

2 ENVIRONMENTAL ASSESSMENT

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2 ENVIRONMENTAL ASSESSMENT

In carrying out the Cornwall and Isles of Scilly SMP2 it is important to understand the relationship between the areas of value to nature conservation and the coastal processes which affect them. It is also important to understand how coastal defences can alter coastal processes, having an impact on the nature of the environment.

In addition, coastal defences may also have an impact on the landscape of an area. The importance placed upon a particular landscape, and the type of structure used, will determine the impact of the defence.

This chapter outlines the strategic process undertaken for the environmental assessment of the Cornwall and Isles of Scilly SMP2 based on the key requirements of the European SEA Directive (2001/42/EC) and EC Habitats Directive (92/43/EEC). The chapter contains the following sections: Environmental Assessment within the SMP Process; Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA). The SEA in particular is important as a broad-scale independent assessment of the risks to the environment resulting from the adoption of given SMP2 policies. The SEA is included as part of the supporting appendices to the main SMP document (Appendix F).

2.1 Environmental Assessment within the SMP Process

2.1.1 Existing Environment

The coastline of Cornwall and the Isles of Scilly has a very rich natural environment, much of which is recognised for its international or national value to nature conservation. The SMP area includes the following sites of international importance:

- Isles of Scilly
- Marazion Marsh
- Polruan to Polperro
- Penhale Dunes
- The Lizard
- Godrevy Head to St Agnes
- Tintagel-Marsland-Clovelly Coast
- Fal and Helford
- River Camel

There are extensive stretches of the coastline that are of national nature conservation interest. This is mainly for their ecology and/or geology or geomorphology. Areas of intertidal mudflats, sandflats, reedbeds, saltmarsh and coastal lagoons of high conservation interest occur at Marazion Marsh and Loe Pool and the estuaries of Hayle, Camel, Fal, Helford, and Fowey. These sites, as well as the Isles of Scilly, all provide important feeding grounds for large populations of internationally important bird species such as waders, gulls and waterfowl, or for aquatic species such as Allis shad, salmon, and seals.

The combination of natural environmental assets associated with this particular SMP creates a coastline of great value, with a tourism economy of national importance.

The current state of the Cornwall and Isles of Scilly SMP environment is described in the Thematic Review presented in Appendix D of this report. This study identifies the key

features of the natural and human environment of the coastline, including a commentary on the characteristics, status, relevant designations, as well as the importance of these features and the 'benefits' they provide to the wider society.

This is supplemented by the Coastal Processes report in Appendix C, which identifies the contemporary physical form of the coastline and the processes operating upon it.

Appendix F contains the Strategic Environmental Assessment, which examines the likely impacts and risks resulting from the adopted SMP2 policy.

Appendix I contains the Habitats Regulations Assessment. This undertakes an assessment of the likely impacts of the adopted SMP2 policy on the integrity of any designated European sites.

2.1.2 The Appraisal Process

SMPs provide an assessment of the risks associated with coastal evolution and provide a framework to address these risks to people and the developed, historic and natural environment in a sustainable manner. The SMP is a non-statutory, policy document for coastal defence management planning, which takes into account existing planning initiatives and legislative requirements so as to inform wider strategic planning. It does not set policy for anything other than coastal defence management.

Full details on the background to the SMP and the appraisal process are set out in Sections 1 and 3, with the exact details of the procedure followed in development of the Plan being set out in Appendix A.

2.1.3 Stakeholder Engagement

A wide variety of stakeholders are involved in the development of the SMP, and have been consulted regularly. The views of those whom the SMP policies will affect have therefore been involved in its development to ensure that all relevant issues have been considered. This is one of the key changes from the first SMP. Engagement with other organisations throughout this SMP Review has:

- been undertaken throughout the development of the SMP2
- given people and organisations an opportunity to comment on the environmental appraisal of options
- allowed representations made by the organisations, communities and the public to be taken into account in the selection of policy options.

Stakeholders for the SMP have included representatives from local authorities, government agencies and a wide range of commercial and local organisations, including private individuals, who have registered an interest in the study. These interested parties have met periodically throughout the development of the SMP to input information and review outputs as the SMP has progressed.

The main group that the SMP has consulted with throughout the process has been the Client Steering Group (CSG). The CSG is comprised of representatives from local authorities, Natural England and the Environment Agency with a remit to agree the various stages of the SMP as it progressed.

Full details of all stages of engagement with other parties during development of the draft Plan are presented in Appendix B. This includes copies of briefing materials.

2.1.4 Environmental Objectives

An integral part of the SMP development process has been the identification of issues and definition of objectives for future management of the shoreline. This was based upon an understanding of the existing environment, the aspirations of stakeholders, and an understanding of the likely evolution of the shoreline under the hypothetical scenario of No Active Intervention (NAI) (Appendix C), which identifies the likely physical evolution of the coast without any future defence management and hence potential risks to shoreline features.

The definition and appraisal of objectives has formed the focus of engagement with stakeholders during development of the SMP (as identified in Appendix B). The full list of issues and objectives defined for this SMP is presented in Appendix E, which is supplemented by background information that is provided in the Thematic Studies (Appendix D).

Appendix G includes consideration of how the objective and hence the environment, would be affected under a NAI scenario, while Section 5 provides and draws together the overall potential environmental effects of the preferred policies.

2.1.5 Environmental Effects of the Preferred Plan

The rationale for development of the preferred plan within each Policy Development Zone (PDZ) is reported in Section 4, which includes a summary policy statement for each Management Area, containing the environmental implications of the various scenarios recorded. A summary of how the preferred plan might perform with respect to different themes is presented in Section 5.

Within the Management Area Summary Statements in Section 4, further detail of the implications of the preferred plan are presented for internationally, nationally, regionally and locally designated environmental areas. This detail also includes an identification of any mitigation measures that would be required in order to implement the policy. This is further supported through undertaking of a HRA of the Plan, with the supporting information being provided in Appendix I. A brief overview of the implications of the preferred plan on the environment is provided in Section 2.2.

2.2 Strategic Environmental Assessment (SEA)

2.2.1 Background

The Defra SMP guidance (Defra, 2006) states that the environmental effects of all policies must be considered before deciding which policies will be adopted. Consideration should be made with regards to both the positive and negative effects of options on wildlife and habitats, populations and health, soil, water, air, climate factors, landscape, cultural heritage and the intrinsic relationship between these.

Under Directive 2001/42/EC of the European Parliament and of the Council, and the associated Environmental Assessment of Plans and Programmes Regulations 2004, the SEA must be made of plans and programmes that are required by legislative, regulatory or administrative provisions.

SMPs clearly set a framework for future development and have much in common with the kind of plans and programmes for which the Directive is designed. As a result, it is recommended (Defra, 2006) that operating authorities assess policies using the approach described in the Directive, with the legislative act which transposes the Directive into domestic law being the Environmental Assessment of Plans and Programmes Regulations (SI 1633, 2004). The intention of the Directive is to:

'provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development'.

The SEA provides a systematic appraisal of the potential environmental consequences of high-level decision-making (i.e. plans, policies and programmes). By addressing strategic level issues, SEA aids the selection of the preferred options, directs individual schemes towards the most appropriate solutions and locations and helps to ensure that resulting schemes comply with legislation and other environmental requirements.

Within the SEA process and in a manner corresponding to that used throughout the SMP (Defra, 2006), the term environment is used to cover:

- landscape and natural beauty
- wildlife, habitats
- buildings, sites and objects of archaeological, architectural or historical interest
- human health and population
- water, air, climatic factors
- material assets.

The SEA process is divided into two distinct elements, the scoping stage and the Environmental Report. The purpose of the scoping stage is to establish the environmental baseline and identify the key environmental issues to be considered during subsequent stages of the SEA, including the development of assessment criteria which provides the basis for the assessment of SMP policy. With this in mind, the overall aims of the SEA associated with this SMP were to:

- Provide for a high level of environmental protection;
- Ensure that likely significant effects on the environment of the implementation of the SMP are identified, described and evaluated, so that they can be taken into account before the plan is adopted;
- Evaluate reasonable alternatives for their likely significant effects, taking into account the objectives and geographical scope and the SMP policies, so that these can inform the nature and content of the SMP.

In addition, following the production of the Environmental Report, a number of issues were raised during consultation which necessitated the production of a Statement of Environmental Particulars (SoEP). This is produced to support the Environmental Report which cannot be changed once published. This is presented as a further Annex alongside the Environmental Report within Appendix F.

The importance of UK BAP habitats is a key consideration for SEA. An assessment of losses (or gains) of all UK BAP habitat types around the SMP coastline is a key

recommendation from the SMP review. Such work should look to tie in with and inform the South West Habitat Creation Programme (regional Environment Agency).

Table 2.1 below identifies the priority UK BAP habitats as defined for the coastal and marine environment, with the broad-scale BAP habitat definition and the UK interpretation provided in the second and third columns.

Broad Category	BAP Broad Habitat	UK BAP Habitat	Key Targets
Terrestrial & Freshwater	Supralittoral rock	Maritime cliff and slopes	Maintain extent (no net loss)
Terrestrial & Freshwater	Supralittoral sediment	Coastal vegetated shingle	Maintain extent (no net loss)
Terrestrial & Freshwater	Supralittoral sediment	Machair	
Terrestrial & Freshwater	Supralittoral sediment	Coastal sand dunes	Maintain extent (no net loss)
Marine	Littoral rock	Intertidal chalk	
Marine	Littoral rock	Intertidal underboulder communities	
Marine	Littoral rock	Sabellaria alveolata reefs	
Marine	Littoral sediment	Coastal saltmarsh	Maintain extent (no net loss)
Marine	Littoral sediment	Intertidal mudflats	Maintain extent (no net loss)
Marine	Littoral sediment	Seagrass beds	
Marine	Littoral sediment	Sheltered muddy gravels	
Marine	Littoral sediment	Peat and clay exposures	
Marine	Sublittoral rock	Subtidal chalk	
Marine	Sublittoral rock	Tide-swept channels	
Marine	Sublittoral rock	Fragile sponge & anthozoan communities on subtidal rocky habitats	
Marine	Sublittoral rock	Estuarine rocky habitats	
Marine	Sublittoral rock	Seamount communities	
Marine	Sublittoral rock	Carbonate mounds	
Marine	Sublittoral rock	Cold-water coral reefs	
Marine	Sublittoral rock	Deep-sea sponge communities	
Marine	Sublittoral rock	Sabellaria spinulosa reefs	
Marine	Sublittoral sediment	Subtidal sands and gravels	
Marine	Sublittoral sediment	Horse mussel beds	
Marine	Sublittoral sediment	Mud habitats in deep water	

Broad Category	BAP Broad Habitat	UK BAP Habitat	Key Targets
Marine	Sublittoral sediment	File shell beds	
Marine	Sublittoral sediment	Maerl beds	
Marine	Sublittoral sediment	Serpulid reefs	
Marine	Sublittoral sediment	Blue mussel beds	
Marine	Sublittoral sediment	Saline lagoons	

Table 2.1 UK Priority coastal & marine BAP Habits

Of particular relevance to the Cornwall and Isles of Scilly SMP are the following BAP Habitats:

- Maritime cliffs and slopes
- Coastal vegetated shingle
- Coastal sand dunes
- Intertidal mudflats
- Estuarine rocky habitats

The opportunity for sand dune management which either enhances existing sites or helps to establish new sites (or re-establish former sites that have been lost) represents a particularly significant potential benefit to the SMP area. These also add Outcome Measure scores for possible future funding. It is likely that Cornwall can provide a significant contribution to the national target of 1,000ha of coastal dunes to be reinstated by 2019, with initially potential sites at Par Sands, Pentewan, Gwithian, Widemouth and Bude.

Also of importance is consideration of changes in intertidal mudflat area, particularly within the Upper Fal, Upper Fowey and Camel estuaries due to sea level rise. Also requiring consideration are the maritime cliff and slopes BAP habitats, particularly around The Lizard and Penwith peninsulas and the north coast above the Camel estuary.

2.2.2 Evaluation of the Plan and Alternatives

The function of a SMP is to consider the coast as a whole, from the perspective of managing coastal flood and erosion risk. The behaviour of the Cornwall and Isles of Scilly SMP coastline is driven by its geological and geomorphology make-up. It is evident that no one aspect of the coastal (in terms of its physical behaviour, natural or built) environment dominates. There is a complex interdependence between different values along this coast that mean that a decision taken within one policy unit has the potential to affect the adjacent policy units. It was, therefore, considered inappropriate that a simple rigid procedure of option appraisal over individual sections of the coast could be undertaken in deriving policy.

2.2.3 Monitoring Requirements

In assessing the environmental implications of the SMP, areas of uncertainty have remained that are critical to the implementation of the preferred shoreline management approach. The SEA has therefore developed mitigation and monitoring requirements to address specific issues identified through the SEA assessment. The need for mitigation and monitoring is location specific, and should largely be the responsibility of the operating authority or coastal management organisations within that area. This approach means that information necessary to inform the on-going development of the

plan is collected, and that those responsible for each section of coast are involved in the implementation of decisions being made.

In finalising the SMP, the Action Plan sets out an overall coherent approach for monitoring and mitigation. Detailed monitoring and definition of mitigation requirements will be undertaken as part of on-going management, as well as the development of strategy studies that are undertaken to initiate implementation of the Plan.

2.3 Habitats Regulations Assessment (HRA)

2.3.1 Background

The need for an HRA arises under the requirements of the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) and its implementation in the UK under the Conservation (Natural Habitats & co.) Regulations 1994. Under Regulation 48(1).

HRA 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 (*Nature 2000*) site, and is not directly connected with or necessary for the management of the site.

A European site is defined as being either a Special Area of Conservation (SAC) or a Special Protection Area (SPA) (sites designated under Council Directive 79/409/EEC on the conservation of wild birds), with Planning Policy Statement 9 (PPS9) (ODPM, 2005a) specifying 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'.

HRA is the process to support a decision by the 'Competent Authority', which in this case is Cornwall Council, 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. However, Government Circular: Biodiversity and geological conservation – statutory obligations and their impact within the planning system (ODPM, 2005b) states that:

'the integrity of a site is the coherence of its 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...If the proposal would adversely affect integrity, or the effects on integrity are uncertain but could be significant the decision-taker should not grant permission'.

Adverse effect is similarly quantified as one that prevents the site from maintaining the same contribution to favourable conservation status of the qualifying feature(s) for which it was designated.

Where it is not possible to determine that a plan or project under consideration will not have an adverse effect on the integrity of an International 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 biological thresholds and limits of anthropogenic activity and disturbance which are required to 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 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) for each site, are the responsibility of NE.

2.3.2 Appropriate Assessment in the Land Use Plan Context

Three documents currently provide the most cohesive source of guidance relating to the provision of HRAs for Shoreline Management Plans. These are:

- 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)
- Appropriate Assessment of Flood Risk Management Plans Under the Habitats Regulations (Environment Agency, Draft document)

These documents relate explicitly to land use plans; however, given that SMPs have the potential to influence the development of land, this guidance has been applied in this report to SMP policy. In this respect, there are clear parallels between Regional Spatial Strategies (RSS) and SMPs, and the relevant elements of guidance relating to HRA for RSS have therefore been adapted here for SMP use.

An HRA is therefore simply 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.

2.3.3 Identification of Competent Authority for the SMP

One of the first steps in assessing 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 HRA, but the ultimate responsibility for signing off the appropriate assessment and ensuring compliance with the Habitats Regulations falls to the competent authority. In this instance, the **competent authority** is **Cornwall Council**.

2.3.4 Requirement for an HRA for the SMP2

During the development of the Cornwall and Isles of Scilly SMP2, the opportunity has been presented to align the development of SMP policy with the requirements of the Habitats Regulations, allowing for the development of SMP policy which takes into account site integrity.

The SMP has a critical role in determining key coastal processes through its decision about how to manage the coastline. This means that the extent and status of

internationally designated natural habitats along the coastline of the SMP area could be impacted by the decisions made in the SMP. This means that ***it can not be concluded that there would not be a likely significant effect of the SMP on the site***. The SMP has therefore been subject to an HRA.

The full detail of the HRA for the international sites associated with the Cornwall and Isles of Scilly SMP2 is provided as Appendix I.