



North Norfolk Shoreline Management Plan (SMP2)
Assessment of plans, policies and programmes

November 2010
Final report

Summary

This report identifies whether and how any of the environmental effects identified as resulting from implementing the North Norfolk Shoreline Management Plan 2 (SMP2) policies may act in-combination with the effects of other policies, plans and programmes.

This report ensures compliance with the European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment” (the Strategic Environmental Assessment (SEA) Directive) by documenting that the effects of the SMP2 have been considered in-combination with those of other plans and programmes. Although in-combination effects were considered while developing the SMP2 and the accompanying SEA, this assessment was not previously documented.

Policies, plans and programmes relevant to the North Norfolk SMP2 area that have the potential to interact with the effects of the SMP2 policies are identified (the list of documents has been updated since the SEA scoping report (Environment Agency, 2009a)) and the assessment of in-combination effects documented. All documents are assessed at the plan level and without any consideration of mitigation or prevention measures associated with implementing them.

In conclusion, significant in-combination effects are not anticipated. A number of in-combination effects, both positive and negative, are identified. However, none are considered to be of sufficient scale that specific policy amendments or other mitigation is required.

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1 Introduction

1.1 Purpose of this report

The purpose of this report is to identify whether and how any of the environmental effects identified as resulting from implementing the Shoreline Management Plan 2 (SMP2) policies may act in-combination with the effects of other policies, plans and programmes.

This report ensures compliance with the European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment” (the Strategic Environmental Assessment (SEA) Directive), detailing the in-combination assessment. Although the in-combination effects were taken into consideration while developing the SEA documents and the SMP2, this assessment was not included. The aim of this report is to document the assessment.

This report is intended to be concise and so where necessary refers to, rather than repeating, elements of the other SEA reports (for example, the scoping report (Environment Agency, 2009a), Environmental Report (ER) (Environment Agency, 2009b) and ER addendum (Environment Agency, 2009c).

1.2 Structure of this report

This report is broken down into six chapters:

- Chapter 1: Introduction – introduces the report, its purpose and structure
- Chapter 2: Assessment process – documents the methods used for assessing the in-combination effects
- Chapter 3: Identification of policies, plans and programmes – identifies plans, programmes and projects that may interact with the SMP
- Chapter 4: Consideration of potential in-combination effects – considers the potential interactions and synergistic effects between the policies, plans, and programmes identified and the effects of the SMP2 policies
- Chapter 5: Conclusions and recommendations – outlines the conclusions of the report
- Chapter 6: References – lists the references used to produce this report

2 Assessment process

2.1 Process

Firstly, policies, plans and programmes that are relevant to the North Norfolk SMP2 area, and have the potential to interact with the effects of the SMP2 policies, were identified. These were previously documented in **section 2.6** and appendix A of the scoping report (Environment Agency, 2009a), undertaken as part of the SEA, and have been updated/added to where appropriate.

The key effects of these policies, plans and programmes were then assessed in relation to the effects identified as potentially arising from implementing the SMP2 policies. For the purposes of assessing the in-combination effects other policies, plans and programmes have been considered at face value, without mitigation, prevention or avoidance measures. The focus of this report is at the plan level and not at the specific SMP2 policy development zone (PDZ) level, which was the assessment level used in the SEA.

2.2 Effects of the SMP2

Through the SEA process, it has been identified that the SMP2 as a plan will have a range of positive and negative effects on receptors and interest features considered by the assessment criteria. Positive effects of the SMP2 are anticipated to relate to the elements below:

- sustainable habitat management
- coastal processes
- tourism
- economic activity
- landscape
- historic environment

Significant negative effects relate to other factors:

- Effects on the condition of international sites designated for conservation value
- The quality of agricultural soil
- Features covered by a Water Framework Directive (WFD) objective

3 Identification of policies, plans and programmes

3.1 Introduction

The SEA scoping report identified policies, plans and programmes that have the potential to interact with the effects of the SMP2. These relate to the development of land in the coastal zone, protection of people and properties from flooding, the protection of habitats and species, management of water bodies, development of infrastructure and economy and other plans or strategies that may affect the physical or biological conditions critical to meeting conservation objectives for the international sites. The following sections outline these policies, plans and programmes and discuss their main objectives and key effects.

3.2 International/European

The following sections outline the key international and European legislation or agreements that have the potential to interact with the SMP2 and its selected policies.

3.2.1 The Water Framework Directive

The Water Framework Directive¹ (WFD) is designed to improve and integrate the way water bodies are managed throughout Europe. It came into force on 22 December 2000 and was transposed into UK law in 2003. Member states must aim to reach good chemical and ecological status/potential in inland and coastal waters by 2015. The RBMPs produced by the Environment Agency set out the objectives for meeting the WFD (see **section 3.4.2** for information about the relevant RBMP).

The main environmental objectives of the Directive are detailed below.

- No deterioration of status for surface and groundwaters and the protection, enhancement and restoration of all water bodies.
- Achievement of good status by 2015, that is, good ecological status (or potential) and good chemical status for surface waters and good chemical and good quantitative status for groundwaters.
- Progressive reduction of pollution of priority substances and phase-out of priority hazardous substances in surface waters and prevention and limitation of input of pollutants in groundwaters.
- Reversal of any significant, upward trend of pollutants in groundwaters.
- Achievement of standards and objectives set for protected areas in Community legislation.

¹ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

3.2.2 The Habitats Directive

The main aim of the Habitats Directive² is to promote the maintenance of biodiversity by requiring member states to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures member states are required to take account of economic, social and cultural requirements, as well as regional and local characteristics.

The provisions of the Directive require member states to introduce a range of measures, including:

- Maintain or restore European protected habitats and species listed in the annexes at a favourable conservation status as defined in Articles 1 and 2.
- Contribute to a coherent European ecological network of protected sites.
- Ensure conservation measures are in place to manage Special Areas of Conservation (SACs) appropriately and ensure appropriate assessment of plans and projects likely to have a significant effect on the integrity of a SAC.
- Member states shall also try to encourage the management of features of the landscape that support the Natura 2000 network (Articles 3 and 10).
- Undertake surveillance of habitats and species (Article 11).
- Ensure strict protection of species listed in Annex IV (Article 12 for animals and Article 13 for plants).

3.2.3 The Birds Directive

This directive³ provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It sets broad objectives for a wide range of activities, although the precise legal mechanisms for their achievement are at the discretion of each member state (in the UK delivery is through several different statutes).

Main provisions of the Directive include:

- The maintenance of populations of all wild bird species across their natural range (Article 2) with the encouragement of various activities to that end (Article 3).
- The identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex I, as well as for all

² Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

³ Council Directive 2009/147/EC on the conservation of wild birds.

regularly-occurring migratory species, paying particular attention to the protection of wetlands of international importance (Article 4).

- The establishment of a general scheme of protection for all wild birds (Article 5).
- Restrictions on the sale and keeping of wild birds (Article 6).
- Specification of the conditions under which hunting and falconry can be undertaken (Article 7).
- Prohibition of large-scale non-selective means of bird killing (Article 8).
- Encouragement of certain forms of relevant research (Article 10 and Annex V).
- Requirements to ensure that introduction of non-native birds do not threaten other biodiversity (Article 11).

3.3 National

The following sections provide a brief description of the relevant national level plans and policies that could have potential interactions with the SMP. They also outline the key findings of these plans in relation to the coast within the SMP2 boundary.

3.3.1 Coastal Habitat Management Plans

Coastal Habitat Management Plans (CHaMPs) are mechanisms for delivering flood and coastal defence schemes that comply with the requirements of the Habitats Directive. They quantify habitat change, loss and gain and recommend measures to prevent future losses. CHaMPs also include strategic habitat monitoring programmes to map future changes.

The North Norfolk CHaMP (Natural England and the Environment Agency, 2003) indicated that the north Norfolk coastal system and associated habitats were not deteriorating. Coastal squeeze and loss of saltmarsh habitat was also considered not to be an issue in north Norfolk.

However, the CHaMP highlighted issues with freshwater grazing marshes and the effects of sea level rise and climate change on maintaining these habitats. The CHaMP proposed a phased, long-term approach (that is, over 100 years) to restore the entire north Norfolk coastline to natural processes, including the eventual restoration of five major areas of freshwater marsh: Cley-Salthouse, Blakeney Freshes, Holkham, Deepdale and Holme.

3.3.2 Planning Policy Statements

Planning Policy Statements (PPS) set out national policies on different aspects of spatial planning in England. They are gradually replacing Planning Policy Guidance (PPG) documents.

The most relevant PPS in the context of a SMP is PPS 25 and its recent supplement. This sets out government policy on development in relation to flood risk. Adherence to PPS 25 guidance minimises the likelihood of development occurring that will prejudice SMP2 policies. However, it does not entirely preclude the possibility that detrimental effects may result.

Coastal development, previously addressed by PPG 20 Coastal Planning⁴, is now addressed by PPS 25 Supplement: Development and Coastal Change. This covers the character of the coast, designated areas, heritage coasts and the international dimension. It also outlines details for developments that may specifically require a coastal location, including tourism, recreation, mineral extraction, energy generation and waste water and sewage treatment plants.

Other relevant statements include PPS 5 and PPS 9. PPS 5 (Planning for the Historic Environment) lays out government policies for identifying and protecting historic buildings, conservation areas and other elements of the historic environment. PPS 9 Biodiversity and Geological Conservation⁴ sets out planning policies on protecting biodiversity and geological conservation through the planning system.

3.3.3 UK Sustainable Development Strategy

The 2005 UK Sustainable Development Strategy 'Securing the Future' updates the previous strategy in the light of changes to UK government structures, including devolution to Scotland, Wales and Northern Ireland, a greater emphasis on delivery at regional level and the new relationship between government and local authorities. It also takes account of policies announced since 1999, in particular the 2003 Energy White Paper that sets a long-term goal of achieving a low carbon economy. It also takes account of the renewed international focus on sustainable development following the World Summit on Sustainable Development in Johannesburg in 2002 and the Millennium Development Goals.

The strategy has five main principles: living within environmental limits, ensuring a strong, healthy and just society, achieving a sustainable economy, promoting good governance and using sound science responsibly.

3.4 Regional plans

Relevant regional plans are detailed in the sections below. These include Catchment Flood Management Plans, River Basin Management Plans, the Regional Spatial Strategy/ East of England Plan and the Norfolk Biodiversity Action Plan (BAP).

⁴ PPG20 has been cancelled with the exception of paragraphs 2.9, 2.10 and 3.9. A new Planning Policy Statement: Planning for a Natural and Healthy Environment was recently consulted on (to June 2010). The consultation document combines PPS9 with elements of PPS7: Sustainable Development in Rural Areas, PPS17: Planning for Open Space, Sport and Recreation, and PPG20: Coastal Planning.

3.4.1 Catchment Flood Management Plans

Catchment Flood Management Plans (CFMPs) give an overview of the flood risk across each river catchment and recommend ways of managing those risks now and over the next 50 to 100 years. CFMPs consider all types of inland flooding - from rivers, groundwater, surface water, sewers and tidal flooding - but not flooding directly from the sea. CFMPs take into account the likely effects of climate change, the effects of land management and how areas could be developed to meet present needs without compromising the needs of future generations.

The North Norfolk SMP2 boundary falls within policy unit 3 (North Norfolk Coast) of the North Norfolk CFMP (Environment Agency, 2009). The flood risk management policy for this area is policy 2, areas of low to moderate flood risk where the Environment Agency can generally reduce existing flood risk management actions. The risk of river flooding is low in this area. The CFMP specifies that flood risk actions will be reduced if they do not cause an adverse effect on the condition of the internationally designated sites.

3.4.2 River Basin Management Plans

River Basin Management Plans (RBMPs) are plans for protecting and improving the water environment. They consider the main issues for the water environment and describe response actions that are required. RBMPs have also undergone SEA. In the case of the Anglian RBMP the following potential issues were identified:

- impacts on business and industry from flood risk and noise and disruption caused by construction activities
- some actions will generate waste, some may make existing resources unusable and some may use a lot of energy
- potential changes to landscape from new assets
- potential to spread alien invasive species and to break up wildlife habitats by new assets and construction disturbance
- coastal retreat and naturalisation of channels may result in loss of features
- increased energy demand from new development and movement of food due to loss of agricultural land and marine fishing controls

The Anglian RBMP SEA included a cumulative effects assessment with other plans and programmes. It concluded that there were potentially significant positive effects in-combination with the Regional Spatial Strategies in relation to population and human health with regard to regeneration, biodiversity (by the reduction of habitat fragmentation) and material assets (development of waste reduction measures and increase in green infrastructure). Negative effects were also noted, in particular the loss of some water-based

recreational activities resulting from pressure on water through increased housing growth and the potential flood risk impact associated with this increased growth.

3.4.3 East of England Plan and Regional Spatial Strategy (RSS)

The East of England Plan outlines substantial growth and infrastructure improvements across the counties of Norfolk, Suffolk, Cambridgeshire, Essex, Hertfordshire and Bedfordshire. Together with relevant sections of the Milton Keynes South Midlands Sub-Regional Strategy it constituted the Regional Spatial Strategy (RSS). A number of policies would have the potential to interact with the SMP2 but the abolition of the RSSs has recently been announced. Since the mechanism for strategic planning coordination remains unclear, we still consider relevant RSS policies, listed below.

- SS9: The Coast
- E4: Clusters
- ENV1: Green Infrastructure
- ENV2: Landscape Conservation
- ENV3: Biodiversity and Earth Heritage
- ENV4: Agriculture, Land and Soils
- ENV6: The Historic Environment
- NEG2: Renewable Energy Targets
- WAT4: Flood Risk Management
- NR1: Norwich Key Centre for Development and Change

3.4.4 Norfolk Biodiversity Action Plan

The UK Biodiversity Action Plan (BAP) describes the biological resources of the UK and provides detailed plans for conservation of these resources at national and devolved levels. Action plans for the most threatened species and habitats have been set out to aid recovery.

The Norfolk BAP sets out the action plans for key species and habitats identified in Norfolk. This includes action plans for the following habitats: saline lagoons, reedbeds and seagrass beds and species plans for a range of coastal birds and mammals.

3.4.5 Norfolk Coast Area of Outstanding Natural Beauty (AONB) Management Plan

The Norfolk Coast AONB covers intertidal, coastal and agricultural land with a total area of over 450 km². It stretches from the Wash in the west through the coastal marshes and hinterland of north Norfolk to the dune system at Winterton.

The 2009 to 2014 Management Plan, produced under the requirements of the Countryside and Rights of Way Act 2000, was launched in September 2009. It comprises two key documents, a strategy and an action plan.

The strategy has the aims listed below.

- Highlight the special qualities and enduring significance of the area and the importance of its landscape features and identify those that are vulnerable to change.
- Present an integrated vision for the future of the AONB as a whole, in the light of national, regional and local priorities.
- Set out agreed objectives and policies that will help secure that vision.
- Identify the means by which objectives, actions and overall management will be reviewed.

The accompanying action plan details specific actions to achieve the objectives and policies of the strategy, defines which partners are involved in each action, the timing of delivery of each action and outlines how progress will be monitored.

A specific action of the management plan is to manage the consequences of coastal change and ensure the features of the area are maintained by assisting with the formulation of the SMPs.

3.5 Local plans

Most local planning authorities are in the process of updating their spatial planning documents, producing and adopting Local Development Framework (LDF) core strategies (and associated documents).

Core strategies provide an over-arching policy framework for the LDF. They establish the vision, objectives and policies for how a district sees itself progressing within the current planning horizon. They replace previous Local Plans. This section considers the relevant LDF documents, together with one capital scheme identified within the plan area (or its zone of influence).

3.5.1 North Norfolk District Council

North Norfolk District Council's Core Strategy (incorporating development control policies) was adopted in September 2008 with the exception of one policy 'Re-use of rural buildings as dwellings'. This policy is currently being considered by a planning inspector, with a decision expected in November/December 2010. The following adopted policies have the potential for in-combination effects with the SMP:

- SS1: Spatial Strategy for North Norfolk

- SS2: Development in the Countryside
- SS4: Environment
- SS5: Economy
- SS14: Wells-next-the-Sea
- EN2: Protection and Enhancement of Landscape and Settlement Character
- EN3: Undeveloped Coast
- EN8: Protecting and Enhancing the Historic Environment
- EN9: Biodiversity and Geology
- EN11: Coastal Erosion

3.5.2 Borough Council of King's Lynn and West Norfolk Core Strategy

The Borough Council of King's Lynn and West Norfolk Core Strategy – Proposed Submission Document was produced in January 2010. It comprises the Council's policy and vision for the borough. Although not yet adopted, it should be materially considered and policies that are relevant to this assessment are listed below. Given the future focus of the SMP2 these policies are considered to be more relevant 'in-combination' than the current policies they will update or replace.

- CS01: Spatial Strategy
- CS05: Hunstanton
- CS06: Development in rural areas
- CS07: Development in coastal areas
- CS12: Environmental Assets

3.5.3 Sheringham Shoal offshore wind farm

The 317MW Sheringham Shoal offshore wind farm, located between 17 and 23 kilometres off the coast of north Norfolk, will comprise 88 wind turbines and generate around 1.1 terrawatt-hours (TWh) of electricity each year.

Wells harbour is acting as the main transportation area for personnel to and from the wind farm. As part of the development, a new outer harbour has been created, providing jetty access for boats. Also, dredging has taken place to provide the depth required for the boats and to create a bund for the jetty to attach to.

3.6 Summary

Table 3.1 below outlines the potential interaction between the plans and programmes identified above and the SMP2 in relation to the receptors identified in the SEA. Interactions, highlighted green and marked with a tick (✓), are discussed further in the next section.

Table 3.1 Potential for the identified plans, policies and programmes to interact with receptors identified in the SMP2

| Plan, policy or programme | Receptor | | | | | | | | |
|--|-------------------------------|-----------------------------|--|------|-------|--|---|-------------------|-----------|
| | Biodiversity, fauna and flora | Population and human health | Material assets - tourism and local commerce | Soil | Water | Material assets - coastal communities, traditional activities and cultural | Material assets - navigation and access | Cultural heritage | Landscape |
| Water Framework Directive | ✓ | | | | ✓ | | | | |
| Habitats Directive | ✓ | | | | | | | | |
| Birds Directive | ✓ | | | | | | | | |
| CHaMP | ✓ | | | | | | | | |
| CFMP | ✓ | ✓ | | ✓ | ✓ | | ✓ | | |
| RBMP | ✓ | ✓ | | | ✓ | | ✓ | | |
| PPS25 (and 5 and 9) | ✓ | ✓ | | | | ✓ | | ✓ | |
| UK sustainable development strategy | | ✓ | ✓ | | | ✓ | | | |
| The East of England Plan | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Norfolk BAP | ✓ | | | | | | | | |
| Norfolk Coast AONB Management Plan | ✓ | | | | | | | | ✓ |
| North Norfolk District Council Core Strategy | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| King's Lynn and West Norfolk Core Strategy | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Sheringham Shoal offshore wind farm | | | | | | | ✓ | | ✓ |

4 Consideration of potential in-combination effects

4.1 Introduction

The following section assesses the potential in-combination effects of the SMP2 with the policies, plans and programmes identified in **section 3** above. The potential effects have been broken down in relation to the receptors and criteria identified in the SEA.

4.2 Biodiversity, fauna and flora

The SMP2 SEA and Habitats Regulations Assessment (HRA) identified that selected management policies will result in an effect on the international sites within the North Norfolk SMP2 area. The HRA for the SMP2 concluded that there would be no in-combination effects from the SMP2 and the spatial plans discussed in **section 3.5** above. The main issue was the loss of freshwater habitat resulting from the SMP2 having an in-combination effect with disturbance through visitation. However, it was concluded that visitors frequent other areas of the coast and different habitats, making it unlikely that bird disturbance would be affected by loss of habitat and increased visitation.

The North Norfolk CHaMP assessed the current extent and condition of habitats and provided a monitoring and management regime to improve freshwater grazing marsh. The purpose of this assessment was to feed into SMP2 policies and other coastal defence schemes.

The HRA for the East of England Plan concluded that the policies would not give rise to any adverse effects on the integrity of sites of European or international importance for nature conservation. As a higher level plan, any issues that did come to light under more detailed assessment would be associated with the spatial plans discussed above.

The Norfolk Coast AONB Management Plan sets out specific actions to maintain and improve coastal habitats and designated sites. It sets out monitoring objectives for habitats and species to enable baseline data to be gathered and populations etc to be preserved. By informing the SMP process, the members of the management plan committee will ensure that biodiversity features are properly taken into account.

The loss of intertidal habitat through coastal squeeze due to a policy of hold the line will result in an effect on the condition and status of the North Norfolk Coast Site of Special Scientific Interest (SSSI). Due to the status and location of this SSSI, no other plans or policies will have an effect. Also, PPS 9 ensures that local planning authorities, local development frameworks and regional spatial strategies should seek to protect sites of biodiversity value. This limits the potential for there to be interacting adverse effects.

The SMP2 is seeking to achieve a more naturalised coastal system along the north Norfolk coast, where natural processes are allowed to occur. This process will also allow for a more reduced programme of habitat management to occur as habitat transitions commence and more sustainable areas develop. The reduction of flood risk management activities proposed in the CFMP, and the measures outlined in the RBMP, will improve the condition of the rivers flowing to the coast and benefit the creation of a naturalised system.

These developments will also cause some change in habitat composition. For example, intertidal habitat may be created or lost in different places along the coastline. The Norfolk BAP seeks to maintain certain coastal habitats and the SMP2 will assist this process, creating extra BAP habitat at certain locations along the coast. However, this may result in the loss of terrestrial habitats such as coastal grazing marsh in areas where managed realignment is to occur. Overall though, there is to be a net increase in BAP habitat created.

It can therefore be concluded that there will be no adverse in-combination effects on biodiversity, flora and fauna arising from the North Norfolk SMP2 and the policies, plans and programmes outlined in **section 3**. Through the creation of BAP habitat, there will be beneficial in-combination effects when considering the SMP2 and the Norfolk BAP.

4.3 Population and human health

The SMP2 is reducing the risk of flooding to coastal settlements. This is in line with the aims of the North Norfolk District Council and the Borough Council of King's Lynn and West Norfolk core strategies and PPS25. Although development is proposed along the coastal area in both districts, specific policies (EN11 and CS07 respectively) ensure that flood risk is taken into account and developments avoid risk areas.

The North Norfolk CFMP has identified that the area of land within the SMP2 boundary is currently over-maintained and the proposed option is to reduce flood risk management in areas where it is appropriate. The CFMP also identified that tide-locking resulting from future increases in sea level has the potential to cause an increase in flood water levels locally on the lower reaches of the rivers Glaven, Burn and Stiffkey and also the Hun and the Cley watercourses. While the policies proposed in the SMP2 will maintain river outfalls throughout the epochs, and although flood risk has been identified as low in the CFMP, this potential remains and will need to be addressed at the scheme level. However, the SMP2 and CFMP both maintain a benefit to local populations through continued reduction of flood risk.

By implementing measures to improve the status of water bodies, the RBMP is ensuring that the likelihood of pollution incidents is reduced and that higher chemical water quality results. This will have additional beneficial effects on

human health during times of high flow periods, but does not interact directly with the SMP2 policies.

The other plans identified in **section 3** do not have any effects associated with increasing the risk to local populations so there will be no adverse in-combination effects related to population and human health. By proposing policies that reduce flood risk to local communities, the SMP2 has a supportive or beneficial interaction with local policies on coastal development, the East of England Plan, the UK Sustainable Development Strategy and the CFMP.

4.4 Tourism and local commerce material assets

By safeguarding the coastline, the SMP2 aims to help maintain its tourism features and local commerce attributes. The spatial plans and RSS identified in **sections 3.4** and **3.5** also seek to maintain and improve tourism on the coast. The UK Sustainable Development Strategy also seeks to increase the productivity of tourism activities. The SMP2 policies are therefore supportive of this approach so, in-combination with the other plans, policies and programmes, the SMP2 is likely to have a beneficial effect on tourism and, in turn, local commerce.

4.5 Soil

As identified in the SEA (Environment Agency, 2009b), the SMP2 is likely to have some adverse effect on the quality of agricultural soils. A section of grade 4 agricultural land will be lost as part of a managed realignment in super-frontage 2. This is considered to be lower quality land associated with grazing rather than arable uses.

By reducing flood risk management in the north Norfolk area, the CFMP may have an effect on the quality of agricultural soils. No grade 2 agricultural land is at risk of flooding, but 33 per cent of the grade 3 land in the area is at risk from a one per cent annual probability flood. However, management measures will only be reduced where appropriate and sustainable farming practices are encouraged.

Core strategies have a number of policies to ensure that agriculture in north Norfolk is maintained and encouraged. This will involve protecting agricultural land where appropriate. The East of England Plan also had a policy specifically for agriculture and soils (ENV4). It stated that planning authorities and other agencies should maintain and enhance the resilience and quality of soils and encourage the sustainable use of soil resources. Although the SMP2 does not wholly support this approach, this is identified in the SEA and no adverse in-combination effects are likely.

4.6 Water

The Anglian RBMP, as a requirement of the WFD, details specific objectives for each water body with mitigation measures designed to maintain and obtain them. This sets out the targets and aims of the RBMP, which should be achieved by

2015 or 2027. The water bodies affected by the SMP2 have all been identified as not meeting good status by 2015 as mitigation measures are either not technically possible or disproportionately expensive (Environment Agency, 2009d). The chosen policies of the SMP2 are unlikely to contribute to the water bodies meeting their required status by 2027.

The SMP2 has been subject to its own WFD assessment. It assessed five transitional and coastal (TRaC) water bodies the Wash Out, North Norfolk, Blakeney Spit Lagoon, Burn, Mow, Overy and Norton and Stiffkey/Glaven as being potentially affected mainly through saline intrusion and effects associated with managed realignment. Most of these water bodies have the potential to fail a combination of Water Framework Directive objectives 2, 3 and 4⁵.

For most of the SMP2 area, it is unlikely that the proposed policies will affect the current or target ecological status or potential of water bodies. The three water bodies identified as having the most potential to fail their environmental objectives are the North Norfolk, Stiffkey/Glaven and the Blakeney Spit Lagoon water bodies and mitigation measures are proposed that include monitoring programmes to assess effects on dunes.

Where environmental objectives are not supported, the SMP2 will not be in line with the objectives of the RBMP and Water Framework Directive.

The North Norfolk CFMP is proposing to reduce flood risk management in the coastal area. This will result in a naturalisation of the river systems and may increase flows in some watercourses during flood events. However, the risk of river flooding is low in this area and tidal flooding is the cause of most flood events. Therefore any effect associated with reducing flood risk management in the north Norfolk rivers is unlikely to act in-combination with the SMP2 policies.

The (revoked) East of England Plan, and the associated council core strategies, all seek to maintain water resources and quality. Also, the East of England Plan states that local authorities should ensure that all relevant plans and policies take into account the environmental consequences of RBMPs. No significant in-combination effects are anticipated with the SMP.

4.7 Coastal communities, traditional activities and cultural material assets

The SMP2 policies will maintain the infrastructure of coastal communities and ensure that traditional activities, such as fishing, can still occur. By maintaining

⁵ WFD2: No changes that will cause failure to meet surface water good ecological status or potential or result in a deterioration of surface water ecological status or potential.

WFD3: No changes that will permanently prevent or compromise the environmental objectives being met in other water bodies.

WFD4: No changes that will cause failure to meet good groundwater status or result in a deterioration of groundwater status.

channels and navigation routes, the local fishing fleets will be able to continue and preserve their business.

Coastal communities are typically small and located away from the main infrastructure. Due to this small size and isolation, it is important that these communities are maintained and protected into the future. The core strategies, (revoked) East of England Plan, PPS25 and the UK Sustainable Development Strategy have objectives or policies about protecting coastal areas and ensuring that their infrastructure is maintained. As the SMP2 will not have any adverse effects, and land use plans have specific policies to protect these coastal features, the SMP2 in-combination with these plans will have beneficial effects on coastal communities, protecting material assets and activities into the future.

4.8 Navigation and access material assets

The managed realignment proposed in the SMP2 will result in an increase in tidal prism and strengthen the channels, so benefiting navigation and access. The Sheringham Shoal offshore wind farm has created a small harbour at Wells-next-the-Sea and undertaken some dredging to provide sufficient access to this site. However, this project is limited to this area and the dredging was only undertaken to create the correct depth of water and to provide a bund for the jetty. The CFMP and RBMP will maintain navigational access down the rivers, but no other plans and policies are considered to have any effects on navigation and access. No significant in-combination effects are envisaged.

4.9 Cultural heritage, including architectural heritage and historic environment

Although the SMP2 will be preventing the loss of several nationally, regionally and locally important heritage assets and conservation areas, potential erosion resulting from implementing SMP2 policy in one PDZ could result in the loss of part of Blakeney and Cley conservation areas. Also, two nationally important, four regionally important and 12 locally important heritage assets may be affected. However, the nationally important heritage assets have already been excavated and removed and the policy prevents an increase in the rate of deterioration of one regionally important heritage asset.

PPS 5 sets out the Government's objectives for the historic environment and the reasons for its conservation. It recognises the unique place the historic environment holds in England's cultural heritage and the ways it supports and contributes to the economy, society and daily life. The PPS also identifies the historic environment as a non-renewable resource. The PPS helps to inform the policies within the core strategies (and previous Regional Spatial Strategies).

The local planning authority documents (core strategies, East of England Plan/RSS) all have policies that ensure the protection of historic environment features. These should ensure that no adverse in-combination effects can occur and that these historic features are maintained and protected. As the SMP2 also seeks to protect heritage assets at other locations, there will be beneficial interactions with the local planning authorities' policies.

4.10 Landscape

The SMP2 policies will maintain channels that are a key historical and social feature in the landscape. The proposed managed realignment will lead to a change in the appearance of the coastal landscape to reflect a more dynamic system. This has been seen as a minor positive effect of the scheme. All the plans (including the East of England Plan and the local authority core strategies) mentioned in **section 3**, in one form or another, seek to maintain the north Norfolk landscape and ensure that it is functional and attractive. The Sheringham Shoal offshore wind farm will result in a small change to the visual impact of the sea views and the overall landscape of the area. However, the turbines are located around 17 kilometres off the coast and so are unlikely to have an impact on the landscape of the north Norfolk coast. So the in-combination effect of implementing the SMP2 with these plans remains positive.

5 Conclusions

This report has outlined the key policies, plans and programmes and the potential for in-combination effects between these and the SMP2. All documents were assessed at the plan level and without any consideration of mitigation or prevention measures associated with implementing the plans.

All the plans assessed in this report seek to protect or enhance many of the features that may be adversely affected by the SMP2 in one way or another. Although significant in-combination effects are not anticipated, the SMP2 does not necessarily entirely support the objectives of the other plans, policies and programmes (for example, there may be some conflict between the SMP2 and the RBMP).

The CHaMP, BAP, AONB Management Plan and European directives seek to protect the environment and establish key goals and measures for achieving these. Although the SMP, through the proposed managed realignment, does result in the loss of some habitat, these effects will not be enhanced in-combination with other plans.

Some beneficial, and mutually-supportive, in-combination effects will arise from the SMP2 and these plans. The spatial plans will protect and enhance rural and coastal communities. The SMP2 will also do this through protecting infrastructure and maintaining traditional activities, such as fishing. BAP habitat will be created as part of the SMP process. Also, all the plans discussed in this report seek to protect and enhance the landscape of the north Norfolk coast.

In conclusion, a number of in-combination effects have been identified between the North Norfolk SMP2 and the policies, plans and programmes assessed through the SEA process. A number of these are beneficial, where the SMP2 supports the activities and objectives of the other identified plans. Where adverse interactions are identified these are not considered to be significant, or of sufficient scale to require mitigation beyond that already contained in the individual policies, plans and programmes.

6 References

Environment Agency, (2009) North Norfolk Catchment Flood Management Plan.

Environment Agency (2009a) North Norfolk Shoreline Management Plan Strategic Environmental Assessment: Scoping Report.

Environment Agency (2009b) North Norfolk Shoreline Management Plan Strategic Environmental Assessment: Environmental Report.

Environment Agency (2009c) North Norfolk Shoreline Management Plan Strategic Environmental Assessment: Addendum to Environmental Report.

Environment Agency, (2009d) River Basin Management Plan: Anglian River Basin District.

Natural England and the Environment Agency, (2003) North Norfolk Coastal Habitat Management Plan.

Norfolk Coast Partnership (2009) Norfolk Coast Area of Outstanding Natural Beauty Management Plan 2009-14.

North Norfolk District Council, (2008) Core Strategy incorporating Development Control Policies.

Borough Council of King's Lynn and West Norfolk, (2010) King's Lynn and West Norfolk Core Strategy - Proposed Submission Document.

Government Office for the East of England (2008) East of England Plan: The Revision to the Regional Spatial Strategy for the East of England.

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