **Section 5** of this document. An assessment for each SMP Management Area has been provided which accounts for the ‘in combination’ effects of other plans or projects (from the list provided in **Section 5**) which have similar impacts to that of the specific policy within the Management Unit. An accompanying rationale has been provided to support this.

The ‘in combination’ assessment has been summarised in regard to the overall conclusions which can be drawn to provide a clear summary for each SMP Management Unit. In this way the impacts of the policies within the unit alone, and ‘in combination’ with other plans and projects, is clearly expressed.

2.4 Consideration of preventative measures and mitigation

The assessment provided offers a simple breakdown of policy (at the Management Area level) as follows:

- Management Areas which are not considered to have an adverse effect on international sites;
- Management Areas where an adverse effect cannot be ruled out depending on the details at scheme level or other avoidance measures; and
- Management Areas which are considered to have an adverse effect on the integrity of sites.

This classification has been provided for effects that are either due to the policies within the Management Area alone, or in combination with other policy, plans or projects.

For some Policy Areas where an adverse effect cannot be discounted a series of preventative measures have been provided. These will ensure that actual effects are avoided at the implementation stage. Effectively, these measures provide a supplementary aspect of SMP policy which will focus the implementation of policy to ensure that the integrity of international sites is protected as the SMP is implemented.

2.5 Consideration of policy which may have an adverse effect on the integrity of sites.

For Management Areas where it has not been able to conclude NAEOI and where preventative measures are not sufficient to avoid such effect, a detailed account of the **alternatives**⁴ for policy has been provided within the assessment. A rationale is therefore provided detailing the possible effects on the integrity of the sites, the possible alternatives (with a commentary on their feasibility and possible effects on integrity), and the reasons why policy has been recommended which will have an adverse effect on the integrity of international sites.

⁴ The consideration of alternatives, together with compensatory and mitigatory measures and the use of IROPI, are post-Appropriate Assessment considerations and not part of the appropriate assessment itself.

3 SITES AND FEATURES FOR CONSIDERATION WITHIN THE APPROPRIATE ASSESSMENT

3.1 Sites within or adjacent to SMP2 management units

The Suffolk coast contains some of the largest areas of undeveloped coastline in the UK, characterised by low marshes and reed beds which are interspersed with sand and shingle beaches, large areas of enclosed tidal land, crumbling cliffs, heathland, forest and farmland. Each of these habitats in turn supports a range of species of high conservation value, including birds, plants and invertebrates. The high conservation value is reflected in the fact that the majority of the coastline is subject to statutory nature conservation and landscape designations. These have important implications for any prospective developments, management or policies relating to the Suffolk coast, with the assessment having been provided for those sites either at risk of coastal erosion or which are located within the 1 in 1000 flood zone⁵. These sites are presented in **Figure 3.1**.

Despite the dispersed nature of the designated sites throughout the SMP area, there is potential for policies associated with one area to have a knock-on effect with other designated sites. Conceivably shoreline management policies may also affect international sites further inland through cumulative impacts. These sites are therefore fully considered. Sites concentrated around the Suffolk coast and likely to be affected by SMP policies are listed below and presented in **Tables 3.1 – 3.3**:

Sites designated under the Birds Directive:

Alde-Ore Estuary SPA
 Benacre to Easton Bavents SPA
 Deben Estuary SPA
 Minsmere-Walberswick SPA
 Sandlings SPA
 Stour and Orwell Estuaries SPA

Sites Designated under the Habitats Directive:

Alde, Ore and Butley Estuaries SAC
 Benacre to Easton Bavents Lagoons SAC
 Minsmere to Walberswick Heaths and Marshes SAC
 Orfordness- Shingle Street SAC
 The Broads SAC

Sites designated under the Ramsar Convention:

Alde-Ore Estuary Ramsar
 Deben Estuary Ramsar
 Minsmere-Walberswick Ramsar
 Stour and Orwell Estuaries Ramsar

⁵ The area defined as having a 0.1% (1 in 1000) chance of inundation per annum

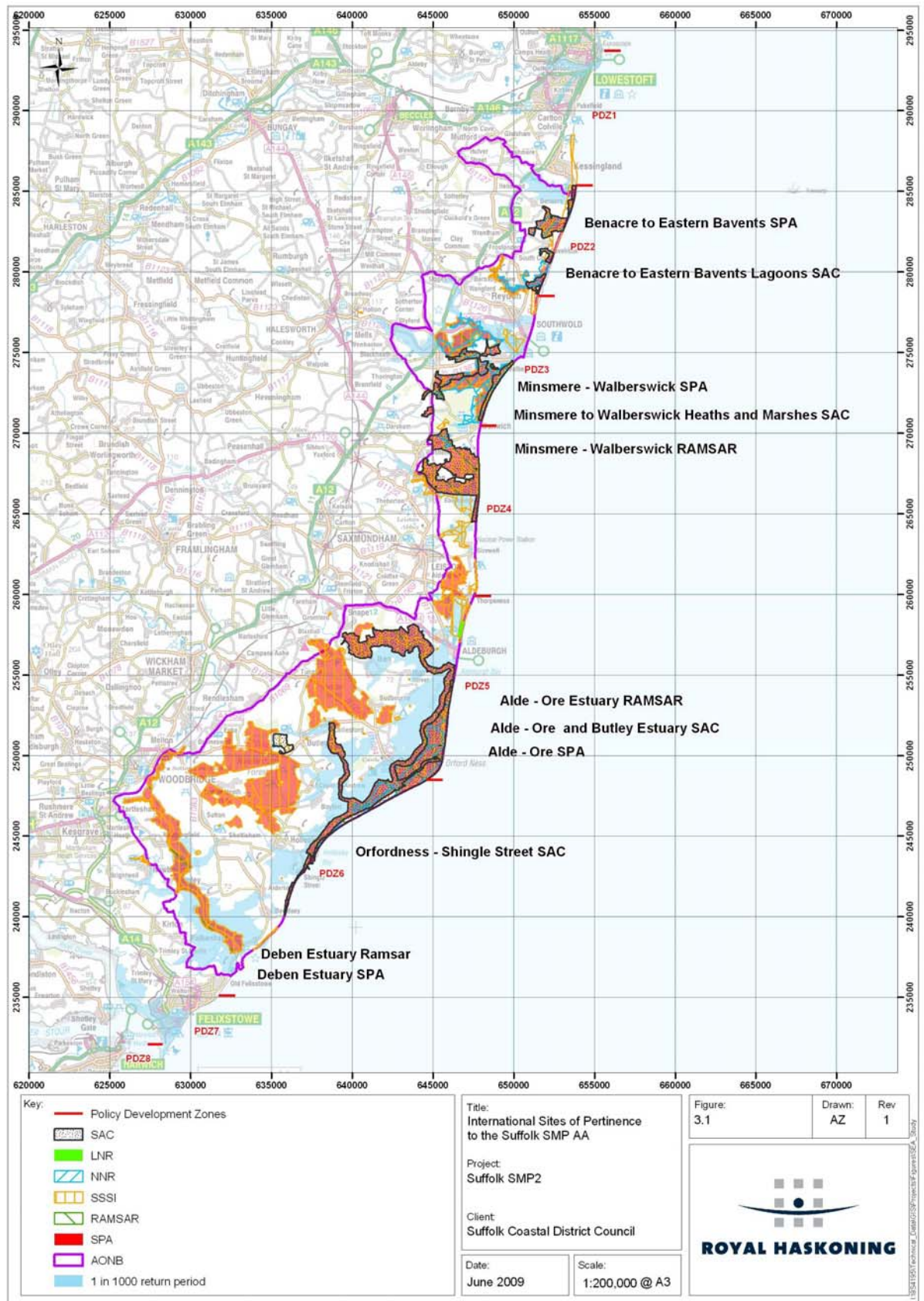


Table 3.1 Special Protection Areas (SPA) within or adjacent to SMP2 management units

SPA name	Site Features
Aide-Ore Estuary SPA	<p>Article 4.1 qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> • Marsh harrier <i>Circus aeruginosus</i> at least 1.9% of the GB breeding population (5 year mean, 1993 – 1997); • Avocet <i>Recurvirostra avosetta</i> (Western Europe / Western Mediterranean – breeding) 23.1% of the GB breeding population (5 year mean, 1990 – 1994); • Little tern <i>Sterna albifrons</i> (Eastern Atlantic – breeding) 2% of the GB breeding population (5 count mean, 1993 – 1994, 1996 – 1998); and • Sandwich tern <i>Sterna sandvicensis</i> (Western Europe / Western Africa) 1.2% of the GB breeding population (5 year mean, 1992 – 1996). <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> • Ruff <i>Philomachus pugnax</i> (Western Africa – wintering) 0.4% of the GB population (5 year peak mean 1991/92 – 1995/96); and • Avocet <i>Recurvirostra avosetta</i> (Western Europe / Western Mediterranean – breeding) 60.3% of the GB population (5 year peak mean 1991/92 – 1995/96). <p>Article 4.2 qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> • Lesser black backed gull <i>Larus fuscus</i> (Western Europe / Mediterranean / Western Africa) 11.3% of the breeding population (5 year mean 1994 – 1998). <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> • Redshank <i>Tringa totanus</i> (Eastern Atlantic – wintering) 1.1% of the population (5 year peak mean 1991/92 – 1995/96).
Benacre to Easton Bavents SPA	<p>Article 4.1 qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> • Bittern <i>Botaurus stellaris</i> (Europe – breeding) 5% of the GB breeding population (5 year mean, 1992 – 1996); • Marsh harrier <i>Circus aeruginosus</i> 5.1% of the GB breeding population (5 year mean, 1993 – 1997); and • Little tern <i>Sterna albifrons</i> (Eastern Atlantic – breeding) 0.9% of the GB breeding population (5 year mean, 1992 – 1996).
Broadland SPA	<p>Article 4.1 qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> • Bittern <i>Botaurus stellaris</i> (Europe – breeding) at least 10% of the GB breeding population (three year mean 1996 – 1998); and • Marsh harrier <i>Circus aeruginosus</i> 10.2% of the GB breeding population (5 year mean, 1987/8 – 1991/2). <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> • Hen harrier <i>Circus cyaneus</i> 2.9% of the GB population (5 year peak mean 1987/8 – 1991/2); • Bewick's swan <i>Cygnus columbianus bewickii</i> (Western Siberia / North-eastern & North-western Europe) at least 8.2% of the GB population (count as at 1996/7); and • Hooper swan <i>Cygnus cygnus</i> (Iceland / UK / Ireland) 1.8% of the GB population (count as at 1996/7). <p>Article 4.2 Qualification (79/409/EEC) Over winter the area regularly supports:</p>

SPA name	Site Features
	<ul style="list-style-type: none"> Gadwall <i>Anas strepera</i> (North-western Europe) 0.8% of the population (5 year peak mean, 1991/2 – 1995/6).
Deben Estuary SPA	<p>Article 4.1 qualification (79/409/EEC) Over winter the area regularly supports:</p> <ul style="list-style-type: none"> Avocet <i>Recurvirostra avosetta</i> (Western Europe / Western Mediterranean – breeding) 7.5% of the GB population (5 year peak mean 1991/92 – 1995/96). <p>Article 4.2 Qualification (79/409/EEC) Over winter the area regularly supports:</p> <ul style="list-style-type: none"> Dark-bellied Brent goose <i>Branta bernicla bernicla</i> (Western Siberia/Western Europe) 0.8% of the population (5 year peak mean 1991/92 – 1995/96).
Minsmere-Walberswick SPA	<p>Article 4.1 qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> Bittern <i>Botaurus stellaris</i> (Europe - breeding) 35% of the GB breeding population (5 year mean, 1993 – 1997); Nightjar <i>Caprimulgus europaeus</i> 0.7% of the GB breeding population (count as at 1990); Marsh harrier <i>Circus aeruginosus</i> 10.2% of the GB breeding population (5 year mean, 1993 – 1997); Avocet <i>Recurvirostra avosetta</i> (Western Europe / Western Mediterranean – breeding) 10.4% of the GB breeding population (count as at early 1990s); and Little tern <i>Sterna albifrons</i> (Eastern Atlantic – breeding) 1.2% of the GB breeding population (5 year mean, 1992 – 1996). <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> Hen harrier <i>Circus cyaneus</i> 2% of the GB population (5 year peak mean, 1985/6 – 1989/90) <p>Article 4.2 Qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> Shoveler <i>Anas clypeata</i> (North-western / Central Europe) 2.3% of the population in Great Britain (Count as at 1990); Teal <i>Anas crecca</i> (North-western Europe) 4.9% of the population in Great Britain (Count as at 1990); and Gadwall <i>Anas strepera</i> (North-western Europe) 3.1% of the population in Great Britain (Count as at 1990). <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> Shoveler <i>Anas clypeata</i> (North-western / Central Europe) 1% of the population in Great Britain (5 year peak mean 1991/92 – 1995/96); Gadwall <i>Anas strepera</i> (North-western Europe) 1.1% of the population in Great Britain (5 year peak mean 1991/92 – 1995/96); and White fronted goose <i>Anser albifrons albifrons</i> (North-western Siberia / North-eastern & North-western Europe) 1.1% of the population in Great Britain (5 year peak mean 1991/92 – 1995/96).
Sandlings SPA	<p>Article 4.1 qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> Nightjar <i>Caprimulgus europaeus</i> 3.2% of the GB breeding population (count as at 1992); and Woodlark <i>Lullula arborea</i> 10.3% of the GB breeding population (count as at

SPA name	Site Features
	1997).
Stour and Orwell Estuaries SPA	<p>Article 4.1 qualification (79/409/EEC) During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> • Avocet <i>Recurvirostra avosetta</i> (Western Europe / Western Mediterranean – breeding) 3.6% of the population in Great Britain (5-year peak mean 1996 – 2000). <p>Article 4.2 Qualification (79/409/EEC) Over winter the area regularly supports:</p> <ul style="list-style-type: none"> • Pintail <i>Anas acuta</i> (North-western Europe) 1.2% of the population (5 year peak mean 1995/96 – 1999/2000); • Dark-bellied Brent goose <i>Branta bernicla bernicla</i> (Western Siberia / Western Europe) 1.2% of the population (5 year peak mean 1995/96 – 1999/2000); • Dunlin <i>Calidris alpina alpina</i> (Northern Siberia / Europe / Western Africa) 1.4% of the population (5 year peak mean 1995/96 – 1999/2000); • Knot <i>Calidris canutus</i> (North-eastern Canada / Greenland / Iceland / North-western Europe) 1.3% of the population (5 year peak mean 1995/96 – 1999/2000); • Black-tailed godwit <i>Limosa limosa islandica</i> (Iceland – breeding) 7.3% of the population (5 year peak mean 1995/96 – 1999/2000); • Grey plover <i>Pluvialis squatarola</i> (Eastern Atlantic – wintering) 1.3% of the population (5 year peak mean 1995/96 – 1999/2000); and • Redshank <i>Tringa totanus</i> (Eastern Atlantic – wintering) 2.8% of the population (5 year peak mean 1995/96 – 1999/2000). <p>On passage the area regularly supports:</p> <ul style="list-style-type: none"> • Redshank <i>Tringa totanus</i> (Eastern Atlantic – wintering) 2% of the population (5 year peak mean 1995/96 – 1999/2000). <p>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage of Birds Over winter the area regularly supports:</p> <ul style="list-style-type: none"> • 63017 waterfowl (5 year peak mean 19/05/2005), including: Great crested grebe <i>Podiceps cristatus</i>, cormorant <i>Phalacrocorax carbo</i>, dark-bellied Brent goose <i>Branta bernicla bernicla</i>, shelduck <i>Tadorna tadorna</i>, wigeon <i>Anas penelope</i>, gadwall <i>Anas strepera</i>, Pintail <i>Anas acuta</i>, goldeneye <i>Bucephala clangula</i>, ringed plover <i>Charadrius hiaticula</i>, grey plover <i>Pluvialis squatarola</i>, lapwing <i>Vanellus vanellus</i>, knot <i>Calidris canutus</i>, dunlin <i>Calidris alpina alpina</i>, black-tailed godwit <i>Limosa limosa islandica</i>, curlew <i>Numenius arquata</i>, redshank <i>Tringa totanus</i> and turnstone <i>Arenaria interpres</i>.

Table 3.2 Special Areas of Conservation (SAC) within or adjacent to SMP2 management units

SAC name	Site Features
Alde, Ore and Butley Estuaries SAC	<p>Annex I Habitats (as a primary reason for selection): Estuaries</p> <p>This estuary, made up of three rivers, is the only bar-built estuary in the UK with a shingle bar. This bar has been extending rapidly along the coast since 1530, pushing the mouth of the estuary progressively south-westwards. The estuary contains large areas of shallow water over subtidal sediments and extensive mudflats and saltmarshes which are exposed at low water. Its diverse and species-rich intertidal sand and mudflat biotopes grade naturally along many lengths of the shore into vegetated or dynamic shingle habitat, saltmarsh, grassland and reedbed.</p> <p>Annex I Habitats (present as a qualifying feature, but not a primary reason for selection of this site): Mudflats and sandflats not covered by seawater at low tide; Atlantic saltmeadows <i>Glauco-Puccinellietalia maritima</i></p>
Benacre to Easton Bavents Lagoons SAC	<p>Annex I Habitats (as a primary reason for selection): Coastal Lagoons</p> <p>Benacre to Easton Bavents Lagoons is a series of percolation lagoons on the east coast of England. The lagoons (the Denes, Benacre Broad, Covehithe Broad and Easton Broad) have formed behind shingle barriers and are a feature of a geomorphologically dynamic system. Sea water enters the lagoons by percolation through the barriers or by overtopping them during storms and high spring tides. The lagoons show a wide range of salinities, from nearly fully saline in South Pool, the Denes, to extremely low salinity at Easton Broad. This range of salinity has resulted in a series of lagoonal vegetation types, including beds of narrow-leaved eelgrass <i>Zostera angustifolia</i> in fully saline or hypersaline conditions, beds of spiral tasselweed <i>Ruppia cirrhosa</i> in brackish water and dense beds of common reed <i>Phragmites australis</i> in freshwater. The site also supports a number of specialist lagoonal species.</p>
Minsmere to Walberswick Heaths and Marshes SAC	<p>Annex I Habitats (as a primary reason for selection): Annual vegetation of drift lines</p> <p>This site is one of two representatives of Annual vegetation of drift lines on the east coast of England. It occurs on a well-developed beach strandline of mixed sand and shingle and is the best and most extensive example of this restricted geographical type. Species include those typical of sandy shores, such as sea sandwort <i>Honckenya peploides</i> and shingle plants such as sea beet <i>Beta vulgaris</i> spp. <i>maritima</i>.</p> <p>Annex I Habitats (as a primary reason for selection): European dry heaths</p> <p>Lowland European dry heaths occupy an extensive area of this site, which is at the extreme easterly range of heath development in the UK. The heathland is predominantly NVC type H8 <i>Calluna vulgaris</i> – <i>Ulex gallii</i> heath, usually more characteristic of western parts of the UK. This type is dominated by heather <i>Calluna vulgaris</i>, western gorse <i>Ulex gallii</i> and bell heather <i>Erica cinerea</i>.</p> <p>Annex I Habitats (present as a qualifying feature, but not a primary reason for selection of this site): Perennial vegetation of stony banks</p>

SAC name	Site Features
Orfordness-Shingle Street SAC	<p>Annex I Habitats (as a primary reason for selection): Coastal lagoons <i>Priority feature</i></p> <p>Orfordness – Shingle Street encompasses a series of percolation lagoons on the east coast of England and together with Benacre to Easton Bavents SAC and The Wash and North Norfolk Coast SAC forms a significant part of the percolation lagoon resource concentrated in this part of the UK. The lagoons at this site have developed in the shingle bank adjacent to the shore at the mouth of the Ore estuary, while the salinity of the lagoons is maintained by percolation through the shingle, although at high tides sea water can overtop the shingle bank. The fauna of these lagoons includes typical lagoon species, such as the cockle <i>Cerastoderma glaucum</i>, the ostracod <i>Cyprideis torosa</i> and the gastropods <i>Littorina saxatilis tenebrosa</i> and <i>Hydrobia ventrosa</i>. The nationally rare starlet sea anemone <i>Nematostella vectensis</i> is also found at the site.</p> <p>Annex I Habitats (as a primary reason for selection): Annual vegetation of drift lines</p> <p>Orfordness is an extensive shingle spit some 15 km in length and is one of two sites representing Annual vegetation of drift lines on the east coast of England. In contrast to Minsmere to Walberswick Heaths and Marshes, drift-line vegetation occurs on the sheltered, western side of the spit, at the transition from shingle to saltmarsh, as well as on the exposed eastern coast. The drift-line community is widespread on the site and comprises sea beet <i>Beta vulgaris spp. Maritima</i> and orache <i>Atriplex spp.</i> in a strip 2 – 5m wide.</p> <p>Annex I Habitats (as a primary reason for selection): Perennial vegetation of stony banks</p> <p>Orfordness consists of a foreland, a 15 km-long spit and a series of recurves running from north to south on the Suffolk coast. This spit has been selected as it supports some of the largest and most natural sequences in the UK of shingle vegetation affected by salt spray. The southern end of the spit has a particularly fine series of undisturbed ridges, with zonation of communities determined by the ridge pattern. Pioneer communities with sea pea <i>Lathyrus japonicus</i> and false oat-grass <i>Arrhenatherum elatius</i> grassland occur. Locally these are nutrient-enriched by the presence of a gull colony; elsewhere they support rich lichen communities. The northern part of Orfordness has suffered considerable damage from defence-related activities but a restoration programme for the shingle vegetation is underway.</p>

Table 3.3 Ramsar sites within or adjacent to SMP2 management units

Ramsar sites	Site Features
Aide-Ore Estuary Ramsar Site	<p>Ramsar Criterion 2 – The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.</p> <p>Ramsar Criterion 3 – The site supports a notable assemblage of breeding and wintering wetland birds.</p> <p>Ramsar Criterion 6 – Qualifying species / populations (as identified at designation).</p> <p>Species regularly supported during the breeding season:</p> <ul style="list-style-type: none"> • Lesser black-backed gull <i>Larus fuscus graellsii</i>. 5790 apparently occupied nests, representing an average of 3.9% of the Western European / Mediterranean / West African breeding population (Seabird 2000 Census) <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> • Pied avocet (<i>Recurvirostra avosetta</i>) 1187 individuals, representing an average of 1.6% of the European / Northwest African population (5 year peak mean 1998/9 – 2002/3); and • Common redshank <i>Tringa totanus totanus</i> 2368 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9 – 2002/3).
Deben Estuary Ramsar Site	<p>Ramsar criterion 2 – Annex II species</p> <ul style="list-style-type: none"> • S1014; Narrow-mouthed whorl snail <i>Vertigo angustior</i>. Martlesham Creek, within the Deben Estuary, is one of only about fourteen sites in Britain where the mollusc <i>Vertigo angustior</i> maintains a viable population (BRDB Endangered). <p>Ramsar criteria 6 - Qualifying species / populations (as identified at designation):</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> • Dark-bellied Brent goose <i>Branta bernicla bernicla</i>. 1953 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9 – 2002/3).
Minsmere-Walberswick Ramsar Site	<p>Ramsar criterion 1 - The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh ditch plants from brackish to fresh water.</p> <p>Ramsar criterion 2 – Annex II species</p> <ul style="list-style-type: none"> • S1014; Narrow-mouthed whorl snail <i>Vertigo angustior</i>. The Minsmere-Walberswick site supports a population of the mollusc <i>Vertigo angustior</i> (Habitats Directive Annex II; BRDB Endangered), which was recently discovered inhabiting river walls on the Blyth estuary. This site also supports nine nationally scarce plants and at least 26 red data book invertebrates, as well as an important assemblage of rare breeding birds associated with marshland and reedbeds including bittern <i>Botaurus stellaris</i>, gadwall <i>Anas strepera</i>, Eurasian teal <i>Anas crecca</i>, northern shoveler <i>Anas clypeata</i>, marsh harrier <i>Circus aeruginosus</i>, avocet <i>Recurvirostra avosetta</i> and bearded tit <i>Panurus biarmicus</i>. <p>Ramsar criterion 6 - Qualifying species / populations (as identified at designation):</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> • Dark-bellied Brent goose <i>Branta bernicla bernicla</i>. 1953 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9 – 2002/3).
Stour and Orwell	<p>Ramsar criterion 2 - The Stour and Orwell Estuaries Ramsar contains seven nationally</p>

<p>Estuaries Ramsar Site</p>	<p>scarce plant species and five British Red Data Book invertebrates (JNCC, 2008f):</p> <ul style="list-style-type: none"> • Stiff saltmarsh-grass <i>Puccinellia rupestris</i>; • Small cord-grass <i>Spartina maritima</i>; • Perennial glasswort <i>Sarcocornia perennis</i>; • Lax-flowered sea lavender <i>Limonium humile</i>; and • Eelgrasses <i>Zostera angustifolia</i>, <i>Zostera marina</i> and <i>Zostera noltei</i>. • Muscid fly <i>Phaonia fusca</i>; • Horsefly <i>Haematopota grandis</i>; • Two spiders, <i>Arctosa fulvolineata</i> and <i>Baryphema duffeyi</i>; and • The endangered swollen spire snail <i>Mercuria confuse</i>. <p>Ramsar criterion 5 - Assemblages of international importance.</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> • 63 017 waterfowl (5 year peak mean 1998/99 – 2002/2003). <p>Ramsar criterion 6 - Species/populations occurring at levels of international importance, during the breeding season.</p> <p>Species with peak counts in spring / autumn:</p> <ul style="list-style-type: none"> • Common redshank <i>Tringa totanus totanus</i>. 2588 individuals, representing an average of 2% of the population (5-year peak mean 1995/96 – 1999/2000). <p>Species with peak counts in winter (JNCC, 2008f):</p> <ul style="list-style-type: none"> • Dark-bellied Brent goose <i>Branta bernicla bernicla</i>. 2627 individuals, representing an average of 1.2% of the population (5-year peak mean 1995/96 - 1999/2000); • Northern pintail <i>Anas acuta</i>. 741 individuals, representing an average of 1.2% of the North-west European population (5-year peak mean 1995/96 – 1999/2000); • Grey plover <i>Pluvialis squatarola</i>. Wintering, 3261 individuals, representing an average of 1.3% of the Eastern Atlantic / Western African population (5-year peak mean 1995/96 – 1999/2000); • Red knot <i>Calidris canutus islandica</i>. Wintering, 5970 individuals, representing an average of 1.3% of the Western & Southern African population (5-year peak mean 1995/96 – 1999/2000); • Dunlin <i>Calidris alpina alpina</i>. 19114 individuals, representing an average of 1.4% of the Western Siberian / Western European population (5-year peak mean 1995/96 – 1999/2000); • Black-tailed godwit <i>Limosa limosa islandica</i>. 2559 individuals, representing an average of 7.3% of the Icelandic / Western European population (5-year peak mean 1995/96 – 1999/2000); and • Common redshank <i>Tringa totanus totanus</i>. 3687 individuals, representing an average of 2.8% of the population (5-year peak mean 1995/96 – 1999/2000).
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3.2 Conservation Objectives

Conservation objectives, set out by Natural England, constitute advice on the interest features on the designated sites and the measures needed to maintain these features in favourable condition. Conservation objectives thus serve as the basis for evaluating plans and projects under the Habitats Regulations. In the case of European marine sites the objectives are statutory and set out in the Regulation 33 package. Conservation objectives are currently being reviewed by Natural England, primarily in order that they can be made more quantitative.

For qualifying **species** the conservation objectives can be generalised as follows:

- To avoid deterioration of the Habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- To ensure for the qualifying species that the following are maintained in the long term:
 - Populations of the species as a viable component of the site;
 - Distribution of the species within site;
 - Distribution and extent of habitats supporting the species;
 - Structure, function and supporting processes of habitats supporting the species; and
 - No significant disturbance of the species.

For qualifying **habitats** the conservation objectives can be generalised as follows:

- To ensure for the qualifying habitats the following are maintained in the long term:
 - Extent of habitat on the site;
 - Distribution of habitat within site;
 - Structure and function of habitat;
 - Processes supporting the habitat;
 - Distribution of typical species of the habitat;
 - Viability of typical species as components of the habitat; and
 - No significant disturbance of typical species of habitat.

An account of conservation objectives for each site is provided on the assessment tables provided in **Appendix I**.

4 CURRENT CONDITION ASSESSMENT

The majority of SPA, SAC and Ramsar Sites are 'underpinned' by SSSI designation, and on such SPA/SACs site condition monitoring is undertaken by Natural England at the SSSI level, according to JNCC common standards.

The relevance of SSSI condition status to those of SPA and Ramsar features is dependant on the correspondence of SSSI features with SPA/Ramsar features. SSSI features are based on BAP broad habitat classifications. These are comprehensive categories, and can be considered to encompass all qualifying features.

This is the case on the Suffolk coast, where there is a close correspondence between SSSI features and Ramsar and SPA features, meaning that condition assessments, and more importantly reasons for unfavourability, can be considered reliable indicators of the conservation status and impacts on site integrity.

SSSIs are typically divided into a series of units, for the purposes of management and monitoring. Analysis of Condition data for SSSI units along the Suffolk coast indicate that several units are currently unfavourable due to inappropriate coastal management issues but these are limited to units in the Alde-Ore Estuary and Minsmere-Walberswick Heaths and Marshes SSSIs. The most common cause for unfavourable condition throughout all of the identified SSSIs is coastal squeeze with further possible factors including water pollution, public disturbance, undergrazing, maintenance dredging and inappropriate weed control.

Natural England's Site Information System (ENSIS) contains information on the "remedies" required to enable SSSIs to meet favourable condition by 2010. This will identify any units where the Environment Agency, through its flood risk management role, is responsible for delivering favourable condition. This would, however, be expected to correspond closely to SSSI condition assessment data.

5 OTHER PLANS AND PROJECTS

A range of envisaged or ongoing plans or projects must be considered in combination with Shoreline Management Plan policies. The following plans have therefore been identified as being of a type and scope which require consideration within the in combination assessment of the SMP. The plans or projects identified are those which relate to the development of land in the coastal zone or strategies which may affect the physical or biological conditions which are critical to meeting conservation objectives for the international sites.

It should be repeated that in combination effects relating to SMP policy are only those where an effect of SMP policy, when combined with the effect of another plan or project, will have an adverse effect on the integrity of the site. It is not the intention of the assessment to use SMP policy to mitigate the effects of other plans where the selected policy has no effect, but an alternate policy could help to address adverse effects of other plans. This is an important distinction within the assessment; although it is the intent to provide SMP policy which provides positive benefits, the Appropriate Assessment is devised to solely address possible adverse effect, not opportunities for remediation.

5.1 Land Use Plans

Land use plans are produced by local authorities, and set out the broad framework for planning and development in the local authority area. The area potentially affected by the Suffolk SMP2 policies is covered by two local authorities, each of which has a land use plan. The two local authorities are:

- Waveney District Council; and
- Suffolk Coastal District Council.

The main issue for land use plans in the context of shoreline management plans and their compatibility with the Habitats Regulations is where land is allocated for housing, employment or other uses, development of which may prejudice SMP policies. For example, housing allocations in areas currently prevented from flooding by flood defence structures or practices would make it more difficult to undertake managed retreat or abandon existing defences. Managed realignment or no active intervention options may be preferred, or necessary, in response to coastal squeeze which may be adversely affecting international sites.

Planning Policy Statement (PPS) 25 sets out government policy on development in relation to flood risk. Broadly speaking this seeks to avoid development in flood prone areas, or undertaking development which will enhance flood risk. PPS 25 requires local authorities to undertake Strategic Flood Risk Assessments to assist in developing local plans such that they achieve these objectives.

Adherence to PPS 25 guidance will ensure that the likelihood of development occurring which will prejudice SMP policies, is minimised. It does not however completely preclude these possibilities, and individual local plans thus need to be examined to identify any constraints which may act “in combination” with SMP policies. This is particularly relevant in the case of the two local authorities concerned, given that large areas of their districts are in flood zone 1. Flood zone 1 is that in which there is a 1 in 200 year or

greater probability of coastal, or 1 in 100 year or greater probability of fluvial flooding assuming the absence of defences. PPS 25 states that in zone 1 there should be a presumption against non-essential development but that this may be acceptable in already developed areas.

5.2 Estuary Strategies

Estuaries included in the SMP study area are the Blyth, Alde-Ore and Deben Estuaries. The existing estuary strategies are varied and dependant on factors at individual sites.

The existing policy in the Blyth Estuary is No Active Intervention with managed withdrawal of defences, accepting that the defences may fail at Reydon, Tinker's Marsh, the Harbour and the A12. In developing the reviewed estuary policy it was necessary to Hold The Line in the upper estuary and improve defences around the A12. The lower inner estuary policy of Managed Realignment is critical with respect to Reydon as there is a need to manage the process rather than have events dictating policy. The upper estuary policy is also Managed Realignment with a view to reassessing the capacity for habitat replacement sites. As the SMP will adopt the Blythe strategy, the SMP has been considered in combination with the more detailed estuary strategy.

Neither the Alde-Ore nor Deben Estuary strategies have been finalised to date and as such no in combination assessment is possible.

5.3 Maintenance dredging

Given the importance of the container terminal at Felixstowe, the 4th largest container port in Europe, maintenance dredging there is paramount. Additional dredging in smaller harbours and channels on the Suffolk coast also takes place for recreational and commercial navigational purposes.

The Marine and Fisheries Agency (MFA) is responsible for administering licences for maintenance dredging under the Food and Environmental Protection Act (FEPA) (1985). No consented dredging activities were identified to have an in combination effect.

5.4 Fisheries and Aquaculture

The Eastern Sea Fisheries Joint Committee is responsible for consenting and regulating fisheries activities along the Suffolk coast and whilst fishing and aquaculture does occur within the Suffolk SMP study area, it is not a significant cause of unfavourability of habitats around the coast.

However, the Eastern Joint Sea Fisheries Committee was contacted to obtain full details of consented fisheries and aquaculture activities so that these could be incorporated into the in-combination assessment.

5.5 Activities Regulated and Consented by the Environment Agency

The Environment Agency regulates and consents a range of activities which have the potential to affect site integrity. Relevant consents include discharge and abstraction consents, Environmental Permits, IPPC licences and waste licences. Although most new applications received by the Environment Agency for these licences are reviewed

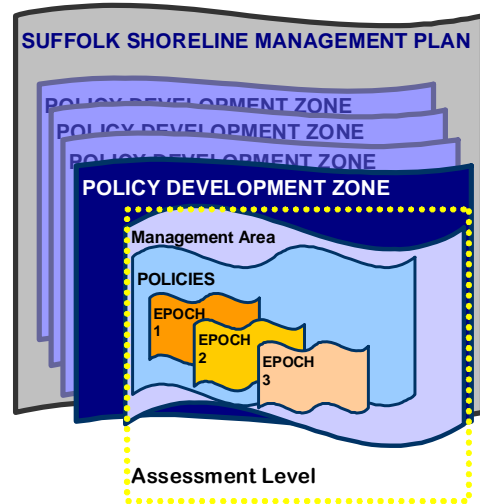
under Regulation 48 of the Habitats Regulations, many such applications are granted in perpetuity, for continuously operated activities. In order to ensure that such activities are compatible with the requirements of the Habitats Regulations, specifically to ensure that they can be determined as having no adverse effect on integrity, the Environment Agency is in the process of reviewing consents through the Regulation 50 Review of Consents (RoC) Project, due for completion in March 2010.

Outcomes of the Review of Consents (RoC) process for the Suffolk coast will establish whether and which Environment Agency consented activities are unable to be determined as not adversely affecting site integrity, and the action required in order to rectify any non-compliant consents. Stage 3 of the RoC process is complete for all sites in Suffolk (excluding the Alde-Ore Estuary) and issues concerning water discharges and abstractions have been highlighted. It was concluded that there would be an adverse affect to site integrity at Minsmere to Walberswick Heaths and Marshes SAC and Benacre to Easton Bavents SPA and SAC due to water quality (notably nutrients) and abstractions.

6 THE 'ALONE' ASSESSMENT OF SMP POLICY

As described above, the intent here is to assess the effect of SMP policy at the Management Area level, with policies considered for each epoch.

The assessment has been provided in detail in the tables provided in **Appendix I**. The first stage of the assessment provided an initial appraisal of the Management Areas, with a view to establishing those where shoreline policy would demonstrably not have a significant effect on international sites. This assessment considered the proximity of Management Areas to international sites and also the contribution of the policy to wider coastal processes within the area. Management area 16 covers the Alde Ore Estuary system, and covers an extremely complex area in terms of habitat, designations and coastal processes. Due to the structure of this management area it has been divided into three, to enable a focussed approach to assessment.



In order to support the assessment below a series of maps is included in **Appendix 2**. These show the location of each management area and the international sites in the local area.

6.1 Management Areas considered to have no effect on international sites

A list of Management Areas where it can be stated that the chosen policies will not have an adverse effect on the integrity of international sites is provided below; detailed assessment on these is not included in **Appendix I**. Due to their location, and to the specifics of their local coastal processes, policies in these Management Areas can be considered to not have a likely significant effect. A detailed assessment is therefore not required, since the areas have been considered alone and in combination with the other Management Areas, and it is considered that they would not have any effect on the integrity of international sites.

The Management Areas falling into this category are as follows:

Management Areas Not Having an Adverse Effect on the Integrity of International Sites:
Low 1.1 to 5.2
Deb 18.1 to 18.2
Fel 19.1 to 19.5

6.2 The assessment of Management Areas which may have an effect on international sites – the “Appropriate Assessment”

The remaining Management Areas have been subjected to a detailed assessment (provided in **Appendix I**). The assessment is based on a consideration of the designated international features within or around the area, the sensitivity of the features, the effects of policy and the need for preventative measures. This transparent approach to the assessment ensures that the actual level of assessment remains appropriate and that the assessment is critically focussed on the effects of policy on the integrity of the sites (and not on wider ecological considerations unrelated to designated features).

The level of detail in the assessment is commensurate with the nature of SMP policy. SMP policy is relatively high-level (relating to a simple statement of intent for areas). The actual level of impact and effects will be largely determined by the particulars of subsequent strategies and schemes. It is at that stage that detailed assessments are possible and required. The SMP assessment should consider anticipated effects of a policy action, but not the specific details of measures to enable this.



6.3 Key Issues within the Assessment

In providing the assessment of the SMP Management Areas it is necessary to identify the key issues which are likely to be central to the assessment. This consideration helps to clarify the assessment process and avoid repetition. The issues have been derived from Natural England reporting in the area (at SSSI and international site level), the conservation objectives for the international sites and a determination of the anticipated effects of SMP policy.

The key issues within the plan area, relating to SMP policy are therefore considered to be those detailed below.

6.3.1 Loss of coastal brackish or freshwater habitat

The Suffolk coast contains a wide range of designated freshwater and brackish habitat which lies landward of existing defences or natural defences (primarily shingle ridges). SMP policy may advocate management measures which would compromise remove or even lead to the loss of this defence – leading to the loss of freshwater habitat such as coastal lagoons or grazing marsh, where local topography dictates that landward migration of this habitat is not possible.

This issue is further complicated by the conservation objectives of many sites which suggest that management is ‘subject to natural change’. Within the context of this

assessment this is considered to be where the coast is resorting to a more natural state. A policy of no active intervention (NAI) on a shingle ridge would be considered to be natural change. However where a shingle ridge has been profiled in the past (three such examples are known in the plan area) then the NAI policy would need consideration, since this action would entail the removal of existing management.

6.3.2 The provision of static and dynamic shingle areas in balance to maintain featured vegetation

Two types of habitat require a balance between static and dynamic areas of shingle supply (areas of relatively undisturbed stable shingle and a supply of new material or shifting areas of shingle):

- Annual vegetation of drift lines; and
- Perennial vegetation of stony banks.

The balance of static and dynamic areas of shingle movement and supply is important to ensure that key vegetation is provided with areas which it can colonise and yet, in some cases, the system is dynamic enough to prevent further colonisation by lesser valued species.

Annual vegetation of drift lines

This habitat type occurs on deposits of shingle lying at or above mean high-water spring tides. These shingle deposits occur as fringing beaches that are subject to periodic displacement or overtopping by high tides and storms. The distinctive vegetation, which may form only sparse cover, is therefore ephemeral and composed of annual or short-lived perennial species.

Approximately one-third of the UK coastline is fringed by a shingle or sand/shingle beach, but much of this is too dynamic to sustain drift-line vegetation. The mobility of shingle foreshores is therefore an overriding consideration, and colonising species of this habitat are able to tolerate periodic disturbance by wave action. Level or gently-sloping, high-level naturally mobile beaches, with limited human disturbance, support the best examples of this vegetation.

Perennial vegetation of stony banks

Unlike annual vegetation of drift lines this habitat is more stable. .Vegetation colonises more permanent ridges which are formed as storm waves throw pebbles high up on the beach (at the limit of high tide), from where the backwash cannot remove them.

The ecological variation in this habitat type depends on stability, the amount of fine material accumulating between pebbles, climatic conditions, width of the foreshore, and past management of the site. The ridges and lows formed also influence the vegetation patterns, resulting in characteristic zonations of vegetated and bare shingle. Perennial vegetation of stony banks therefore varies hugely (e.g. from pioneer species such as sea kale *Crambe maritima*, through to scrub habitats of willow *Salix sp.*, broom *Cytisus scoparius* and blackthorn *Prunus spinosa*).

The shingle systems of Suffolk comprise both the mobile (annual vegetation of drift lines) and more stable systems, (perennial vegetation of stony banks) and include some of the finest ridge vegetation in the UK – all because of stability.

SMP policy has the potential to alter patterns of shingle movement around the coast, which may in turn affect this balance of static and dynamic shingle supply. This also needs consideration on a temporal level, given the large amounts of shingle on this coastline. The effects of shingle movement will therefore be addressed where appropriate with a view to establishing how the conditions for the features listed above will be maintained.

6.3.3 The interaction and transitional issues between estuaries and coastal habitat

The Suffolk coast contains a number of estuaries which are designated as SACs with 'estuary' being the primary feature. The consideration of SMP policy will need to have regard to effects on coastal features and on the effects on the designated estuaries at their mouth and upstream. SMP policy has the potential (given the range of policy options available) to significantly alter the mouth of estuaries, their location and the sedimentary and hydrological flow regimes in the estuary systems.

The provision of a balance between maintaining the integrity of coastal features concurrent with estuarine features must be central to the provision of SMP and estuary management and policy.

6.3.4 The maintenance of habitat for bird species

The Suffolk coast contains a wide range of SPAs designated for coastal and freshwater bird species. The maintenance of habitat (the key aspect relating to SMPs) must be accounted for in SMP policy. The 'subject to natural change' objectives are considered against the possible scenario of SMP policy actively leading to loss of habitat.

6.3.5 Limited areas of coastal squeeze

If the sea rises, many coasts that are developed with infrastructure along or close to the shoreline will be unable to accommodate erosion, and will experience coastal squeeze. This area of coast has a limited amount of saltmarsh and mudflat; however, the nature of large areas of this coastline, where shingle provides a natural defence for landward freshwater habitat, may lead to coastal squeeze issues emerging with a potential loss of freshwater or grazing marsh habitat.

Within the assessment of SMP policy it is necessary to consider the effects of shingle movement on landward features and local topography.

6.4 **Management Areas where it can be concluded that there will be no adverse effect on the integrity of international sites**

Appendix I provides a detailed assessment of all Management Areas relating to the effects on international sites in or around the spatial extent of the actual Management Area in question. The assessment has been provided in regard to:

- The discrete or overlapping nature of each Management Area (in regard to the effect of policy);
- The features, conservation objectives, topography and sensitivities in that location; and
- The key issues described in this section.

The Management Areas for which it has been concluded, through detailed assessment, that the policies (for all epochs) will not have an adverse effect on the integrity of the international sites are given below. This list should be read in conjunction with **Section 6.1** (which lists the Management Areas where no likely significant effect was identified and a detailed assessment was not required).

Management Areas Not Having an Adverse Effect on the Integrity of International Sites:

**SWD 8.1 to 8.3
MIN 13.1 to 13.3
ORF15.1 to 15.2
HOL16.1**

For each Management Area above, a rationale for the determination of no significant effect is provided in the tables in **Appendix I**. Whilst there will undoubtedly be an effect in certain areas, no examples have been identified where this effect would contribute towards an adverse effect on the integrity of the international sites.

6.5 Management Areas where no adverse effect on the integrity of International sites cannot be concluded but can be mitigated with avoidance measures

Of the Management Areas within the SMP, six have been identified where, on the basis of the SMP policy alone, it is not possible to conclude no adverse effect on the integrity of the international sites. These are:

Management Areas where Avoidance Measures will be required to prevent and adverse effect on the integrity of International sites:

**KES 5.3 – 5.4
BEN 6.1 to 6.3
BLY 9.1 to 9.5
ALB 14.1 to 14.4
HOL 16.3 to 16.6
DEB 17.1 to 17.4**

The Management Areas listed need to be considered in the context of the requirement to provide shoreline management policy to this area of coast. The Suffolk coast is a unique balance of static holding points (traditionally settlements or estuary mouths) interspersed with relatively natural sections of coast. This overall balance between dynamic and fixed coast defines the character of the Suffolk coast. Within this balance the range of international sites present are to a large degree dependent not only on natural processes, but also on the human intervention which has stabilised estuary

mouths, constrained tidal prisms, created coastal lagoons and defended coastal freshwater and brackish habitat. In this context, even with the Habitats Regulations as a key driver for SMP policy, frontages exist where due to other drivers a 'no effect' policy option does not exist. The policies above, without exception, have regard to the requirements of the Habitats Regulations as a core driver, but require the provision of avoidance measures (mitigation) to prevent any adverse effect.

Whilst the issues on this coast are defined above (**Section 6.3**) some additional commentary is required for this group of Management Areas, in addition to the detailed accounts provided in **Appendix I**. The sections below consider each Management Area, summarising the challenges and discussing conclusions regarding avoidance measures.

6.5.1 KES 5.3 to 5.4

This Management Area has the potential to adversely affect site integrity at the adjacent SAC through interference to the processes driving the migration of Benacre Ness. The SMP specifies the need to ensure that works required to implement the Hold the Line policy in KES 5.4 are designed to avoid such interference. It is considered then that the policies coupled with this measure would not have an adverse effect on the integrity of any international site.

AVOIDANCE MEASURE: An active requirement to prevent measures to Hold the Line in Policy Zone 5.4 to avoid an interruption on the processes driving the migration of Benacre Ness. The works on the defences behind Benacre Ness should be designed so as not to an adverse effect and the integrity of the site and will anyway be subject to an Appropriate Assessment at scheme level.

STATUS: Text to specify this included in the SMP.

6.5.2 BEN 6.1 to 6.3

This management area seeks to provide a degree of management to the features in the adjacent SPA and SAC so that the effects of sea level rise do not lead to the overall loss of freshwater features through overtopping and breach of the shingle barrier. The cell is complicated by the location of an outfall, which is not considered sustainable in later epochs. This management area seeks to provide a considered approach to the overall realignment of the frontage in anticipation of the defence and loss of the outfall, seeking to promote conditions for the temporal continuity of the SAC saline lagoon feature (saline lagoons are regarded as ephemeral features and therefore the appropriate intent of management is to allow the conditions for the formation of saline lagoons to exist, rather than protecting these features *in situ*), provide a wide shingle beach (allowing nesting of Tern *Sterna* sp. communities) and enable the creation of a balance of static and dynamic shingle (for the maintenance of perennial and drift line vegetation). The core element of this is the provision of a control point in epoch two; the installation of this control point has the potential to impact upon the conditions which allow for the formation of saline lagoon features within this international site, to lead to the loss of shingle habitat through squeeze, to interfere with the migration of Benacre Ness or to alter the natural formation of the shingle beach. Of these impacts, the limiting of the conditions required for the formation of saline lagoons would be seen as AEOI; the design of this control point needs to take this issue into account.

AVOIDANCE MEASURE: An active requirement to ensure that the control point required in epoch two does not have an adverse effect on the integrity of the international sites (in reality such a measure would in any case be subject to an assessment under Regulation 48 of the Habitats Directive).

STATUS: Text to specify this included in the SMP.

6.5.3 BLY 9.1 to 9.5

This management area straddles the mouth of the Blythe Estuary and whilst it does not front an International site, the policy to the south bank (BLY 9.5, a Managed Realignment policy) has the potential to constrain the development of the designated shingle beach immediately to the south. The SMP recognises this and specifies the requirement to ensure that the realignment works with natural processes.

AVOIDANCE MEASURE: A requirement to ensure that the management realignment on the south shore of the estuary mouth (BLY 9.5) does not constrain the natural development of the shingle beach to the south. This scheme will also be subject to an Appropriate Assessment.

STATUS: Text to specify this included in the SMP.

6.5.4 ALB 14.1 to 14.4

This area seeks to provide for the natural evolution of the coastline between two holding points, at Thorpeness and Aldeburgh, and to maintain the integrity of the Home Reach so that management of the River Ore can be developed to anticipate and respond to natural change. Preferred policy between Thorpeness and Aldeburgh includes an extensive area of managed realignment which fronts Thorpeness Reserve and North Warren. It is anticipated that within the lifespan of the SMP, no actual SPA habitat would be lost under this policy (ALB14.2). Policy ALB 14.4 seeks to maintain the integrity of the narrow spit at Slaughden by Holding The Line. This policy is intended to ensure that the estuary behind will not destabilise due to a breach at this point. This policy effectively provides time to align estuary management (in regard to habitat) with longer term shifts in its evolution. However, due to the fact that the estuary strategy has not yet been completed, the potential effect of the HTL policy in the context of the international site cannot be effectively quantified or assessed.

AVOIDANCE MEASURE: The completion of the Estuary Strategy, coupled with ensuring that the technique used to HTL at Slaughden does not impact upon the adjacent International site.

STATUS: Text to specify this included in the SMP.

6.5.5 HOL 16.2 to 16.6

A detailed description of each area is provided in **Appendix I**; however, the overall intent of management is to maintain this system (an estuarine mouth fronted by extensive shingle habitat) in as natural a manner as possible. The policy intends to

maintain the dynamism required for the shingle and saline lagoon systems, to maintain the estuary mouth and to prevent the rapid loss of habitat (vegetated shingle and saline lagoons, SAC interest features) through squeeze. The critical elements to support this are the policies to support the maintenance of the estuary mouth (HOL 16.2 – 16.3) and the provision of some degree of stability to the overall system (HOL 16.5 at East Lane), although this may have a significant effect on SAC features.

The SMP explicitly mentions the requirement to manage the estuary mouth in a manner which enables coastal lagoons to form on the south shore. The policy at East Lane (HOL 16.5) seeks to provide limited control to avoid the rapid loss of shingle from a system that has historically benefited from previous management. It is an intent to protect the integrity of intertidal and freshwater habitat in a dynamic context (encouraging natural change) whilst not abandoning the sites (the loss of an established holding point at East Lane would lead to acute shifts not considered to be, or moving towards, natural change).

This series of units does, however, require an approach of monitoring the coast, to establish how the features are affected in response to SMP policy. To this end, a detailed site specific study is required to monitor key elements of this wider area and to feed the results of this into the SMP3 process. In this manner the initial management provision of this SMP can evolve to ensure that there is no adverse effect on the integrity of the site based on the provision of future management (in SMP3).

AVOIDANCE MEASURE: The management of the estuary mouth to provide the appropriate conditions for the formation of saline lagoons, especially with regard to maintaining the width of shingle foreshore. In addition to this, a site specific study should be implemented for the entire area to monitor how the coast is evolving in response to sea level rise and SMP policy. The study will be developed with input from Natural England and the Environment Agency and will provide the basis for SMP3 policy. If there is any certainty in the nature of the likely impacts, the response measures should be determined in advance with the identified lead organisation committing to find funding if necessary.

STATUS: Agreement to provide a site specific study for this area will be sought.

6.5.6 DEB 17.1 to 17.4

This Management Area seeks to provide stability to the mouth of the Deben Estuary and its lower reaches. Policy is based on the expectation that managed realignment is likely to be required in the middle and upper reaches to allow the estuary to respond to sea level rise without threatening the stability of the estuary mouth. The intention in this area is to provide natural management of the system to enable development of the estuary and avoid the loss of intertidal habitat through accelerated squeeze. The estuary itself is designated as a SAC/Ramsar for Dark-bellied Brent geese *Branta bernicla bernicla* and Avocet *Recurvirostra avosetta*, both of which require intertidal habitat.

It is likely that Holding the Line in the estuary over Epoch 1 and 2 will lead to a loss of intertidal habitat and subsequent requirements for realignment. The overall intent in this management area is to respond to sea level rise in a manner which will enable the estuary to function naturally, albeit within the confines of human activity at the estuary mouth. However, until the estuary strategy has been developed it is difficult to

determine whether there will be an adverse effect on the SPA; the estuary strategy may give rise to a managed realignment policy which would serve to mitigate any losses due to holding the estuary mouth.

AVOIDANCE MEASURE: Completion of the estuary strategy.

STATUS: Text to specify this included in the SMP.

6.6 Management Areas where an adverse effect on the integrity of international sites cannot be ruled out

Of the Management Areas within the SMP, five have been identified where, on the basis of the SMP policy alone, it is not possible to conclude no adverse effect on the integrity of the international sites even if avoidance measures are employed. These examples are:

Management areas which may have an adverse effect on the integrity of International sites:

COV 7.1 – 7.2
BLY 10.1 to 10.3
DUN 11.1 to 11.4
MIN 12.1 and 12.4

The areas where it has not been possible to rule out any adverse effect on the integrity of international sites through the application of avoidance measures are discussed in detail below (and supported by **Appendix I**).

6.6.1 COV 7.1 – 7.2

This management area seeks to provide for the natural development of a sand and shingle frontage, with a brackish and freshwater system to the rear at Easton, Covehithe and Benacre Broads. The SAC features are saline lagoons located around the shingle ridge and the SPA features on the ridge and in the freshwater features landward of this.

The integrity of the broad has been maintained historically by control of the water levels, using a sluice, and management of the shingle ridge. It is considered, in the wider context of sea level rise, that the ongoing management practice on this frontage is not sustainable. Management of the ridge ceased several years ago and since that time the ridge has widened and flattened. It is considered that over time, the ridge will continue to flatten and roll landwards. As this happens, the ridge will experience more frequent overtopping and may breach in a storm event. This could lead to the loss of the SPA reedbed feature, through increased wave action, and the associated bittern and marsh harrier populations.

It is considered that the loss of saline lagoons, although a SAC feature, is part of natural change, and is therefore not an adverse effect on the integrity of the site. The loss of the SPA cited habitat within the freshwater areas of the broads (reedbed) does however constitute an adverse effect on the integrity of the site and will therefore require compensation.

Considerations of Alternatives: The alternative management approach would be to hold the line by continuing to re-profile the shingle ridge, maintaining the fluvial drainage and tidal flood defence for the benefit of bittern and marsh harrier (SPA features), although this would also lead to damage of the saline lagoon SAC features.

This approach is required to maintain the nature conservation interests of the site in the face of climate change and sea level rise. The pursuit of this policy is required in the interests of accepting natural change and the effects of sea level rise, in order to manage the site for beneficial conservation outcomes. A No Active Intervention policy on this frontage would allow the saline lagoon to roll back under rising sea levels, although this too would lead to the loss of SPA habitat and associated species.

Compensation required: The provision of replacement freshwater SPA habitat, commensurate with the loss of SPA features, to be provided through the Environment Agency Regional Habitat Creation Programme.

6.6.2 BLY 10.1 to 10.3

This management area seeks to foster the natural evolution of the Blyth Estuary whilst having regard to the fact that, at present, the freshwater habitat at Tinker's and Delacroix Marshes is under threat due to the existing unsustainable defences. The management area also takes an approach of Holding the Line on the existing defences in the middle estuary. Current management is subject to the estuary strategy, the SMP and planning applications for the management of Tinker's Marshes. The assessment therefore needs to have regard to this uncertain management background. Since Tinker's and Delacroix Marshes are not sustainable in conservation terms, given available information on natural processes and the likely evolution of the estuary, the impacts of coastal squeeze are likely to result in the loss of intertidal habitat. A similar situation is present at Hen reedbed (BLY 10.1).

Policy 10.1 seeks to remove the unsustainable defences within the estuary by a policy of managed realignment. Whilst this will lead to the loss of freshwater habitat (and associated bird species such as bittern) it will also prevent the loss of intertidal habitat through coastal squeeze. This policy is considered to offer a prudent, sustainable approach to the management of both the estuary and the habitat contained within. Policy 10.2 (middle reaches of the Blyth) seeks to Hold the Line landward of existing intertidal areas in preserve *in situ* the A12. It is considered that this policy would lead to the loss of intertidal habitat through squeeze, but this may be offset by the creation of intertidal habitat under the previous policy. The remaining factor would be to ensure that levels of intertidal loss through squeeze are balanced by levels of gain through realignment.

Considerations of Alternatives: The alternative management approach would be to defend Tinker's Marshes, but this is not considered sustainable given projections for sea level rise in the estuary and the condition of the existing defences. Equally, the alternative to the Hold the Line policy in the middle estuary would result in an increase in the tidal prism of the Blyth. This is considered likely to threaten the integrity of the harbourside area which is critical to the maintenance and vibrancy of communities at Southwold and Walberswick. The squeeze of intertidal habitat against the A12 will be mitigated through the habitat created by the MR policy at Tinker's Marsh. As such, there is no need to discuss alternatives further.

Compensation required: The provision of replacement freshwater and intertidal habitat, commensurate with the loss of SPA features, will be provided by the Environment Agency Regional Habitat Creation Programme and agreed in accordance with the assessment of the estuary strategy.

6.6.3 DUN 11.1 to 11.4

This management area seeks to provide a degree of stability to this area (where it abuts the holding point at Walberswick) but in doing this, enables a no active intervention policy over most of the frontage adjacent to the international sites (thereby encouraging the natural evolution of the coastline and the conditions required for the maintenance of a dynamic shingle ridge). The no active intervention policy (DUN 11.2) does however have the potential to lead to the loss of freshwater features landward of the ridge. This is considered to be a function of maintaining the shingle features and freshwater features subject to natural change. It is expected that the evolution of the ridge would lead to the loss of freshwater reedbed on Oldtown, Point and East Hill Marshes (in Epoch 1) but the provision of rear defences would protect some of the interest features of Westwood Marshes, including the associated reedbed.

However, this reedbed would only remain if protected from wave action, as *Phragmites australis* is typically tolerant of salinity levels up to those typically regarded as marine. The movement of the shingle ridge would lead to the loss of saline lagoons (although these are not cited features of the SAC), but this is considered acceptable in regard to enabling the natural evolution of the shingle (SAC and SPA habitat) areas and is considered to be loss through natural change.

Consideration of Alternatives: The alternative management option in this area would be to Hold the Line along the existing frontage through active management of the shingle ridge. Such measures would be detrimental to the integrity of the SAC and SPA shingle features which are dependent on a balance of static and dynamic shingle habitat being able to respond to a dynamic coastline which is subject to climate change and sea level rise. The long term sustainability of managing the ridge, in response to sea level rise, is also questionable. The key driver for this area is to work with natural processes and arrive at a management solution that will allow the conservation *in situ* of habitats and species which can respond to dynamic coastal conditions and to replace habitats which will become increasingly difficult to manage.

Compensation Required: The provision of replacement freshwater and intertidal habitat, commensurate with the loss of SPA features, will be provided by the Environment Agency Regional Habitat Creation Programme and agreed in accordance with the assessment of the estuary strategy.

6.6.4 MIN 12.1 and 12.4

The intent of policy in this management area is the sustainable management of the conservation features in the face of climate change and sea level rise effects, as the northern valley at Minsmere is particularly vulnerable to overtopping and breaching. The policy may lead to the concomitant loss of freshwater and brackish features in the Minsmere Valley to the rear (which includes extensive areas of reedbed which are critical for SPA species such as bittern, marsh harrier etc). A Hold the Line policy in this

location would result in damage to the SAC shingle ridge; by realigning, natural dynamism can be sustained in the shingle beach and a cut off bank built to sustain the bulk of the freshwater reedbed. North Marsh will, however, change to intertidal habitat and compensation for freshwater features will be required. A current Environment Agency project for this frontage envisages that Minsmere North marsh (MIN12.2) will breach within the next 20 years with associated loss of reedbed. This loss will represent an adverse effect on the integrity of the SPA and will be addressed at an appropriate time through the Environment Agency's Regional Habitat Creation Programme.

Consideration of Alternatives: As mentioned in the above assessment of Management Area DUN11.1 – 11.4, the alternative option here would be the maintenance through management of the shingle ridge. This is not considered appropriate and would be detrimental to the natural dynamics of shingle features. The key driver for this approach is to work with natural processes and arrive at a management solution that will allow the conservation *in situ* of habitats and species which can respond to dynamic coastal conditions and to provide replacements for habitats which will become increasingly difficult to manage.

Compensation Required: The provision of replacement freshwater and intertidal habitat, commensurate with the loss of SPA features, will be provided by the Environment Agency Regional Habitat Creation Programme and agreed in accordance with the assessment of the estuary strategy.

6.6.5 Conclusion of in combination assessment

The consideration of the effects of SMP policy on the features and conservation objectives of the international sites in this area has been central to policy production in this process. This is reflected in the nature of the policies under consideration here, which (with only five exceptions once alternatives have been incorporated), are considered to not have any adverse effect on the integrity of the international sites. A central principle of policy provision has been to work with the natural processes acting upon this coast. It therefore follows, that the policies reflect the intention to allow natural change, with a few carefully managed exceptions.

The five examples presented in **Section 6.5** do have the potential to cause an adverse effect on various international sites, and the SMP will therefore need an agreed suite of compensatory measures.

It can therefore only be concluded that the suite of **SMP policies provided, assessed 'alone', would have an adverse effect on the integrity of international sites.** The in-combination assessment, at the plan level and together with other plans and policies is provided in **Section 7.**

7 THE IN-COMBINATION ASSESSMENT OF SMP POLICY AND OTHER PLANS AND PROJECTS

As discussed previously, two aspects of in-combination need consideration: the effects of Management Areas collectively and the effects of Management Areas in combination with other plans and projects. This in-combination assessment also needs to have regard to the issues discussed in **Section 6.3** and the other plans and projects outlined in **Section 5**.

The intent is simply to establish if the effects of SMP policy, in-combination with the effects of other plans and projects will have an adverse effect on the integrity of international sites.

7.1 The collective assessment of Management Areas

The Management Areas have been devised to be either discrete areas of localised coastal process action, or areas of similar effect within the broader patterns of coastal development. The benefit of this approach is that the structure of the SMP is built up the relationship between areas of coast.

The assessment in **Appendix I** provided for upstream and downstream effects, so the effects of a Management Area have been considered on adjacent areas. This provides a level of assessment which addresses the collective manner of establishing Management Area effects. In the course of this assessment (at the 'alone' stage) the effects of policy outside Management Areas were fully considered). What remains to be considered is the in-combination effects, where a policy is considered to have either: a given effect that is acceptable on its own, but would affect site integrity in-combination with the effect of another policy; or where a series of small scale similar effects cumulatively contribute to an overall, adverse effect on the integrity of sites.

The cumulative effects are addressed by the very nature of an Appropriate Assessment. There is no '*de minimus*' in this process – if there is an adverse effect (no matter how small) in site integrity, the singular policy (and consequently overall plan) would not be acceptable.

No examples were found where the Management Areas collectively had an effect which was additional to any anticipated singular effects. The singular effect of the SMP related to **changes in habitat extent** or **shifts in habitat morphology** and it should be considered however that the anticipated changes across the plan area need consideration in the Environment Agency's Regional Habitat Compensation Programme to ensure the most effective means of delivering compensation, its location and its extent.

7.2 The in-combination assessment with other plans and projects

The assessment of SMP policy in **Appendix I** provides a clear account of the expected effects of each Management Area. As outlined above the only real effect of policy is changes in habitat extent or shifts in habitat morphology. Therefore the outstanding issue here is whether the habitat shift or loss as a result of the SMP would have an in-combination effect with other plans and projects.

Of the other plans and projects identified in **Section 5**, only two groups are considered relevant to this assessment, following the detailed assessment in **Appendix I**. These are land use plans and estuary strategies.

The central effects of land use plans are loss of habitat, if policy enables development on areas covered by international designations, or disturbance from increased visitation due to increased population (a function of housing policy) or tourism initiatives. None of the land use plans which cover the Suffolk coast provide for development on any international site. The remaining effect is therefore disturbance, which relates to physical disturbance, through visitation, primarily on bird species.

Ground nesting species are particularly susceptible to disturbance. The designation of SPA habitat for ground-nesting Little Terns is one of the major designations on the Suffolk coast and consideration needs to be given therefore to whether this effect, coupled with the effects of the SMP, are considered to have any combined effect. The delivery of the SMP seeks to maintain the natural evolution of shingle ridges, and no adverse effect of SMP policy has been identified on this particular feature; indeed the SMP has a positive effect. It therefore follows that there is no combined adverse effect on this feature.

7.2.1 In combination effect of the SMP and land use plans

The outstanding issue would be whether the loss of freshwater habitat, identified in this assessment as an adverse effect of SMP policy, would have an in-combination effect with disturbance through visitation. The local authority plans in this area considered relevant relate to existing and emerging policy from:

- Waveney District Council; and
- Suffolk Coastal District Council

It is considered that: firstly, the majority of visitors to the Suffolk coast will be drawn to the foreshore, rather than grazing marsh or reedbed areas; and secondly, the correlation between disturbance and loss of habitat would be difficult to establish without recourse to additional studies. Such studies could be provided at the scheme level, but are not considered appropriate for this level of assessment, which should be based on available information. **The SMP therefore is not considered to have any in combination effects with land use plans in the Suffolk Coastal area.**

7.2.2 In combination effect of the SMP and estuary strategies

The estuary strategies are at various stages of development along the Suffolk coast. The strategies have the potential to lead to a similar range of effects to those of the SMP, so in theory there is a genuine potential for in combination effects. The strategies are intended however to have regard to SMP policy and provide an integrated approach to management. It is not therefore considered that there would be any additional effects of the SMP and the estuary strategies. **As the strategies emerge they should be guided by, or should inform, SMP policy and no in combination effects are therefore either a) expected or b) possible to establish due to the status of the strategies.**

7.3 Conclusion of the in-combination assessment

No in combination effects were determined in this assessment.

It can be concluded that the effects of the SMP are therefore confined to the actual effects of SMP policy alone.

8 CONCLUSION

Based on the application of a fully compliant Habitats Regulations Assessment, incorporating both alone and in-combination assessment, it can be concluded that **the Suffolk SMP will have an adverse effect on the integrity of some international sites**. The extent of this effect is dependent on the provision of certain management provisions, adopted as Avoidance Measures. However preferred policies in five management areas identified are considered likely or possibly to have an adverse effect on the features of various international sites.

This report provides a detailed assessment (in **Appendix I**), including an account of preventative measures required, consideration of alternatives and justification of the pursuit of the preferred policy in regard to Imperative Reasons of Over-riding Public Interest (IROPI)/wider environmental management considerations, and details compensatory measures required.

Subsequent to this assessment, a briefing note must be provided to the Secretary of State which outlines:

- Effects of the SMP;
- Alternative policy options;
- Imperative Reasons of Over-riding Public Interest (IROPI); and
- Compensatory measures.

The outcome of this Appropriate Assessment is to conclude an adverse effect on the integrity of international sites.

9 REFERENCES

DCLG (2006) *Planning for the Protection of European Sites: Appropriate Assessment*. HMSO. Available online at

<http://www.communities.gov.uk/archived/publications/planningandbuilding/planning2>

English Nature (now Natural England) (2006) *The Assessment of Regional Spatial Strategies under the Provisions of the Habitats Regulations – Draft Guidance*.

ERM (2006) *East of England Regional Spatial Strategy Habitats Directive Assessment*.

Office of the Deputy Prime Minister (ODPM) (2005a). Planning policy Statement 9: Biodiversity and Geological Conservation. HMSO, London, UK.

Office of the Deputy Prime Minister (ODPM) (2005b). Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their impact within the planning system. HMSO, London, UK/

RSPB (Royal Society for the Protection of Birds) (2007) *The Appropriate Assessment of Land Use Plans in England*.

Tyldesley, D. and Hoskin, R. (2008) *Assessing projects under the Habitats Directive: guidance for competent authorities*. Report to the Countryside Council for Wales, Bangor.

SSSI citations are available online at:

<http://www.sssi.naturalengland.org.uk/Special/sssi/index.cfm>

Natura 2000 data forms are available at:

<http://www.jncc.gov.uk/page-4>

APPENDIX I

APPROPRIATE ASSESSMENT TABLES

Policy Development Zone 01
Management Area 5: (KES 5.3 to 5.4)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
KES 5.3	Kessingland Village	HTL	HTL	HTL	
KES 5.4	Kessingland South	HTL	HTL	HTL	Upgrade defence as Ness moves north

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Benacre to Easton Bavents Lagoons	SAC	Annex I habitats (as a primary reason for selection): Coastal Lagoons (Priority feature*)

SAC Site Features		
Sub Feature(s)	Sensitivity	Conservation Target
Shingle ridges along the coastline in front of and to the south of Kessingland. Saline lagoons (priority habitat) to south	Loss of habitat due to inappropriate coastal management (subject to natural change)	The conservation objective is, subject to natural change, to maintain*, in favourable condition, the saline lagoon feature. * maintenance implies restoration if the feature is not currently in favourable condition.
Potential effect of policy	As Benacre Ness (naturally) moves northwards, there will be increased protection to Kessingland village. Maintaining defences behind the ridge will have no impact on these processes (and associated features to the south). During the final epoch the southern end of the ness will start to expose the frontage of South Kessingland. Defence of this frontage will not significantly impact upon the processes, nor will it reduce supply to the shingle feature. Management of this southern area will need to be undertaken in a manner sympathetic to maintaining these processes, but the policy will not preclude this. Ultimately therefore, there will be no adverse effect on the saline lagoons to the south, providing that the works subsequent to this policy are undertaken in an appropriate manner.	
Preventative Measures An active requirement of SMP policy are measures to Hold the Line in Policy 5.4 to avoid an interruption on the processes driving the migration of Benacre Ness. The works on the defences behind Benacre Ness should be designed so as not lead to an adverse effect on the integrity of the site. They will anyway be subject to an Appropriate Assessment at scheme level.	Mitigation	Implications for the integrity of the site No adverse effect, subject to preventative measures for Policy KES 5.4.

Policy Development Zone 02
Management Area 6: (BEN 6.1 to 6.3)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
BEN 6.1	Kessingland Levels	HTL	MR	MR	Overall Managed realignment. Some adjustment of the actual line (to the north) may be required in the final epoch but the general approach would be to maintain control of the coast at this point. To allow sustainable managed realignment of defences within Kessingland Levels, and to provide opportunity for retention of a natural beach in front of these retired defences, some form of control is anticipated to the south of the area.

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Benacre to Easton Bavents	SPA	Article 4.1 During the breeding season the area regularly supports: Bittern, Marsh harrier, Little tern
Benacre to Easton Bavents Lagoons	SAC	Annex I habitats (as a primary reason for selection): Coastal Lagoons (Priority feature*)

SPA site feature	Benacre to Easton Bavents SPA	
Sub Feature(s)	Sensitivity	Conservation Target
Vegetated shingle ridge	Loss of habitat - The natural sea level rise will lead to more frequent saltwater inundation of the site, whilst being beneficial for some habitats will lead to loss of others. Sea level rise is causing erosion of the lagoons through the landward movement of the confining shingle barrier. Natural processes if unchecked are likely over time to lead to the loss of these features and the area of reedbed will be reduced. New lagoons have been created further back from the coast	To maintain*, in favourable condition, the habitats for the populations of Bittern (<i>Botaurus stellaris</i>) and Marsh harrier (<i>Circus aeruginosus</i>), with particular reference to swamp, marginal and inundation and standing water. Subject to natural change, to maintain* in favourable condition the habitats for the population of Little tern (<i>Sterna albifrons</i>), with particular reference to shingle and shallow coastal waters. * maintenance implies restoration if the feature is not currently in favourable condition.
Swamp, marginal and inundation and standing water		
Potential effect of policy	This policy will result in the loss of the saline lagoon habitat, which is at present maintained by the presence of Benacre Ness. As Benacre Ness	

	(naturally) moves north, there will be a resultant loss of the lagoons. Management of the frontage looks to provide a degree of artificial control to the north and south of Kessingland Levels, with the defence to Kessingland Levels is retreated to a sustainable position inland. This management area seeks to provide a considered approach to the overall realignment of the frontage in anticipation of the defence and loss of the outfall, seeking to promote conditions for the temporal continuity of the SAC saline lagoon feature (saline lagoons are regarded as ephemeral features and therefore the appropriate intent of management is to allow the conditions for the formation of saline lagoon to exist), provide a wide shingle beach (allowing nesting of Tern spp.) and enable the creation of a balance of static and dynamic shingle (for the maintenance of perennial and drift line vegetation). There will be overtopping and unconstrained flooding into the small valley behind Kessingland village.	
Preventative Measures	Mitigation In developing this policy in detail, the intent to create the above opportunities needs to be actively considered and the provision of a wide shingle beach to support Little tern communities provided. The loss of the saline lagoons is considered to be a function of ephemeral habitat on a dynamic coast and does not require mitigation.	Implications for the integrity of the site The policy promotes the natural behaviour of the coast, therefore no adverse affect on the integrity of the site.

SAC site feature	Benacre to Easton Bavents Lagoons SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Coastal Lagoons - formed behind shingle barriers. Sea water enters the lagoons by percolation through the barriers, or by overtopping them during storms and high spring tides.	The lagoons show a wide range of salinities; Easton Broad has extremely low salinity. The low salinity has resulted in specific vegetation types, including beds of spiral tasselweed <i>Ruppia cirrhosa</i> in brackish water and dense beds of common reed <i>Phragmites australis</i> in freshwater. The site supports a number of specialist lagoonal species. Sea level rise is resulting in erosion and landwards movement of the shingle barrier, leading to the reduction in area of each lagoon.	The conservation objective is, subject to natural change, to maintain*, in favourable condition, the saline lagoon feature. * maintenance implies restoration if the feature is not currently in favourable condition.
Potential effect of policy	This policy will result in the loss of the saline lagoon habitat. The lagoons at present are maintained by the presence of Benacre Ness. As Benacre Ness (naturally) moves north, there will be a resultant loss of the lagoons. Over the first epoch, this will be partially mitigated by maintaining the Kessingland outfall. As pressure increased on the outfall (in later epochs) this structure would be abandoned. Management of the frontage looks to provide a degree of artificial control to the north and south of Kessingland Levels, with the defence to Kessingland Levels retreated to a sustainable position inland. The policy will not impact on the behaviour of Benacre Ness. The intent of the policy, is to create the opportunity for development of a wide shingle beach. There will be overtopping and unconstrained flooding into the small valley behind Kessingland village. Whilst this is not seen specifically as habitat recreation it contributes towards a more natural function of the coast and potentially provides an environment within which ephemeral saline lagoons may form.	
Preventative Measures	Mitigation As per SPA mitigation.	Implications for the integrity of the site The policy promotes the natural behaviour of the coast, therefore no adverse affect on the integrity of the site.

Policy Development Zone 02
Management Area 7: (COV 7.1 to COV 7.2)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
COV 7.1	Benacre Broad to Easton Broad	NAI	NAI	NAI	
COV 7.2	Easton Broad	MR	NAI	NAI	MR to allow time for adaptation with coastal habitat. Potters bridge road would continue to flood

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Benacre to Easton Barents	SPA	Article 4.1 During the breeding season the area regularly supports: Bittern, Marsh harrier, Little tern
Benacre to Easton Barents Lagoons	SAC	Annex I habitats (as a primary reason for selection): Coastal Lagoons (Priority feature*)

SPA and Ramsar Site Feature	Benacre to Easton Barents SPA	
Sub Feature(s)	Sensitivity	Conservation Target
Vegetated shingle ridge	Sea level rise is causing loss of the lagoons through the landward movement of the confining shingle barrier. Disturbance of the shingle has led to colonisation of open areas by false oat grass, common mouse-ear and sea pea.	To maintain*, in favourable condition, the habitats for the populations of Bittern (<i>Botaurus stellaris</i>) and Marsh harrier (<i>Circus aeruginosus</i>), with particular reference to swamp, marginal and inundation and standing water.
Saline lagoons - there are a series of artificial system and natural bar built percolation lagoons representing a range of salinities. Benacre Broad is the most saline and Easton Broad is the least saline.	Natural sea level rise will lead to more frequent saltwater inundation of the site, whilst being beneficial to some habitats will lead to loss of others. Natural processes if unchecked are likely over time to lead to the loss of these features. New lagoons have been created further back from the coast. The lagoons in this management area contain two marine species considered nationally rare or scarce - the starlet sea anemone and the lagoonal sand shrimp.	Subject to natural change, to maintain* in favourable condition the habitats for the population of Little tern (<i>Sterna albifrons</i>), with particular reference to shingle and shallow coastal waters.
Reedbeds and marshland	Natural processes if unchecked are likely over time to lead to the loss of these features and the area of reedbed will be reduced. The reedbeds are particularly important for Bittern at this site. Marsh harrier also use marshland and reedbeds.	* maintenance implies restoration if the feature is not currently in favourable condition.
Flood-plain fens - found in the valleys at Benacre, Covehithe and the Easton Valley.	Different species are found depending on the extent of water present. Saline and brackish influences are noted.	

Cliffs - at Covehithe	Eroding cliffs have a fringing beach of sand and shingle. This is the most rapidly eroding area on the English coast.	
Sand dunes	At the southern end of the Ness the sand dunes lie landward of the eroding shingle. Risk of loss of habitat from erosion.	
Sandy grassland	Includes largely short, species poor grassland with buck's horn plantain, biting stonecrop and moss. Risk of erosion.	
Scrub woodland - found on the floodplain	Typically dominated by alder, grey willow and downy birch.	
Potential effect of policy	The policy provides for a NAI approach on a frontage where previous profiling of the shingle ridge and control of water levels via the sluice, has maintained a spatially stable foreshore and a range of freshwater habitat. The removal of such management is likely to see the widening and flattening of the shingle ridge with a possible landward movement of this feature. At the present time, since management was removed some years ago, the ridge has shown signs of accretion, however this is not expected to continue over subsequent epochs and the integrity of the ridge and the location of the sluice will be lost either gradually or through a storm event. Such a change is likely to be beneficial to species such as Little tern which nest on the shingle, however the increased inundation of the ridge, and its ultimate breach, will lead to the gradual loss of freshwater habitat in the broad. Freshwater habitat will become saline or brackish, and reedbed may be lost through wave action. The policy therefore is therefore likely to lead to the loss of a significant area of freshwater habitat which is critical for Bittern and Marsh harrier.	
Preventative Measures	Mitigation The loss of freshwater habitat is being addressed through the EA RHCP.	Implications for the integrity of the site Due to the loss of freshwater habitat, which is critical for Bittern and Marsh harrier, the NAI policy of COV7.2 is expected to have an adverse effect on the integrity of this site.

SAC Site Feature	Benacre to Easton Bavents Lagoons SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Coastal Lagoons - formed behind shingle barriers. Sea water enters the lagoons by percolation through the barriers, or by overtopping them during storms and high spring tides.	The lagoons show a wide range of salinities; Easton Broad has extremely low salinity. The low salinity has resulted in specific vegetation types, including beds of spiral tasselweed <i>Ruppia cirrhosa</i> in brackish water and dense beds of common reed <i>Phragmites australis</i> in freshwater. The site supports a number of specialist lagoonal species. Sea level rise is resulting in erosion and landwards movement of the shingle barrier, leading to the reduction in area of each lagoon.	The conservation objective is, subject to natural change, to maintain*, in favourable condition, the saline lagoon feature. * maintenance implies restoration if the feature is not currently in favourable condition.
Potential effect of policy	As described above, the policy would lead to the flattening and widening of the shingle ridge, and a subsequent inundation of the broad. This is likely to lead to the loss of saline lagoons in their present location, however, new features may emerge in a more landward location.	
Preventative Measures	Mitigation	Implications for the integrity of the site The loss of the lagoons is considered to be a natural change, given their ephemeral nature. Policies in this area will not have any adverse effect on the integrity of the SAC therefore.

Policy Development Zone 03
Management Area 8: (SWD 8.1 to 8.3)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
SWD 8.1	Easton Barents	NAI	NAI	NAI	
SWD 8.2	Easton Marsh	HTL	MR	HR	Retired flood defence and potential bastion at northern end
SWD 8.3	Southwold Town	HTL	HTL	HTL	

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Eastern Barents	SPA	Article 4.1. During the breeding season the area regularly supports: Bittern, Marsh harrier & Little tern
Benacre to Easton Barents Lagoons	SAC	Annex I habitats (as a primary reason for selection): Coastal Lagoons (Priority feature*)

SPA and Ramsar Site Feature	Benacre to Easton Barents SPA	
Sub Feature(s)	Sensitivity	Conservation Target
Vegetated shingle ridge	Sea level rise is causing loss of the lagoons through the landward movement of the confining shingle barrier. Disturbance of the shingle has led to colonisation of open areas by false oat grass, common mouse-ear and sea pea.	To maintain*, in favourable condition, the habitats for the populations of Bittern (<i>Botaurus stellaris</i>) and Marsh harrier (<i>Circus aeruginosus</i>), with particular reference to swamp, marginal and inundation and standing water. Subject to natural change, to maintain* in favourable condition the

Saline lagoons - there are a series of artificial system and natural bar built percolation lagoons representing a range of salinities. Benacre Broad is the most saline and Easton Broad is the least saline.	Natural sea level rise will lead to more frequent saltwater inundation of the site, whilst being beneficial to some habitats will lead to loss of others. Natural processes if unchecked are likely over time to lead to the loss of these features. New lagoons have been created further back from the coast. The lagoons in this management area contain two marine species considered nationally rare or scarce - the starlet sea anemone and the lagoonal sand shrimp.	habitats for the population of Little tern (<i>Sterna albifrons</i>), with particular reference to shingle and shallow coastal waters. * maintenance implies restoration if the feature is not currently in favourable condition.
Potential effect of policy	On the basis of current understanding of coastal processes in this area, it is considered that the policies in this management area will not have any short or long term affect on the features in adjacent management areas. The effects of policy are considered to be localised to this management area.	
Preventative Measures	Mitigation	Implications for the integrity of the site None

SAC Site Feature	Benacre to Easton Barents Lagoons SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Coastal Lagoons - formed behind shingle barriers. Sea water enters the lagoons by percolation through the barriers, or by overtopping them during storms and high spring tides.	The lagoons show a wide range of salinities; Easton Broad has extremely low salinity. The low salinity has resulted in specific vegetation types, including beds of spiral tasselweed <i>Ruppia cirrhosa</i> in brackish water and dense beds of common reed <i>Phragmites australis</i> in freshwater. The site supports a number of specialist lagoonal species. Sea level rise is resulting in erosion and landwards movement of the shingle barrier, leading to the reduction in area of each lagoon.	The conservation objective is, subject to natural change, to maintain*, in favourable condition, the saline lagoon feature. * maintenance implies restoration if the feature is not currently in favourable condition.
Potential effect of policy	On the basis of current understanding of coastal processes in this area, it is considered that the policies in this management area will not have any short or long term affect on the features in adjacent management areas. The effects of policy are considered to be localised to this management area.	
Preventative Measures	Mitigation	Implications for the integrity of the site None

Policy Development Zone 03

Management Area 9 (BLY 9.1 to BLY 9.5)

Policy Unit	Policy Plan				
	2025	2055	2105	Comment	
BLY 9.1	The Denes	HTL	HTL	HTL	Maintain beach and dune defence
BLY 9.2	North pier and north side of harbour mouth (harbour entrance structures)	HTL	HTL	HTL	Maintain and improve (HTL to maintain function of harbour - doesn't necessarily hold individual stretches where they are)
BLY 9.3	Harbour reach north	HTL	HTL	HTL	Improve defence and raise in 50m years, in line with harbour use plan
BLY 9.4	Harbour reach and mouth, south side (Harbour reach south)	HTL	MR	MR	Redevelop defences in line with harbour use plan
BLY 9.5	Walberswick Dunes	MR	MR	MR	Retain beach and dunes as a defence

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Minsmere-Walberswick Heaths and Marshes	Ramsar SPA	<p>Ramsar Criterion 1 The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh plants from brackish to fresh water.</p> <p>Ramsar Criterion 2 The site supports at least nine nationally scarce plants and at least 26 red data book invertebrates.</p> <p>Site supports a population of the mollusk <i>Vertigo angustior</i> (Habitats Directive Annex II; British Red Data Book Endangered), recently discovered on the Blyth Estuary river walls.</p> <p>Site supports an important assemblage of rare breeding birds associated with reedbeds and marshland: Great Bittern, Eurasian Teal, Gadwall, Northern Shoveler, Pied Avocet and Bearded Tit.</p> <p>Article 4.1. During the breeding season the area regularly supports: Bittern, Nightjar, Marsh Harrier, Avocet, Little Tern</p> <p>Over winter the area regularly supports: Hen Harrier</p> <p>Article 4.2. During the breeding season the area regularly supports: Northern Shoveler, Common Teal, Gadwall</p> <p>Over winter the area regularly supports: Greater White-fronted Goose Northern Shoveler Common Teal</p>
Minsmere-Walberswick Heaths and Marshes	SAC	Annex 1 Habitats. Annual vegetation of drift lines; one of only two sites in East of England. European Dry Heaths

SPA and Ramsar Site Feature	Minsmere-Walberswick Heaths and Marshes SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target

Swamp, marginal and inundation communities	Maintaining freshwater and coastal/intertidal habitats <i>in situ</i> , and in a favourable condition, is not possible. There is a need to consider adaptation for habitats that are not sustainable in the face of a dynamic coastal environment. The site is actively managed to prevent scrub and tree invasion of the heathlands grazing marshes and reedbeds. Much of the land is managed by conservation organisations and positively by private landowners through ESA and Countryside Stewardship schemes. The coastline is going to be pushed back by natural processes. Alternative sites for reed bed creation are being sought to help offset the possible future natural losses.	To maintain*, in favourable condition, the habitats for the populations of Annex 1 species of European importance with particular reference to: • Shingle • Swamp, marginal and inundation communities • Saltmarsh • Standing water • Grassland • Heathland + Avocet, Bittern, Little tern, Marsh harrier, Nightjar, Woodlark, Hen harrier To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to: • Grassland, marsh and standing water + Gadwall, Teal, Shoveler, European White-fronted goose
Saltmarsh		
Shingle		
Standing waters		
Grassland		
Heathland		
Grassland, marsh and standing water		
Potential effect of policy	BLY 9.1 to 9.4 cover the estuary mouth, adjacent to the designated sites of the estuary. Since the policies in this area simply seek to Hold the Line of the existing estuary mouth (based on a canalisation of the mouth and provision of defences to maintain the harbourside) it is expected that these policies will have no effect of international sites. Realignment under policy BLY 9.5 seeks to enable the natural evolution of the shingle ridge to the south. The policy covering this feature (DU 1.2) is for managed realignment (see appropriate sheet).	
Preventative Measures	Mitigation Implementation of the policy of managed realignment BLY 9.5 should be developed so that it does not significantly constrain the natural development of the shingle ridge to the south. The SMP identifies the potential consequences of management and specifies the need for an appropriate approach which works with management of the shingle ridge.	Implications for the integrity of the site Policies BLY 9.1 to 9.4 have no adverse effect on site integrity. Providing that the mitigation specified to support Policy BLY 9.5 is provided, no adverse affect on the integrity of the features to the south can be concluded.

SAC Site Feature	Minsmere-Walberswick Heaths and Marshes SAC	
Sub Feature(s)	Sensitivity	Conservation Target
annual vegetation of drift lines perennial vegetation of stony banks	Coastal habitats need to be dynamic in order to function, and to respond to coastal change and sea level rise. Currently this dynamism is constrained by the freshwater habitats of the hinterland. Recreational use of the coast is potentially a threat because rare shingle vegetation is highly sensitive to trampling damage, and rare birds which nest on shingle (such as Little Tern) are easily scared away. Annual vegetation of drift lines: This habitat is maintained through the action of natural coastal processes upon the shoreline. The requirement for management is limited and is restricted to ensuring that significant human disturbance of the vegetated shore zone does not occur. This aspect of management is addressed through the RSPB visitor management plan.	Subject to natural change, to maintain*, in favourable condition, the: • annual vegetation of drift lines • perennial vegetation of stony banks
Heathland	This habitat is not considered likely to be threatened by actions within the SMP	
Potential effect of policy	As per SPA above.	
Preventative Measures	Mitigation Implementation of the policy of managed realignment BLY 9.5 should be developed so that it does not significantly constrain the natural development of the shingle ridge to the south. The SMP identifies the potential consequences of management and specifies the need for an appropriate approach which works with management of the shingle ridge.	Implications for the integrity of the site Policies BLY 9.1 to 9.4 have no adverse effect on site integrity. Providing that the mitigation specified to support Policy BLY 9.5 is provided, no adverse affect on the integrity of the features to the south can be concluded.

Policy Development Zone 03

Management Area 10 (BLY 10.1 to BLY 10.3)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
BLY 10.1	Lower inner estuary	MR	MR	MR	Maintaining the northern defences, subject to confirmation of funding.
BLY 10.2	A12	HTL	HTL	HTL	Improve defence.
BLY 10.3	Upper estuary	NAI	NAI	NAI	

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Minsmere-Walberswick Heaths and Marshes	Ramsar SPA	<p>Ramsar Criterion 1 The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh plants from brackish to fresh water.</p> <p>Ramsar Criterion 2 The site supports at least nine nationally scarce plants and at least 26 red data book invertebrates.</p> <p>Site supports a population of the mollusk <i>Vertigo Angustior</i> (Habitats Directive Annex II; British Red Data Book Endangered), recently discovered on the Blyth Estuary river walls.</p> <p>Site supports an important assemblage of rare breeding birds associated with reedbeds and marshland: Great Bittern, Eurasian Teal, Gadwall, Northern Shoveler, Pied Avocet and Bearded Tit.</p> <p>Article 4.1. During the breeding season the area regularly supports: Bittern, Nightjar, Marsh Harrier, Avocet, Little Tern</p> <p>Over winter the area regularly supports: Hen Harrier</p> <p>Article 4.2. During the breeding season the area regularly supports: Northern Shoveler, Common Teal, Gadwall</p> <p>Over winter the area regularly supports: Greater White-fronted Goose Northern Shoveler Common Teal</p>
Minsmere-Walberswick Heaths and Marshes	SAC	Annex 1 Habitats. Annual vegetation of drift lines; one of only two sites in East of England. European Dry Heaths

SPA and Ramsar Site Feature	Minsmere-Walberswick Heaths and Marshes SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target
Swamp, marginal and inundation communities	Maintaining freshwater and coastal/intertidal habitats in situ, and in a favourable condition is not possible and there is a need to consider adaptation for habitats that are not sustainable in the face of a dynamic coastal environment. The site is active	To maintain*, in favourable condition, the habitats for the populations of Annex 1 species of European importance with particular reference to:
Saltmarsh		
Shingle		

Standing waters		<ul style="list-style-type: none"> • Shingle • Swamp, marginal and inundation communities • Saltmarsh • Standing water • Grassland • Heathland
Grassland		
Heathland		
Grassland, marsh and standing water		
		+ Avocet, Bittern, Little tern, Marsh harrier, Nightjar, Woodlark, Hen harrier
		To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:
		<ul style="list-style-type: none"> • Grassland, marsh and standing water
		+ Gadwall, Teal, Shoveler, European White-fronted goose
Potential effect of policy	<p>Management in this area remains uncertain due to the estuary strategy and SMP progressing in tandem. As such mechanisms for compensation, actual policy and mitigation will need to be clarified. This assessment concerns itself solely with the effects of SMP policy and will need to inform the wider debate. BLY10.1 provides for the managed realignment over the lower estuary, leading to the loss of Tinker's marsh (the defences of which have already been compromised, leading to shifts in habitat composition). This policy would therefore lead to the loss of freshwater habitat; however, the species for which the SPA is designated are not solely dependent upon freshwater grazing marshes and therefore the shift in habitat functionality is not viewed as significantly detrimental. Nevertheless, in order to provide a diversity of habitat type for SPA species, some degree of compensation is required.</p> <p>BLY10.2 seeks to HTL through the middle estuary, this will lead to loss through squeeze of intertidal habitat, which supports many of the SPA cited spp. Loss of intertidal habitat will require compensation, although the creation of intertidal areas at Tinker's will need to be factored into this.</p> <p>BLY10.3 takes a NAI approach to the upper estuary and it is considered that the effects of this policy will not affect any designated features.</p>	
Preventative Measures	Mitigation Creation of intertidal habitat and freshwater grazing marsh to be provided under the EA RHCP.	Implications for the integrity of the site Policies 10.1 and 10.2 are consistent with the emerging estuary strategy but are considered to have an adverse effect on site integrity, due to the loss of intertidal and freshwater habitat.

SAC Site Feature	Minsmere-Walberswick Heaths and Marshes SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Annual vegetation of drift lines Perennial vegetation of stony banks	<p>Coastal habitats need to be dynamic in order to function, and to respond to coastal change and sea level rise. Currently this dynamism is constrained by the freshwater habitats of the hinterland.</p> <p>Annual vegetation of drift lines: This habitat is maintained through the action of natural coastal processes upon the shoreline. The requirement for management is limited and is restricted to ensuring that significant human disturbance of the vegetated shingle</p>	<p>Subject to natural change, to maintain*, in favourable condition, the:</p> <ul style="list-style-type: none"> • annual vegetation of drift lines • perennial vegetation of stony banks
Heathland	This habitat is not considered likely to be threatened by actions within the SMP	
Potential effect of policy	Both features, due to their topography or location, are not considered likely to be affected by policies in this management area.	
Preventative Measures	Mitigation None	Implications for the integrity of the site None

Policy Development Zone 03

Management Area 11 (DUN 11.1 to DUN 11.4)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
DUN 11.1	Walberswick	HTL	HTL	HTL	Maintain and improve flood defences
DUN 11.2	Walberswick Marshes	NAI	NAI	NAI	Examine opportunity for managing inland defences
DUN 11.3	Dunwich rear defences	HTL	HTL	HTL	Maintain and improve flood defences
DUN 11.4	Dunwich cliff	MR	MR	MR	Low level management is not precluded

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Minsmere-Walberswick Heaths and Marshes	Ramsar SPA	<p>Ramsar Criterion 1 The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh plants from brackish to fresh water.</p> <p>Ramsar Criterion 2 The site supports at least nine nationally scarce plants and at least 26 red data book invertebrates.</p> <p>Site supports a population of the mollusk <i>Vertigo Angustior</i> (Habitats Directive Annex II; British Red Data Book Endangered), recently discovered on the Blyth Estuary river walls.</p> <p>Site supports an important assemblage of rare breeding birds associated with reedbeds and marshland: Great Bittern, Eurasian Teal, Gadwall, Northern Shoveler, Pied Avocet and Bearded Tit.</p> <p>Article 4.1. During the breeding season the area regularly supports: Bittern, Nightjar, Marsh Harrier, Avocet, Little Tern</p> <p>Over winter the area regularly supports: Hen Harrier</p> <p>Article 4.2. During the breeding season the area regularly supports: Northern Shoveler, Common Teal, Gadwall</p> <p>Over winter the area regularly supports: Greater White-fronted Goose Northern Shoveler Common Teal</p>
Minsmere-Walberswick Heaths and Marshes	SAC	Annex 1 Habitats. Annual vegetation of drift lines; one of only two sites in East of England. European Dry Heaths

SPA and Ramsar Site Feature	Minsmere-Walberswick Heaths and Marshes SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target
Swamp, marginal and inundation communities	Maintaining freshwater and coastal/intertidal habitats in situ, and in a favourable condition is not possible and there is a need to consider adaptation for habitats that are not sustainable in the face of a dynamic coastal environment. The site is actively managed to prevent scrub and tree invasion of the heathlands grazing marshes and reedbeds. Much of the land is managed by conservation organisations and positively by private landowners through ESA and Countryside Stewardship schemes. The coastline is going to be pushed back by natural processes.	To maintain*, in favourable condition, the habitats for the populations of Annex 1 species of European importance with particular reference to: <ul style="list-style-type: none"> • Shingle • Swamp, marginal and inundation communities • Saltmarsh • Standing water • Grassland
Saltmarsh		
Shingle		

Standing waters	Alternative sites for reed bed creation are being sought to help off set the possible future natural losses.	<ul style="list-style-type: none"> • Heathland + Avocet, Bittern, Little tern, Marsh harrier, Nightjar, Woodlark, Hen harrier <p>To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:</p> <ul style="list-style-type: none"> • Grassland, marsh and standing water + Gadwall, Teal, Shoveler, European White-fronted goose
Grassland		
Heathland		
Grassland, marsh and standing water		
Potential effect of policy	<p>Maintaining the defence line at Walberswick, DUN11.1 assists in sustaining the general alignment and integrity of the shingle ridge to the south, providing the opportunity for a change in policy to one of NAI over the length of the frontage whilst still maintaining the opportunity for development of saline lagoons. However, without management, as previously undertaken, there will be a greater risk of saline flooding to freshwater features (reedbed etc) and significant change in the degree of saline intrusion to the lagoons. The policy to the south of the area provides for the natural evolution of the coastline and the SMP specifically states that the intention of management of the cliffs is not to prevent the movement of sediment along the shore. In the context of the SMP timeline however, the policies within this management area will lead to the progressive loss of freshwater habitat (primarily reedbed) to a retired defence line. It is anticipated that the new defence line seaward of Westwood Marshes (Dunwich rear defences) will protect the freshwater features landward of this, throughout Epoch 3, but freshwater habitat seaward of this will be lost through Epochs 1 and 2.</p>	
Preventative Measures	<p>Compensation The loss of freshwater/terrestrial habitat is being addressed through the EA RHCP.</p>	<p>Implications for the integrity of the site Due to the loss of freshwater habitat which supports Bittern, Marsh harrier and Avocet in Epoch 1 and 2, this management area would have an adverse effect on integrity of the site. Compensation is to be provided for this loss through the RHCP.</p>

SAC Site Feature	Minsmere-Walberswick Heaths and Marshes SAC	
Sub Feature(s)	Sensitivity	Conservation Target
annual vegetation of drift lines perennial vegetation of stony banks	<p>Coastal habitats need to be dynamic in order to function, and to respond to coastal change and sea level rise. Currently this dynamism is constrained by the freshwater habitats of the hinterland.</p> <p>Annual vegetation of drift lines: This habitat is maintained through the action of natural coastal processes upon the shoreline. The requirement for management is limited and is restricted to ensuring that significant human disturbance of the vegetated shore zone does not occur. This aspect of management is addressed through the RSPB visitor management plan.</p>	<p>Subject to natural change, to maintain*, in favourable condition, the:</p> <ul style="list-style-type: none"> • annual vegetation of drift lines • perennial vegetation of stony banks
Heathland	This habitat is not considered likely to be threatened by actions within the SMP	
Potential effect of policy	<p>Maintaining the defence line at Walberswick DUN11.1 assists in sustaining the general alignment and integrity of the shingle ridge to the south, providing an opportunity for a change in policy to one of NAI over the length of the feature, while still maintaining the opportunity for development of saline lagoons. The policy to the south of the area maintains the general integrity of the site without management and the SMP specifically states that the intention of management of the cliffs is not to prevent the movement of sediment along the shore. The policies in this management area, from BLY 9.5 southwards, seek to provide for the development of a wide shingle ridge. This is in accordance with the conservation objectives for the site.</p>	
Preventative Measures	<p>Mitigation None</p>	<p>Implications for the integrity of the site The policies promote a more natural evolution and development of the shingle ridge and are therefore not considered to have an adverse effect on the integrity of the shingle based features.</p>

Policy Development Zone 04

Management Area reference (MIN 12.1 to MIN 12.4)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
MIN 12.1	Dunwich & Minsmere cliffs	NAI	NAI	NAI	
MIN 12.2	Minsmere North	MR	MR	NAI	Encouraging the development of a more natural transition at the cliffs
MIN 12.3	Minsmere Central	MR	MR	MR	Through management of the sluice
MIN 12.4	Minsmere South	NAI	NAI	NAI	Possible minor works to address local weak spots.

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Minsmere-Walberswick Heaths and Marshes	Ramsar SPA	<p>Ramsar Criterion 1 The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh plants from brackish to fresh water.</p> <p>Ramsar Criterion 2 The site supports at least nine nationally scarce plants and at least 26 red data book invertebrates.</p> <p>Site supports a population of the mollusk <i>Vertigo Angustior</i> (Habitats Directive Annex II; British Red Data Book Endangered), recently discovered on the Blyth Estuary river walls.</p> <p>Site supports an important assemblage of rare breeding birds associated with reedbeds and marshland: Great Bittern, Eurasian Teal, Gadwall, Northern Shoveler, Pied Avocet and Bearded Tit.</p> <p>Article 4.1. During the breeding season the area regularly supports: Bittern, Nightjar, Marsh Harrier, Avocet, Little Tern</p> <p>Over winter the area regularly supports: Hen Harrier</p> <p>Article 4.2. During the breeding season the area regularly supports: Northern Shoveler, Common Teal, Gadwall</p> <p>Over winter the area regularly supports: Greater White-fronted Goose Northern Shoveler Common Teal</p>
Minsmere-Walberswick Heaths and Marshes	SAC	Annex 1 Habitats. Annual vegetation of drift lines; one of only two sites in East of England. European Dry Heaths

SPA and Ramsar Site Feature	Minsmere - Walberswick Heaths and Marshes SPA	
Sub Feature(s)	Sensitivity	Conservation Target

Swamp, marginal and inundation communities	Maintaining freshwater and coastal/intertidal habitats in situ, and in a favourable condition, is not possible and there is a need to consider adaptation for habitats that are not sustainable in the face of a dynamic coastal environment. The site is actively managed to prevent scrub and tree invasion of the heathlands grazing marshes and reedbeds. Much of the land is managed by conservation organisations and positively by private landowners through ESA and Countryside Stewardship schemes. The coastline is going to be 'pushed back' by natural processes. Alternative sites for reed bed creation are being sought to help offset the possible future losses.	To maintain*, in favourable condition, the habitats for the populations of Annex 1 species of European importance with particular reference to: • Shingle • Swamp, marginal and inundation communities • Saltmarsh • Standing water • Grassland • Heathland + Avocet, Bittern, Little tern, Marsh harrier, Nightjar, Woodlark, Hen harrier to maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to: • Grassland, marsh and standing water + Gadwall, Teal, Shoveler, European White-fronted goose
Saltmarsh		
Shingle		
Standing waters		
Grassland		
Heathland		
Grassland, marsh and standing water		
Potential effect of policy	Managed realignment across the Minsmere valley MIN 12.2, 12.3 and 12.4 may in (epoch 3) lead to increased saline flooding and potential longer term breach throughout the Minsmere Valley leading to the loss of freshwater lagoons (Bittern habitat). General management of these areas and the sluice will, however, maintain the shingle ridge and bank without significant interruption of coastal processes in the short term. Management of the sluice will help to support water level management within the valley. The intent of management over MIN 12.2, specifically aims to provide a transition between the erosion of the cliffs to the north and management of a robust shingle ridge to the south. These policies would lead to the loss (through realignment) of a range of freshwater habitat (particularly the large reedbed to the north of the Visitors Centre) which are important for designated species (Bittern, Marsh harriers, Woodlarks, Nightjars, Gadwall, Teal, Shoveller and Hen harriers) which would constitute an adverse effect on the integrity of the site. It is considered that the loss of ephemeral habitat such as saline lagoons would constitute natural change and therefore not represent an adverse effect on integrity. The loss of freshwater habitat is currently being addressed through the Environment Agency's RHCP.	
Preventative Measures	Compensation Replacement of reedbed habitat which would be lost in this area, to be provided under the EA RHCP.	Implications for the integrity of the site The loss of reedbed habitat is considered to be an adverse effect on the integrity of the site and will require compensation.

SAC Site Feature	Minsmere-Walberswick Heaths and Marshes SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Annual vegetation of drift lines Perennial vegetation of stony banks	Coastal habitats need to be dynamic in order to function, and to respond to coastal change and sea level rise. Currently this dynamism is constrained by the freshwater habitats of the hinterland. Recreational use of the coast is potentially a threat because rare shingle vegetation is highly sensitive to trampling damage, and rare birds which nest on shingle, Such as Little Tern, are easily scared away. Annual vegetation of drift lines: This habitat is maintained through the action of natural coastal processes upon the shoreline. The requirement for management is limited and is restricted to ensuring that significant human disturbance of the vegetated shore zone does not occur. This aspect of management is addressed through the RSPB visitor management plan.	Subject to natural change, to maintain*, in favourable condition, the: • annual vegetation of drift lines • perennial vegetation of stony banks

Heathland	This habitat is not considered likely to be threatened by actions within the SMP	
Potential effect of policy	The policies in this management area actively provide for the natural evolution of the shingle ridge through allowing the coast to respond to coastal processes through MR or NAI. The management area is therefore consistent with the conservation objectives of the site.	
Preventative Measures	Mitigation None	Implications for the integrity of the site The management area enables the natural development of the shingle features in this area and will therefore have no adverse effect on the integrity of the site.

Policy Development Zone 04

Management Area reference (MIN 13.1 to MIN 13.3)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
MIN 13.1	Power station and village	HTL	HTL	HTL	Works in the long term may be required.
MIN 13.2	Sizewell Cliffs	NAI	NAI	NAI	
MIN 13.3	Thorpeness	NAI	NAI	MR	Potential need for minor works subject to local impacts

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Minsmere-Walberswick Heaths and Marshes	Ramsar SPA	<p>Ramsar Criterion 1 The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and rare transition in grazing marsh plants from brackish to fresh water.</p> <p>Ramsar Criterion 2 The site supports at least nine nationally scarce plants and at least 26 red data book invertebrates.</p> <p>Site supports a population of the mollusk <i>Vertigo Angustior</i> (Habitats Directive Annex II; British Red Data Book Endangered), recently discovered on the Blyth Estuary river walls.</p> <p>Site supports an important assemblage of rare breeding birds associated with reedbeds and marshland: Great Bittern, Eurasian Teal, Gadwall, Northern Shoveler, Pied Avocet and Bearded Tit.</p> <p>Article 4.1. During the breeding season the area regularly supports: Bittern, Nightjar, Marsh Harrier, Avocet, Little Tern</p> <p>Over winter the area regularly supports: Hen Harrier</p> <p>Article 4.2. During the breeding season the area regularly supports: Northern Shoveler, Common Teal, Gadwall</p> <p>Over winter the area regularly supports: Greater White-fronted Goose Northern Shoveler Common Teal</p>
Minsmere-Walberswick Heaths and Marshes	SAC	Annex 1 Habitats. Annual vegetation of drift lines; one of only two sites in East of England. European Dry Heaths
Sandlings	SPA	Article 4.1. During the breeding season the area regularly supports: European Nightjar and the Woodlark.

SPA and Ramsar Site Feature	Minsmere - Walberswick Heaths and Marshes SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target

Vegetated shingle beach	Important habitat for a range scarce shingle flora - sea bindweed, lady's bedstraw, sheep's bit and harebell (rare). Areas suffering from considerable erosion, due to wave action and human activity (trampling). Area suffering from coastal squeeze.	To maintain*, in favourable condition, the habitats for the populations of Annex 1 species of European importance with particular reference to: <ul style="list-style-type: none"> • Shingle • Swamp, marginal and inundation communities • Saltmarsh • Standing water • Grassland • Heathland + Avocet, Bittern, Little tern, Marsh harrier, Nightjar, Woodlark, Hen harrier to maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to: <ul style="list-style-type: none"> • Grassland, marsh and standing water + Gadwall, Teal, Shoveler, European White-fronted goose
Potential effect of policy	None - The protection of the power station is important for social and environmental reasons (under policy Min 13.1). Policies 13.2 and 13.3 will enable the coast to function in a more natural manner.	
Preventative Measures	Mitigation None	Implications for the integrity of the site No adverse effect on integrity.

SPA and Ramsar Site Feature	Sandlings SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Acid grassland and heath lowland	Heathland subjected to successional changes from lack of management, leading to spread of scrub and trees.	To maintain*, in favourable condition, the habitats for the populations of Woodlark (<i>Lullula arborra</i>) and Nightjar (<i>Caprimulgus europaeus</i>). * maintenance implies restoration if the feature is not currently in favourable condition.
Broadleaf woodland - lowland	Home to established Woodlark and Nightjar populations, which are dependent upon a certain amount of forest clearance. Ongoing woodland management including planting, felling, thinning and coppicing. Area dominated by commercial forestry. Human interference is an ongoing problem.	
Potential effect of policy	None - The protection of the power station is important for social and environmental reasons (under policy MIN 13.1). Policies 13.2 and 13.3 will enable the coast to function in a more natural manner.	
Preventative Measures	Mitigation None	Implications for the integrity of the site No adverse effect on integrity.

SAC Site Feature	Minsmere-Walberswick Heaths and Marshes SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Annual vegetation of drift lines	One of only four known outstanding sites in the UK.	Subject to natural change, to maintain*, in favourable condition, the: <ul style="list-style-type: none"> • annual vegetation of drift lines • perennial vegetation of stony banks
Perennial vegetation of stony banks	Area of significant importance, as only a small number of these habitats exist in Europe.	
European dry heaths	Considered to be one of the best such areas in the UK. Site dependent upon grazing and/or heather cutting to maintain its characteristics.	
Potential effect of policy	None - The protection of the power station is important for social and environmental reasons (under policy MIN 13.1). Policies 13.2 and 13.3 will enable the coast to function in a more natural manner.	
Preventative Measures	Mitigation None	Implications for the integrity of the site No adverse effect on integrity.

Policy Development Zone 05

Management Area reference (ALB 14.1 to ALB 14.4)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
ALB 14.1	Thorpeness Haven Property	NAI	NAI	NAI	This would not preclude minor works to sustain property subject to impact assessment.
ALB 14.2	Thorpeness Haven Beach	MR	MR	MR	Consider allowing flooding with secondary defence but maintain the road.
ALB 14.3	Aldeburgh	HTL	HTL	HTL	Control at Fort Green.
ALB 14.4	Slaughden North	HTL	HTL	HTL	Detailed management subject to an estuary management plan

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Sandlings	SPA	Article 4.1. During the breeding season the area regularly supports: European Nightjar and the Woodlark.
Alde-Ore Estuary	Ramsar SPA	<p>Ramsar criterion 2 The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.</p> <p>Ramsar criterion 3 The site supports a notable assemblage of breeding and wintering wetland birds.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation): Species regularly supported during the breeding season: Lesser black-backed gull Species with peak counts in winter: Pied avocet Common redshank</p> <p>Article 4.1 Qualification During the breeding season the area regularly supports: Marsh harrier Avocet Little tern Sandwich tern Over winter the area regularly supports: Ruff Avocet</p> <p>Article 4.2 Qualification During the breeding season the area regularly supports: Lesser black-backed gull Over winter the area regularly supports: Common redshank</p>
Alde-Ore and Butley Estuaries	SAC	<p>Annex I habitats (that are a primary reason for selection): Estuaries</p> <p>Annex I habitats (present as a qualifying feature but not primary reason for selection of this site): Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows</p>

SPA and Ramsar Site Feature	Sandlings SPA
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Sub Feature(s)	Sensitivity	Conservation Target
Broadleaf woodland	Oak, Willow and Birch woodlands adjacent to both wet and dry reedbeds. Area dominated by commercial forestry. Human interference is an ongoing problem. Large areas of habitat suited to Woodcock and Nightjar.	To maintain*, in favourable condition, the habitats for the populations of Woodlark (<i>Lullula arborra</i>) and Nightjar (<i>Caprimulgus europaeus</i>).
Fen, marsh and swamp lowland	Important habitat for Marsh Harrier, Water Vole, Bittern and Otter.	* maintenance implies restoration if the feature is not currently in favourable condition.
Acid grassland, woodland	Sensitive to invasion by gorse and tree species - ongoing grazing management by rabbits and/or sheep.	
Potential effect of policy	It is considered that the features on this site will not be affected by SMP policy due to their proximity to the coast and local topography.	
Preventative Measures	Mitigation None	Implications for the integrity of the site None

SPA and Ramsar Site Feature	Alde-Ore Estuary SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target
Intertidal mudflats, salt marshes. Considered to be one of the best estuary habitats in the UK. A range of nationally scarce plant species inhabit the area, as do noteworthy bird and invertebrate species.	Area is subject to coastal squeeze and sea-level rise. Saltmarsh loss has occurred.	The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the habitats for the populations of the regularly occurring Annex 1 bird species and migratory bird species +, of European importance, with particular reference to grazing marsh, saltmarsh, intertidal mudflat and shallow coastal waters. +avocet, Sandwich tern, little tern, ruff, redshank, lesser black-backed gull
Potential effect of policy	Policies to the north of the site are not considered likely to have any adverse effect on this site. ALB 14.4 is considered an appropriate measure whilst the estuary strategy is being developed - the intent being to offer a precautionary approach to determining responses to potential rapid changes to the estuary via the formation of a new estuary mouth at Slaughden. In isolation, policy 14.4 does prevent the natural evolution of the coast/estuary, however this needs consideration in the context of the forthcoming estuary strategy. The current policy only relates to epoch 1, with policy for later epochs to be shaped by the estuary strategy. Given the short term nature of the policy and the critical role of the estuary strategy, it is considered that ALB 14.4 would not have an adverse effect on the integrity of the site, it will simply provide time for the management of the estuary to be established. Any breach would be likely to occur on the ALB 14.4 frontage or the more likely (based on current knowledge) frontage at ORF 15.1).	
Preventative Measures	Mitigation The provision of appropriate approaches to the management of the Slaughden frontage, through the emerging estuary strategy.	Implications for the integrity of the site No adverse effect on the integrity of the site, providing that the estuary strategy establishes the wider framework for management of this area.

SAC Site Feature	Alde- Ore Estuary SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Intertidal mudflats, salt marshes, lagoons	Erosion combined with sea level rise has resulted in the loss of much of the saltmarsh.	The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the Atlantic salt meadows, estuaries, mudflats and sandflats not covered by the seawater at low tide, saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks.
Potential effect of policy	As above for the SPA.	
Preventative Measures	Mitigation The provision of appropriate approaches to the management of the Slaughden frontage, through the emerging estuary strategy.	Implications for the integrity of the site No adverse effect on the integrity of the site, providing that the estuary strategy establishes the wider framework for management of this area.

Policy Development Zone 05
Management Area 15 (ORF 15.1 to ORF 15.2)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
ORF 15.1	Sudbourne Beach	No policy (HTL)	No policy (NAI)	No policy (NAI)	Subject to an estuary management plan - HTL may not be through whole of epoch 1, policies defined from perspective of shoreline management only; informed by estuary strategy (plan for Aldeburgh / Alde-Ore)
ORF 15.2	Orford Ness	NAI	NAI	NAI	

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Alde-Ore Estuary	Ramsar SPA	<p>Ramsar criterion 2 The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.</p> <p>Ramsar criterion 3 The site supports a notable assemblage of breeding and wintering wetland birds.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation): Species regularly supported during the breeding season: Lesser black-backed gull Species with peak counts in winter: Pied avocet Common redshank</p> <p>Article 4.1 Qualification During the breeding season the area regularly supports: Marsh harrier Avocet Little tern Sandwich tern Over winter the area regularly supports: Ruff Avocet</p> <p>Article 4.2 Qualification During the breeding season the area regularly supports: Lesser black-backed gull Over winter the area regularly supports: Common redshank</p>
Alde-Ore and Butley Estuaries	SAC	<p>Annex I habitats (that are a primary reason for selection): Estuaries</p> <p>Annex I habitats (present as a qualifying feature but not primary reason for selection of this site): Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows</p>

SPA and Ramsar Site Feature	Alde-Ore Estuary SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target

Vegetated shingle	The shingle supports a number of rare and scarce invertebrates and is an important breeding place for many bird species including terns and avocet. Large areas of well developed sea pea. Trampling and damage from vehicles is an issue. Risk of loss due to coastal erosion and sea level rise.	The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the habitats for the populations of the regularly occurring Annex 1 bird species and migratory bird species +, of European importance, with particular reference to grazing marsh, saltmarsh, intertidal mudflat and shallow coastal waters. +avocet, Sandwich tern, little tern, ruff, redshank, lesser black-backed gull * maintenance implies restoration if the feature is not currently in favourable condition.
Shingle ridge	Acts as a shingle barrier. Damage from vehicles driving over it. Previous coastal management has damaged the ridge.	
Saltmarsh - some extensive areas of well developed salt marsh, accreting on fringes of Alde	Risk of loss of important saltmarsh species through sea level rise and coastal erosion.	
Intertidal mudflat - fringing and on both sides of the channel	Risk of loss from coastal squeeze and sea level rise.	
Marshes and reed bed	Home to gull colonies which are at risk from fox predation. Reeds spreading as site gets wetter but water levels limited as BBC transmitter station cannot be isolated from rest of unit. Some areas to the north are more brackish. Grazed areas are good for lapwing and redshank.	
Saline lagoons - formed when shingle was used to build roads.	Becoming more species rich as lagoons become more established. At risk of loss through sea level rise.	
Potential effect of policy	The frontage adjacent to ORF 15.1 covers the shingle ridge where a breach is likely (adjacent to ALB 14.4) which may lead to the formation of a new estuary mouth. Given the implications of such a breach for the wider estuary and its features a policy is not provided for this frontage, and it is anticipated that the estuary management plan will offer the critical direction for policy in this area. This is a 'no policy' option and not an NAI option, and there is therefore no effect to assess. Policy 15.2 offers an NAI policy which will ensure that the ness is allowed to evolved naturally. There are no adverse effects (such as the loss of freshwater habitat) anticipated as a result of this policy. A management plan is currently being developed for Alde-Ore and Aldebrough area, and it is this plan which will provide the basis for the management of this area.	
Preventative Measures	Mitigation None	Implications for the integrity of the site No adverse effect on the integrity of the site.

SAC Site Feature	Alde-Ore and Butley Estuaries SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Shingle bar - only bar built estuary in UK with a shingle bar. Vegetated and dynamic shingle habitat.	Coastal accretion - bar has been extending rapidly along the coast since 1530 through longshore drift from the north, pushing the mouth of the estuary progressively south-westwards.	The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the Atlantic salt meadows, estuaries, mudflats and sandflats not covered by the seawater at low tide, saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks.
Mudflats and sandflats - not covered by seawater at low tide	Risk of loss from coastal squeeze and sea level rise.	
Atlantic saltmeadows	Past canalisation and erosion together with sea level rise has resulted in the loss of much of the saltmarsh.	
Vegetated shingle	Many plant species that are nationally rare are found here in abundance.	
Lagoons	At risk from sea level rise and coastal squeeze.	
Potential effect of policy	As per the SPA	
Preventative Measures	Mitigation	Implications for the integrity of the site No adverse effect on the integrity of the site.

Policy Development Zone 06
Management Area 16 (HOL 16.1)

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
HOL 16.1	Orford Beach	NAI	NAI	NAI	Maintain supply to south

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Alde-Ore Estuary	Ramsar SPA	<p>Ramsar criterion 2 The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.</p> <p>Ramsar criterion 3 The site supports a notable assemblage of breeding and wintering wetland birds.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation): Species regularly supported during the breeding season: Lesser black-backed gull</p> <p>Species with peak counts in winter: Pied avocet Common redshank</p> <p>Article 4.1 Qualification During the breeding season the area regularly supports: Marsh harrier Avocet Little tern Sandwich tern</p> <p>Over winter the area regularly supports: Ruff Avocet</p> <p>Article 4.2 Qualification During the breeding season the area regularly supports: Lesser black-backed gull</p> <p>Over winter the area regularly supports: Common redshank</p>
Alde-Ore and Butley Estuaries	SAC	<p>Annex I habitats (that are a primary reason for selection): Estuaries</p> <p>Annex I habitats (present as a qualifying feature but not primary reason for selection of this site): Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows</p>
Orfordness-Shingle Street	SAC	<p>Annex I habitats (that are a primary reason for selection of this site): Coastal lagoons (*priority feature), annual vegetation of drift lines, perennial vegetation of stony banks</p>

SPA and Ramsar Site Feature	Alde-Ore Estuary SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target
Vegetated shingle - shingle heath communities well established and showing zonation of shingle vegetation	The shingle supports a number of rare and scarce invertebrates and is an important breeding place for many bird species including terns and avocet. Trampling and damage along designated walkways and unauthorised areas. Potential problem with access from waterskiers. Risk of loss due to coastal erosion and sea level rise.	The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the habitats for the populations of the regularly occurring Annex 1 bird species and migratory bird species +, of European importance, with particular reference to grazing marsh, saltmarsh, intertidal mudflat and shallow coastal waters.
Reedbed - particularly around Havergate Island	Dry reedbed home to specialist dry-litter beetle species. Increase in <i>Juncus</i> spp. on some marsh areas which provides cover for redshank. Risk of loss due to coastal squeeze.	+avocet, Sandwich tern, little tern, ruff, redshank, lesser black-backed gull

Saltmarsh - fringe along stony ditch and extends out to significant areas towards south	Risk of loss of important saltmarsh species through sea level rise and coastal erosion.	backed gun * maintenance implies restoration if the feature is not currently in favourable condition.
Intertidal mudflat - on both sides of the channel	Risk of loss from coastal squeeze and sea level rise.	
Brackish lagoons	Brackish lagoons at risk of overtopping and becoming more saline. Risk of loss from coastal squeeze and sea level rise.	
Neutral grassland - with ditches. Progression from the saltmarsh areas	Risk of loss from coastal squeeze and sea level rise.	
Potential effect of policy	Policy HOL 16.1 offers an NAI policy which will ensure that the ness is allowed to evolved naturally. There are no adverse effects (such as the loss of freshwater habitat) anticipated as a result of this policy.	
Preventative Measures	Mitigation	Implications for the integrity of the site No adverse effect on the integrity of the site.

SAC Site Feature	Alde-Ore and Butley Estuaries SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Shingle bar - only bar built estuary in UK with a shingle bar. Vegetated and dynamic shingle habitat.	Coastal accretion - bar has been extending rapidly along the coast since 1530 through longshore drift from the north, pushing the mouth of the estuary progressively south-westwards.	The conservation objectives for this site are, subject to natural change, to maintain* in favourable condition, the Atlantic salt meadows, estuaries, mudflats and sandflats not covered by the seawater at low tide, saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks.
Mudflats and sandflats - not covered by seawater at low tide	Risk of loss from coastal squeeze and sea level rise.	
Atlantic saltmeadows	Past canalisation and erosion together with sea level rise has resulted in the loss of much of the saltmarsh.	
Vegetated shingle	Many plant species that are nationally rare are found here in abundance, particularly on Havergate Island.	
Lagoons	At risk from sea level rise and coastal squeeze.	
Potential effect of policy	As above for the SPA	
Preventative Measures	Mitigation	Implications for the integrity of the site No adverse effect on the integrity of the site.

SAC Site Feature	Orfordness-Shingle Street SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Shingle spit	Acts as a barrier providing sheltered habitats landwards of the spit. Also provides habitats for transitional vegetation.	The conservation objectives for this site are, subject to natural change, to maintain* in favourable condition the saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks. * maintenance implies restoration if the feature is not currently in favourable condition.
Vegetated shingle - for annual vegetation of drift lines this is considered to be rare as its total extent in the UK is estimated to be less than 100 hectares.	This is a sensitive habitat. Sea level rise will result in loss of this feature. The northern part of Orfordness has suffered considerable damage from defence-related activities.	
Annual vegetation of drift lines	Drift line vegetation occurs on the sheltered western side of the spit at the transition from shingle to saltmarsh as well as on the exposed eastern coast. Sea level rise will result in loss of this feature.	
Saltmarsh	The saltmarsh provides an important habitat for birds and invertebrates as well as supporting a large number of rare saltmarsh plants.	
Potential effect of policy	As above for the SPA	
Preventative Measures	Mitigation	Implications for the integrity of the site No adverse effect on the integrity of the site.

**Policy Development Zone 06
Management Area 16 (HOL 16.2)**

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
HOL 16.2	North Weir Point	MR	MR	NAI	Potential need to manage changes in estuary

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Alde-Ore Estuary	Ramsar SPA	<p>Ramsar criterion 2 The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.</p> <p>Ramsar criterion 3 The site supports a notable assemblage of breeding and wintering wetland birds.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation): Species regularly supported during the breeding season: Lesser black-backed gull Species with peak counts in winter: Pied avocet Common redshank</p> <p>Article 4.1 Qualification During the breeding season the area regularly supports: Marsh harrier Avocet Little tern Sandwich tern Over winter the area regularly supports: Ruff Avocet</p> <p>Article 4.2 Qualification During the breeding season the area regularly supports: Lesser black-backed gull Over winter the area regularly supports: Common redshank</p>
Alde-Ore and Butley Estuaries	SAC	<p>Annex I habitats (that are a primary reason for selection): Estuaries</p> <p>Annex I habitats (present as a qualifying feature but not primary reason for selection of this site): Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows</p>
Orfordness-Shingle Street	SAC	<p>Annex I habitats (that are a primary reason for selection of this site): Coastal lagoons *priority feature, annual vegetation of drift lines, perennial vegetation of stony banks</p>

SPA and Ramsar Site Feature	Alde-Ore Estuary SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target
Vegetated shingle - shingle heath communities well established and showing zonation of shingle vegetation	The shingle supports a number of rare and scarce invertebrates and is an important breeding place for many bird species including terns and avocet. Trampling and damage along designated walkways and unauthorised areas. Potential problem with access from waterskiers. Risk of loss due to coastal erosion and sea level rise.	<p>The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the habitats for the populations of the regularly occurring Annex 1 bird species and migratory bird species +, of European importance, with particular reference to grazing marsh, saltmarsh, intertidal mudflat and shallow coastal waters.</p> <p>+avocet, Sandwich tern, little tern, ruff, redshank, lesser black-backed gull</p> <p>* maintenance implies restoration if the feature is not currently in favourable condition.</p>
Reedbed - particularly around Havergate Island	Dry reedbed home to specialist dry-litter beetle species. Increase in <i>Juncus</i> spp. on some marsh areas which provides cover for redshank. Risk of loss due to coastal squeeze.	
Saltmarsh - fringe along stony ditch and extends out to significant areas towards south	Risk of loss of important saltmarsh species through sea level rise and coastal erosion.	
Intertidal mudflat - on both sides of the channel	Risk of loss from coastal squeeze and sea level rise.	

Brackish lagoons	Brackish lagoons at risk of overtopping and becoming more saline. Risk of loss from coastal squeeze and sea level rise.	
Neutral grassland - with ditches. Progression from the saltmarsh areas	Risk of loss from coastal squeeze and sea level rise.	
Potential effect of policy	The changes to the estuary mouth (described under the SACs below) are not considered likely to have an adverse effect on the integrity of the SPA. The features provided by shingle will be actively maintained by this policy.	
Preventative Measures	Mitigation	Implications for the integrity of the site No adverse effect.

Alde Ore and Butley Estuary SAC Site Feature		
Sub Feature(s)	Sensitivity	Conservation Target
Estuaries Annex I habitats (present as a qualifying feature but not primary reason for selection of this site): Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows	Past canalisation and erosion together with sea-level rise has resulted in the loss of much of the saltmarsh. There are plans for managed coastal retreat which in the long-term will result in the creation of saltmarsh.	The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the Atlantic salt meadows, estuaries, mudflats and sandflats not covered by the seawater at low tide, saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks.
Potential effect of policy	Change within the estuary as a result of management of defences or as a result of sea level rise gives rise to different behaviour scenarios at the mouth of the estuary, without significantly altering its overall alignment. The spit and position of the mouth is, however, subject to much more significant natural variation, typically over a 100 to 120 year cycle. Coastal policy of managed realignment in the first two epochs allows for some adjustment and possible response control of the impacts of this changing behaviour within the range anticipated under different scenarios. The intent over the final epoch is to establish a system which can function naturally. The policy would maintain the shingle bar, encouraging a natural balance between mobile and vegetated shingle and maintain the opportunity for development of lagoons and ensuring the defence of Shingle Street. The policy provides for the management of this change, but does not preclude shifts to the spit which would ultimately lead to the closure of the estuary mouth for example. The policy seeks minimum intervention to protect the social values of Shingle Street through limited management, but is not considered to constrain the natural development, in the long term of this feature.	
Preventative Measures	Mitigation Managing the change in development of the estuary mouth to protect Shingle Street will be provided in a manner to ensure that there is no adverse effect on the integrity of the site or the natural development of its features.	Implications for the integrity of the site The intent of policy is to enable a dynamic system to function naturally whilst providing limited management to protect Shingle Street. The policy is considered to enable the natural development of the shingle and the estuary and it is not considered that the management required to protect Shingle Street would be of a magnitude to affect the wider processes driving natural change.

Orford Ness Shingle Street SAC Site Feature		
Sub Feature(s)	Sensitivity	Conservation Target
Coastal lagoons *priority feature, annual vegetation of drift lines, perennial vegetation of stony banks	The coastal habitats which are important at this site need to be dynamic in order to function, and to respond to coastal change and sealevel rise. Currently this dynamism is constrained by shingle re-cycling works at the northern end and coast protection works at the southern end. Recreational use of the coast is an issue because rare shingle vegetation is highly sensitive to trampling damage, and rare birds which nest on shingle, such as Little tern, are easily scared away. Vegetated shingle is a sensitive habitat. The site is managed to limit recreational pressures. Much of the interest is self-sustaining with little need for intervention. Natural coastal processes will lead to changes in the extent of lagoons at Shingle Street over time.	The conservation objectives for this site are, subject to natural change, to maintain* in favourable condition the saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks. * maintenance implies restoration if the feature is not currently in favourable condition.
Potential effect of policy	Change within the estuary as a result of management of defences or as a result of sea level rise gives rise to different behaviour scenarios at the mouth of the estuary, without significantly altering its overall alignment. The spit and position of the mouth is, however, subject to much more significant natural variation, typically over a 100 to 120 year cycle. Coastal policy of managed realignment in the first two epochs allows for some adjustment and possibly some response to the impacts of changes behaviour resulting from changes within the estuary, within the range anticipated under different scenarios. This would not significantly influence the longer term changes nor the opportunity for the entrance and coast to change at this broader scale. The intent over the final epoch is to have established a system which can function naturally. The policy would maintain the transfer of shingle along the coast and maintain the opportunity for development of coastal lagoons.	
Preventative Measures	Mitigation As per Alde Ore and Butley Estuary SAC above	Implications for the integrity of the site The intent of policy is to enable a dynamic system to function naturally whilst providing limited management to protect Shingle Street. The policy is considered to enable the natural development of the shingle and the estuary and it is not considered that the management required to protect Shingle Street would be of a magnitude to affect the wider processes driving natural change.

**Policy Development Zone 06
Management Area 16 (HOL 16.3 to 16.4)**

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
HOL 16.3	Shingle Street	MR	HTL	HTL	Manage periodic loss of width to beach
HOL 16.4	Hollesley Bay	MR	MR	MR	Allowing rollback of the front line shingle beach defence
HOL 16.5	East Lane	HTL	HTL	HTL	Maintain control of drift
HOL 16.6	Bawdsey Hill	NAI	NAI	NAI	Maintain supply to the south

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Alde-Ore Estuary	Ramsar SPA	<p>Ramsar criterion 2 The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.</p> <p>Ramsar criterion 3 The site supports a notable assemblage of breeding and wintering wetland birds.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation): Species regularly supported during the breeding season: Lesser black-backed gull Species with peak counts in winter: Pied avocet Common redshank</p> <p>Article 4.1 Qualification During the breeding season the area regularly supports: Marsh harrier Avocet Little tern Sandwich tern Over winter the area regularly supports: Ruff Avocet</p> <p>Article 4.2 Qualification During the breeding season the area regularly supports: Lesser black-backed gull Over winter the area regularly supports: Common redshank</p>
Orfordness-Shingle Street	SAC	Annex I habitats (that are a primary reason for selection of this site): Coastal lagoons *priority feature, annual vegetation of drift lines, perennial vegetation of stony banks

SPA and Ramsar Site Feature	Alde-Ore Estuary SPA and Ramsar	
Sub Feature(s)	Sensitivity	Conservation Target
Vegetated shingle - shingle heath communities well established and showing zonation of shingle vegetation	The shingle supports a number of rare and scarce invertebrates and is an important breeding place for many bird species including terns and avocet. Trampling and damage along designated walkways and unauthorised areas. Potential problem with access from waterskiers. Risk of loss due to coastal erosion and sea level rise.	The conservation objectives for this site are, subject to natural change, to maintain*, in favourable condition, the habitats for the populations of the regularly occurring Annex 1 bird species and migratory bird species +, of European importance, with particular reference to grazing marsh, saltmarsh, intertidal mudflat and shallow coastal waters.
Reedbed - particularly around Havergate Island	Dry reedbed home to specialist dry-litter beetle species. Increase in <i>Juncus</i> spp. on some marsh areas which provides cover for redshank. Risk of loss due to coastal squeeze.	Least concern. Sandwich tern, little tern, ruff, redshank, lesser black-

Saltmarsh - fringe along stony ditch and extends out to significant areas towards south	Risk of loss of important saltmarsh species through sea level rise and coastal erosion.	+avocet, Sandwich tern, little tern, ruff, redshank, lesser black-backed gull * maintenance implies restoration if the feature is not currently in favourable condition.
Intertidal mudflat - on both sides of the channel	Risk of loss from coastal squeeze and sea level rise.	
Brackish lagoons	Brackish lagoons at risk of overtopping and becoming more saline. Risk of loss from coastal squeeze and sea level rise.	
Neutral grassland - with ditches. Progression from the saltmarsh areas	Risk of loss from coastal squeeze and sea level rise.	
Potential effect of policy	<p>The management of policy units here has to be considered across the whole area. The intent of the suite of policies is to sustain both defence and the coastal shingle ridge. The generally weak net drift over the frontage is to the south (from Shingle Street towards East Lane). The bay is however, in a relatively stable configuration and this net southerly drift can be reversed over periods with waves approaching from directions south of east. East Lane acts to control this movement at the southern end, acting to hold sediment within the bay. Loss of this control point would initially encourage sediment drift to the south, weakening the shingle ridge feature and encouraging the ridge to move inland. This would result in squeeze against the retired flood defence and would result in loss of the lagoons situated behind the ridge (such loss would be due to natural change and would not be considered an adverse effect). Holding the Line at East Lane allows maintenance of sufficient bulk in the shingle ridge such that it is able to adjust naturally to variations in wave climate and sea level rise.</p> <p>This would maintain both the vegetated shingle and the more active front face. Through controlling shingle movement to the south there can be sufficient build up against the northern end of East Lane to allow bypass of excess material. The degree to which this occurs depends on the release of shingle from in front of Shingle Street and upon the maintenance of the historically typical wave climate. During periods when disproportionate amounts of material are retained at the northern end of the site, there can be net recession at the southern end of the bay at East Lane. During such periods local wave interaction with the defences can impact locally on the beach to the north. The primary driver for policy in this area is to protect coastal settlements to the north and to provide the conditions for the evolution of shingle habitat which will maintain critical features.</p> <p>Due to the uncertainty relating to the evolution of this area of coast, it is recommended that a site specific study, to monitor and respond the effects of policy, is provided as an integral element of the SMP. Such a study would enable foreshore management to respond to the response of the coast to existing policy, and avoid adverse effects on site integrity. The complexity of this area precludes any other course of action based on trying to predict the response of the coast of policy, and a monitoring and response approaches offers the most robust approach to avoiding adverse effects on site integrity.</p>	
Preventative Measures The provision of a site specific study which will monitor the response of the coast to policy and feed into policy provision in subsequent SMPs. It is considered that this study, given the timing of SMPs, would prevent any adverse effects on site integrity. The specification of the study will be agreed with the EA and NE and provided in the SMP action plan.	Mitigation	Implications for the integrity of the site No adverse effect on integrity is expected in the short term. Any longer term effects will be addressed through a site specific study based on monitoring of the response of the coast to policy. This process will inform the provision of policy in subsequent SMPs.

SAC Site Feature	Orfordness-Shingle Street SAC	
Sub Feature(s)	Sensitivity	Conservation Target
Coastal lagoons *priority feature, annual vegetation of drift lines, perennial vegetation of stony banks	<p>The coastal habitats which are important at this site need to be dynamic in order to function, and to respond to coastal change and sealevel rise. Currently this dynamism is constrained by shingle re-cycling works at the northern end and coast protection works at the southern end.</p> <p>Recreational use of the coast is an issue because rare shingle vegetation is highly sensitive to trampling damage, and rare birds which nest on shingle (Such as Little Tern) are easily scared away. Vegetated shingle is a sensitive habitat. The site is managed to limit recreational pressures. Much of the interest is self-sustaining with little need for intervention. Natural coastal processes will lead to changes in the extent of lagoons at Shingle Street over time.</p>	<p>The conservation objectives for this site are, subject to natural change, to maintain* in favourable condition the saline lagoons, annual vegetation of drift lines and perennial vegetation of stony banks.</p> <p>* maintenance implies restoration if the feature is not currently in favourable condition.</p>
Potential effect of policy	As per SPA	
Preventative Measures As per SPA	Mitigation	Implications for the integrity of the site As per SPA

**Policy Development Zone 06
Management Area 17 (DEB 17.1 to DEB 17.4)**

Policy Unit		Policy Plan			
		2025	2055	2105	Comment
DEB 17.1	Bawdsey cliffs	NAI	NAI	NAI	
DEB 17.2	Bawdsey Manor	HTL	HTL	HTL	Maintain estuary configuration with local decisions on management of individual sections
DEB 17.3	Lower Estuary	HTL	HTL	MR	Manage potential flood compartment in a manner to allow sustainable management of the estuary entrance
DEB 17.4	Felixstowe Ferry	HTL	HTL	HTL	Manage alignment of the coast

Designated sites		
Site	Designation	Key Features (for full account see Table 4.1)
Deben Estuary	Ramsar SPA	<p>Ramsar criterion 2 Supports a population of the mollusc <i>Vertigo angustior</i> (Habitats Directive Annex II (S1014); British Red Data Book Endangered). Martlesham Creek is one of only about fourteen sites in Britain where this species survives</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation): Species with peak counts in winter: Dark-bellied Brent goose</p> <p>Article 4.1 Qualification Over winter the area regularly supports: Avocet</p> <p>Article 4.2 Qualification Over winter the area regularly supports: Dark-bellied Brent goose</p>

Deben Estuary SPA and Ramsar		
Sub Feature(s)	Sensitivity	Conservation Target

<p>Ramsar criterion 2 Supports a population of the mollusc <i>Vertigo angustior</i> (Habitats Directive Annex II (S1014); British Red Data Book Endangered). Martlesham Creek is one of only about fourteen sites in Britain where this species survives</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation): Species with peak counts in winter: Dark-bellied Brent goose</p> <p>Article 4.1 Qualification Over winter the area regularly supports: Avocet</p> <p>Article 4.2 Qualification Over winter the area regularly supports: Dark-bellied Brent goose</p>	<p>The saltmarsh and intertidal habitats are vulnerable to sea level rise and coastal squeeze. These issues are being addressed through the Environment Agency LEAP, the estuary Shoreline Management Plan and research into possible managed retreat in parts of the site</p>	<p>The Conservation Objectives for this site are, subject to natural change, to maintain*, in favourable condition, the habitats for the populations of Annex 1 species and the regularly occurring migratory bird species +, of European importance, with particular reference to intertidal saltmarsh and mudflats .</p> <p>+ avocet, Brent goose</p> <p>* maintenance implies restoration if the feature is not currently in favourable condition.</p>
<p>Potential effect of policy</p>	<p>The intent of the policy is to sustain the semi-natural development of the Knolls, the shingle beaches and entrance configuration to the Deben Estuary. This would require general management of defences/flood compartments within the estuary in such a manner as to limit tidal volume increase in the future, ensuring that the flow through the mouth does not exceed the capacity of the system. The policy to HTL in epoch 1 and 2 within the estuary has the potential to lead to the loss through squeeze of intertidal habitat which may have an adverse effect on Avocet and Brent geese, which use such areas for feeding <i>etc.</i> It is anticipated that some realignment would be undertaken within the middle and upper estuary (epoch 3), with opportunities for reducing coastal squeeze and habitat enhancement. However it is not known at this time whether this realignment would offset the previous loss through squeeze.</p>	
	<p>Changes in tidal volume arising from such realignment would be manageable through the estuary entrance and at the coast without disruption of the existing processes. Within the lower estuary, the intent would be to develop detailed approaches to flood management which would limit extreme increases in tidal volume. Failure to maintain this overall structure is likely to result in a significant widening of the estuary mouth, the feed of coastal sediment in to the estuary. The recommended policy aims to allow the estuary to be adapted to sea level rise in a manner that sustains coastal features.</p>	
<p>Preventative Measures Completion of the estuary strategy</p>	<p>Mitigation Replacement of intertidal habitat in the estuary which would be lost through coastal squeeze, to be provided under the EA RCHP.</p>	<p>Implications for the integrity of the site The HTL policy in the estuary under DEB 17.3 may lead to a loss of intertidal habitat that would have an adverse effect on designated bird species. This policy may therefore have an adverse effect on the integrity of the site.</p>