

## **Appendix A SMP Development**

Draft for public consultation  
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## APPENDIX A – CONTENTS

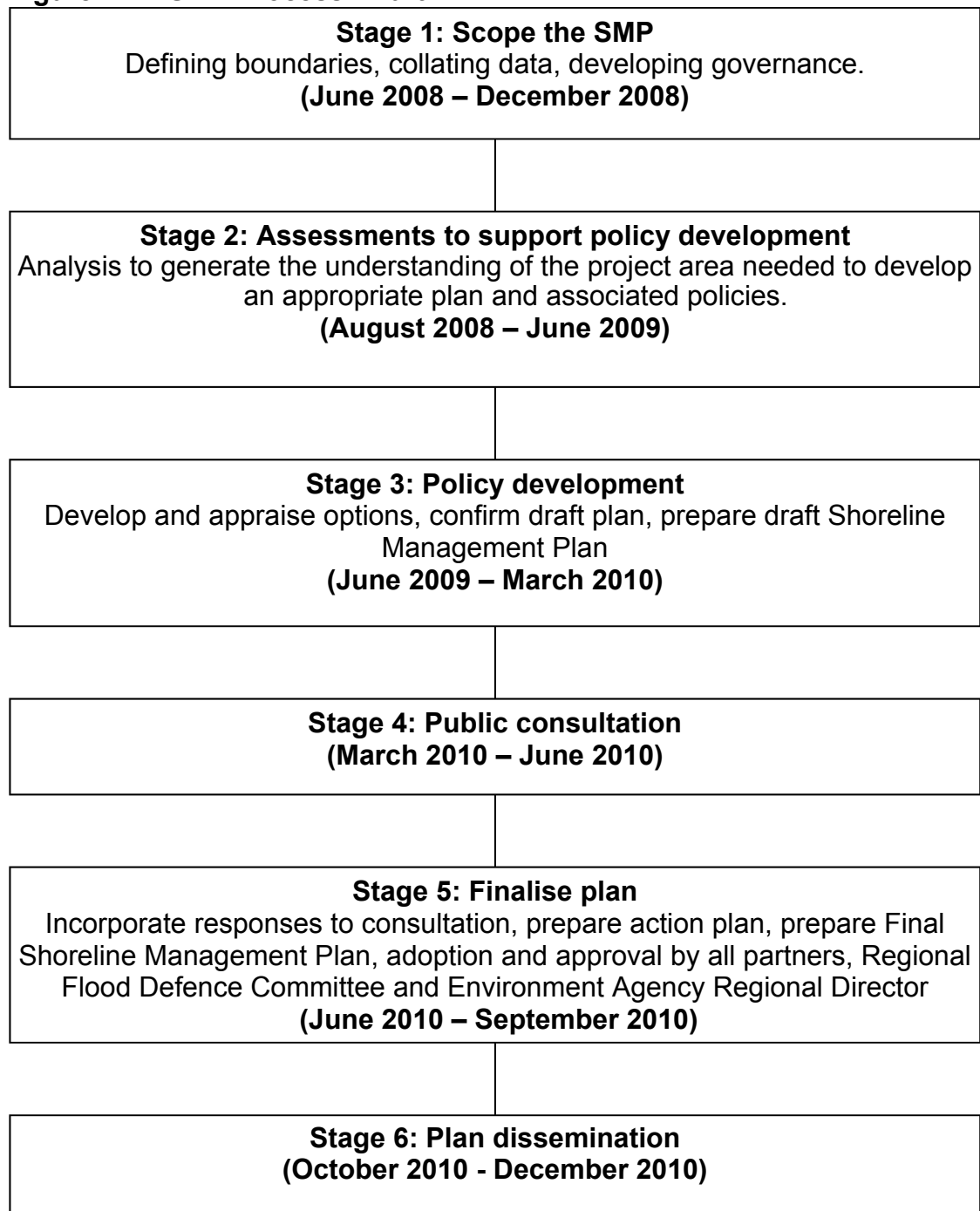
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## A1 INTRODUCTION

The aim of Appendix A is to set out the process of SMP development with reference to the guidance provided by Defra (Shoreline Management Plan Guidance, 2006). The following Appendices give detailed information on the details and results of the SMP process.

There are six principal SMP stages in the development of the SMP.

**Figure A1.1 SMP Process Chart**



The flow chart in Figure A1.1 illustrates the overall structure of the SMP process. The Guidance distinguishes a number of tasks for each Stage. In general, the development of The Essex and South Suffolk SMP has followed this structure, with a few adaptations and additions to capture the SMP's individual characteristics. The additional activities are described per Stage.

## **A2 SMP TASKS**

### **A2.1 Stage 1: Scope the SMP**

#### **A2.1.1 Tasks Based on SMP Guidance**

This initial stage of the SMP consists of 5 tasks, aimed to initiate and define the process, including consultation and data collation.

##### Task 1.1 Initiate SMP

This task consisted of establishing the governance of the SMP by setting up the Client Steering Group and Elected Members Forum (as described in **section 1.3 of the Main Document**) and determining the approach and scope of work.

##### Task 1.2 SMP Definition

This task included identification and confirmation of the geographical boundaries for the SMP, as described in **section 1.2 of the main document**.

##### Task 1.3 Define stakeholder engagement

Stakeholder engagement was a continual process throughout the development of the SMP. More detail of this is available in **Appendix B**.

##### Task 1.4 Data Collection

The main activities for this task were to initiate the data collation process and obtain information for the SMP. This data is collated by a data management tool in geodatabase format that allows easy and structured organisation of data to provide a quick reference tool for subsequent tasks. The database is an interactive way of allowing the end user to interact with the data used within the development of the SMP. The end user will be able to view all the data in a geographical context of the SMP area. Information on this database is available in **Appendix I**. The collated data was reviewed for coverage, completeness and accuracy.

In addition, a bibliographic database was developed in order to record, store and track all incoming documents of the Essex and South Suffolk SMP project.

##### Task 1.5 Additional Investigations

The aim of this task was to undertake any further studies that would provide necessary information for the review of the SMP. Although there were gaps

and some uncertainties in knowledge, there was sufficient information available to develop the second round of Shoreline Management Plans for Essex and South Suffolk.

#### A2.1.2 Additional Activities

In addition to the above tasks that are identified in the SMP guidance, there are also a number of additional tasks performed that are integrated into the process to provide a more detailed understanding of the area to help with the policy decision process. In brief, these are as follows:

##### Review of Monitoring Data

A review was undertaken of the Environment Agency beach monitoring data and the Coastal Trends Analysis of the Anglian Region (Environment Agency, 2007). This has been inputted into tasks such as the coastal processes assessment in Task 2.1 (**Appendix C**).

##### Risk Workshop

Risk workshops were held with the CSG at the start of the process to identify the critical factors that could influence the development and delivery of the SMP. By recognising these risks early in the SMP process and updating this at a critical stage, efforts could be made for their mitigation.

As a result of the risk workshop during the first CSG meeting, a risk register was established. This lists all the risks, establishes whether the risk is high, medium or low, and states how urgent the risk is. The full risk register was then further developed into a Risk Action Plan listing the actions that each of the three main parties (EMF/CSG, Lead Authority (Environment Agency), and Consultant) have to carry out to manage the highlighted risks. This Risk Action Plan was used on a day-to-day basis and it was made a standard agenda item in client progress meetings and with the Client Steering Group and Elected Members Forum. It consisted of the following actions:

- Attend meetings and come prepared
- Be actively involved in objective setting and appraisal
- Ensure the involvement of the full council
- Pose questions at right levels (i.e. policy level)
- Be aware of data required for SMP; deal explicitly with uncertainty
- Communicate importance of SMP within organisation; and
- Ensure effective involvement from key stakeholders and community groups

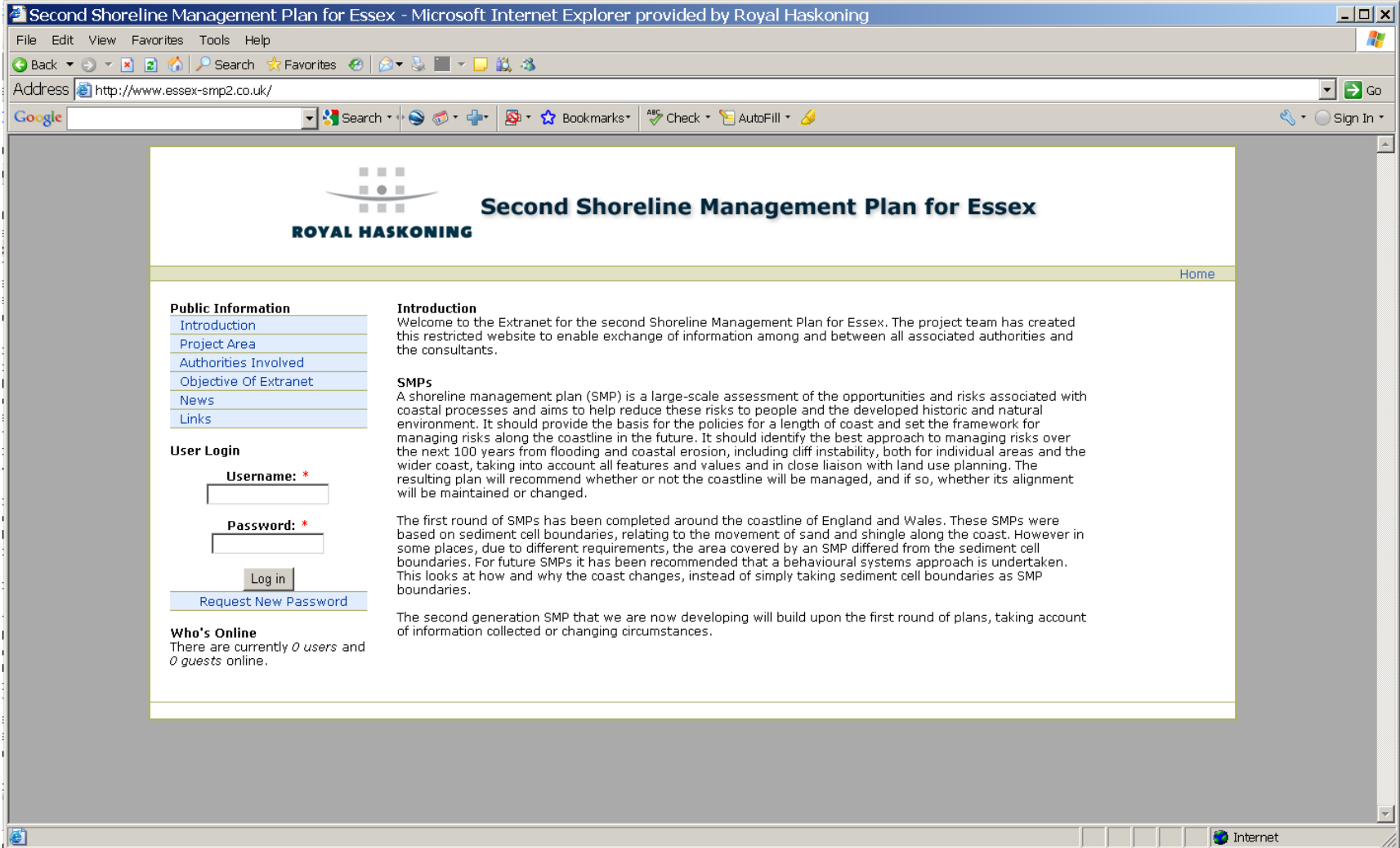
The actions for the Environment Agency and Royal Haskoning and the full risk register are available on request.

##### Extranet

An Extranet site was set up to provide an easy way for the members of the Client Steering Group and Elected Members Forum to access and review

documents as they were being produced. This site is found under [www.essex-smp2.co.uk](http://www.essex-smp2.co.uk) and the front page is illustrated in Figure A2.1.

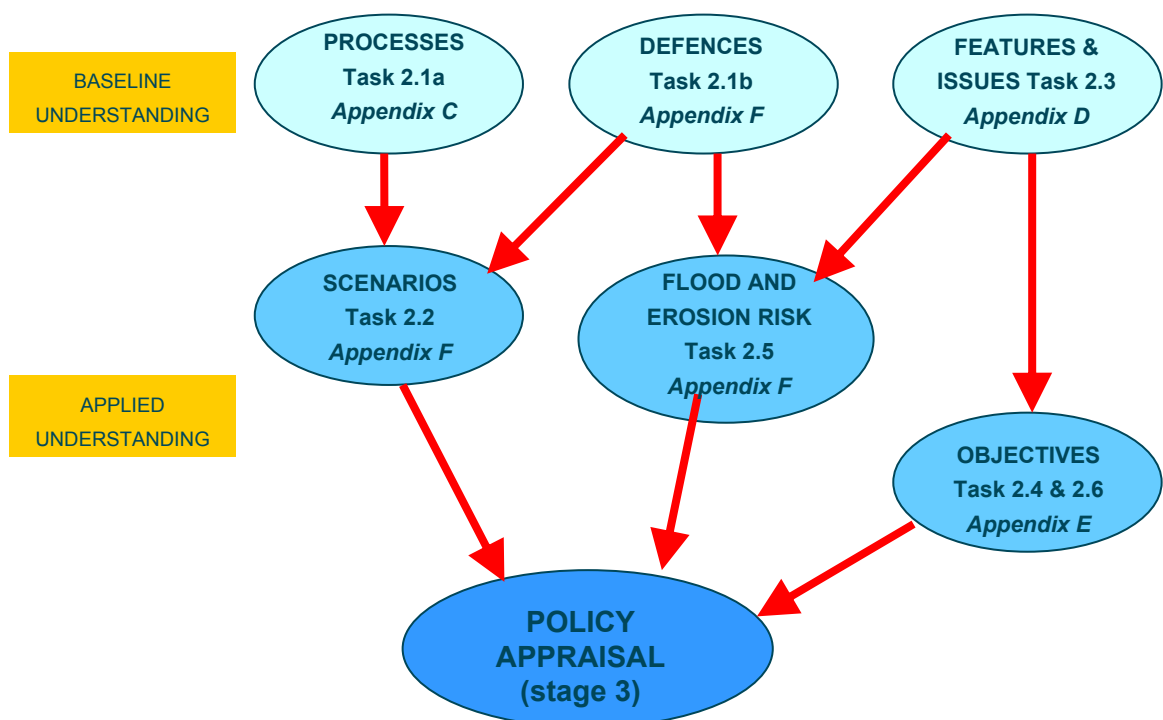
Figure A2.1 Essex and South Suffolk SMP Extranet Homepage



## A2.2 Stage 2: Assessments to support policy development

Stage 2 aims to develop the understanding of the shoreline that is required to develop shoreline management policy. The tasks include both technical elements (coastal processes and defences), and land use and environment. The guidance identifies a number of tasks, which are related as illustrated in Figure A2.2. In addition to the development of understanding, Stage 2 has also produced the objectives (or policy appraisal criteria) that have been used in Stage 3 to select the draft policies.

**Figure A2.2 Stage 2 Overview**



### A2.2.1 Baseline Understanding of Coastal Behaviour and Dynamics (Task 2.1)

The initial part of this Task (Task 2.1a) built on the initial understanding of physical processes and issues developed as part of a Coastal Characterisation that was undertaken as an additional activity during Stage 1 (see Section A2.1.2).

A detailed review of all existing information was carried out. This included information contained within the SMP1, any studies and strategies completed since SMP1 such as Futurecoast, the Southern North Sea Sediment Transport Study (SNSSTS), the Essex and the Suffolk Coastal Habitat Management Plans (CHAMPS, 2002) and ongoing monitoring data received from the Environment Agency (the Coastal Trend Analysis, 2008). This enabled a detailed understanding to be gained of the historic and ongoing



processes influencing the development of the shoreline, and of how the coast is expected to change in the future. The review also enabled any uncertainties in the predicted evolution to be identified. The assessment was based on the results and/or conclusions from existing studies, rather than revisiting base information.

The outputs from this task are concise descriptions of processes and evolution, expected directions and rates of change. These outputs can be found in **Appendix C** of the SMP.

Data on the condition of the coastal defences was obtained from the National Flood and Coastal Defence Database (NFCDD) and Local Authorities data bases as part of the data collection carried out in Stage 1. The estimated unmaintained life and residual lifes under No Active Intervention, of each defence structure was determined as part of the second stage of this task (Task 2.1b). This was based on the approach developed as part of Essex and South Suffolk SMP2 and the review of EA and LA Asset Managers, Operations Delivery Staff and Landowners. Maps were produced that illustrate the residual life of the defences. The information gathered for this task is presented in Section 3 of **Appendix F** of the SMP.

#### A2.2.2 Develop Baseline Scenarios (Task 2.2)

Task 2.2, developing the baseline scenarios, aimed to provide an appreciation of how the shoreline is behaving, and how this behaviour is influenced by coastal management. These assessments were developed based on the specialist knowledge developed in Task 2.1, and were used to determine flooding and coastal erosion risks and to develop an understanding of the likely impact of extreme policy scenarios. The understanding of extreme policy scenarios was an instrumental step for the development of Stage 3 of the SMP. There were two activities in this task: the assessment of baseline response to the two scenarios of No Active Intervention (NAI) and With Present Management (WPM); and the development of Coastal Risk maps – coastal processes and defences assessment.

For the first activity NAI was assessed based on the assumption that the defences would fail at the start of epoch 2, to assess the extreme impact of the NAI policy. Note that at the estimated unmaintained lifes (residual lifes under NAI) were not utilised for this assessment. The WPM assessment was based on the assumption that the same standard of service would be provided by the defences throughout the SMP plan period. This therefore assumes that the defences will not deteriorate significantly. These assessments also addressed climate change as far as possible. Predicted results were reported in tables for the short, medium and long term for both scenarios, providing an overview of the extreme impact of the policy scenarios. In addition, the activity also highlighted the uncertainty regarding the estimates of intertidal habitats likely to be lost.

The Coastal Risk Maps were developed following the completion of Task 2.1a and 2.1b and the first activity of Task 2.2. It utilises the baseline understanding on coastal and estuarine processes. As well as the state of the defences, to provide a clear indication of coastal area at risk and/or areas where a change in management may be required due to the impact of coastal processes on the defences. The Coastal Risk Maps were developed based on local expert knowledge and previously developed understanding. In addition, it was augmented by anecdotal information.

Both the baseline scenarios and Coastal Risk Maps are included in chapter 3 and chapter 4 of **Appendix F** of the SMP.

### A2.2.3 Define Features, Benefits and Issues (Task 2.3)

This task, also referred to as the Theme Review, aims to develop a clear understanding of the key features along the coast and why these are important to stakeholders. The review is used as a basis for the development of policy appraisal criteria and options. This task identifies the features and issues throughout the SMP area to highlight the benefits from these features. A feature is defined as something tangible that provides a service to, or benefits society in some way. The importance of the feature is explained in terms of the benefit it provides, who benefits from it and the scale of its importance (i.e. local, national, international, and whether it is rare at any scale). The potential effect of coastal change on the value of the feature is also considered, and so is the potential for substitution of the feature.

This task uses existing information and data provided by the stakeholder engagement process. The features are identified and valued and issues described. The themes covered by the SMP are listed below:

Physical features;  
The environment;  
Heritage and culture;  
Hard assets;  
Recreation;  
Commercial activities; and  
Hazards

A key part of the development of this task was the development of cross-section graphics. These graphics are an innovative way of visualising the findings from the Theme Review. Compared to the tabular format prescribed in the guidance (which was also produced), the graphics allow better identification of interaction between features, which is an important element of The Essex and South Suffolk shoreline. The visual nature of the graphics made it easier for stakeholders to provide feedback on the SMP's initial findings, which improves their involvement and leads to improved

understanding of the features and issues, facilitating the development of the SMP.

The results of this task, including the tables and graphics, can be found in **Appendix D**.

#### A2.2.4 Define and Assess Objectives (Tasks 2.4 and 2.6)

This task aimed to set and assess shoreline management objectives that guide the SMP policy appraisal process. The SMP Guidance suggests an approach in which objectives are developed for each feature identified in the Theme Review; these feature level objectives are then assessed and prioritised to develop them into appraisal criteria.

For this SMP, an alternative approach was developed, complementing the bottom-up feature level approach with a top down approach based on an agreed set of high level principles as listed in Section 1.3 of the main SMP document. This combined approach, developed in close cooperation with the CSG and EMF, has then produced the criteria that have been used to appraise the policies, as illustrated in Figure A2.2.

The approach, the resulting criteria and indicators, and the detailed results of the appraisal are described in Section 2 of **Appendix E**.

#### A2.2.5 Identify Flood and Erosion Risk (Task 2.5)

The final task in Stage 2 is the identification of flood and erosion risks for the SMP frontage and hinterland. This task looks in more detail at the assets and features identified during the Thematic Review and the extent that they are at risk under No Active Intervention. The main aim of the task is to develop an overall understanding of how flood and erosion risk varies in space (within the SMP area) and in time (from Epoch 1 to Epoch 3). This has specifically fed into the appraisal, through the identification of the features at risk per policy package and per epoch. An overview of the results of this task is provided in **Appendix F**.

#### A2.2.6 Additional Activities

##### Non-technical Summary of Draft SMP

Box 3.1 of the SMP guidance indicates that it may be appropriate to prepare a non-technical summary of the Draft SMP for the purpose of consultation. This additional task concerned the preparation of the three non-technical summary's, including communication with Environment Agency and CSG. These are stand-alone documents.

##### Sustainability Appraisal (Signposting)

The Sustainability Appraisal (SA) includes environmental, social and economic aspects; the environmental aspects are similar to the contents of

the Strategic Environmental Assessment. This task concerned the additional activities required to clarify the link between SEA and SA, and explicitly annotating how and where the SMP fulfils the SA requirements. This document is provided as **Appendix J**.

#### Water Framework Directive – Assessment

This assessment looks into the impact of the SMP policies on the objectives developed in the River Basin Management Plan based on the Water Framework Directive. This document is provided as **Appendix K**.

#### Strategic Environmental Assessment (SEA)

A stand-alone Strategic Environmental Assessment (SEA) document was prepared for The Essex and South Suffolk SMP. This is characterised by an approach in 5 Stages (A – E), in line with SEA guidance and incorporated in the SMP process. Section 1.5 of the main SMP document explains the relation with the SMP. The SEA is provided as **Appendix L**.

#### Appropriate Assessment (AA)

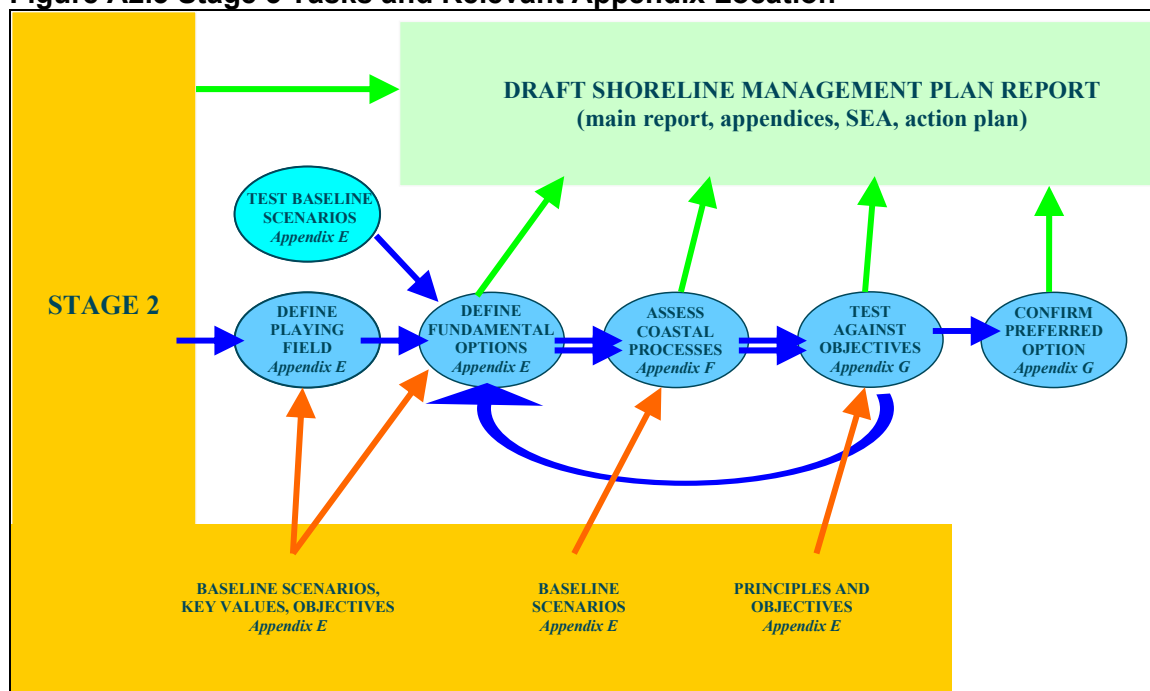
The Habitats Regulations Assessment or Appropriate Assessment was produced in response to Defra guidance on AA provision for SMPs. A scoping report was produced for discussion with Natural England, and based on that, the actual assessment has been carried out alongside policy appraisal during Stage 3 and has been used as an active policy evaluation tool, with policy options and scenarios being considered in regard to their effects on the integrity of international sites. Section 1.5 of the main SMP document explains the relation with the SMP. The AA is provided as **Appendix M**.

### **A2.3 Stage 3: Policy Development**

The Stage 3 tasks have taken the information collated in Stage 2 to develop policy options for the SMP, appraise the options and define the draft option. The order of the tasks is largely linear (instead of the parallel nature of Stage 2), with a strongly iterative character to enable full and effective CSG and EMF involvement. The sequence of the tasks has been set up to facilitate the complex decisions that the SMP has to make, by gradually converging on the key decisions to be made and ensuring that the detailed appraisal only covers realistic options appropriate to the high level of SMPs. The results of the tasks, with a focus on the draft plan and policies, are then fed into the draft SMP document, which is prepared as part of one of the final tasks of Stage 3. This process is illustrated in Figure A2.3.

The development of the Essex and South Suffolk SMP policies has largely followed the approach as set out in the SMP Guidance, with a few deviations and additions as discussed below.

**Figure A2.3 Stage 3 Tasks and Relevant Appendix Location**



### A2.3.1 Defining Policy Scenarios - Coastal Policy Context (Task 3.1)

These tasks were based on the understanding developed in Stage 2. The subsequent aim of this task was to identify and define the ‘options’ (at policy level) that are sufficiently realistic and relevant to justify the effort of full appraisal. This means that a policy is only part of the coastal policy context if there is at least a driver, and if there are no absolute constraints. This streamlining process is required, because otherwise there would be an infinite number of policy options in both time (epochs) and space (frontages). Therefore this task improves the efficiency of the SMP process.

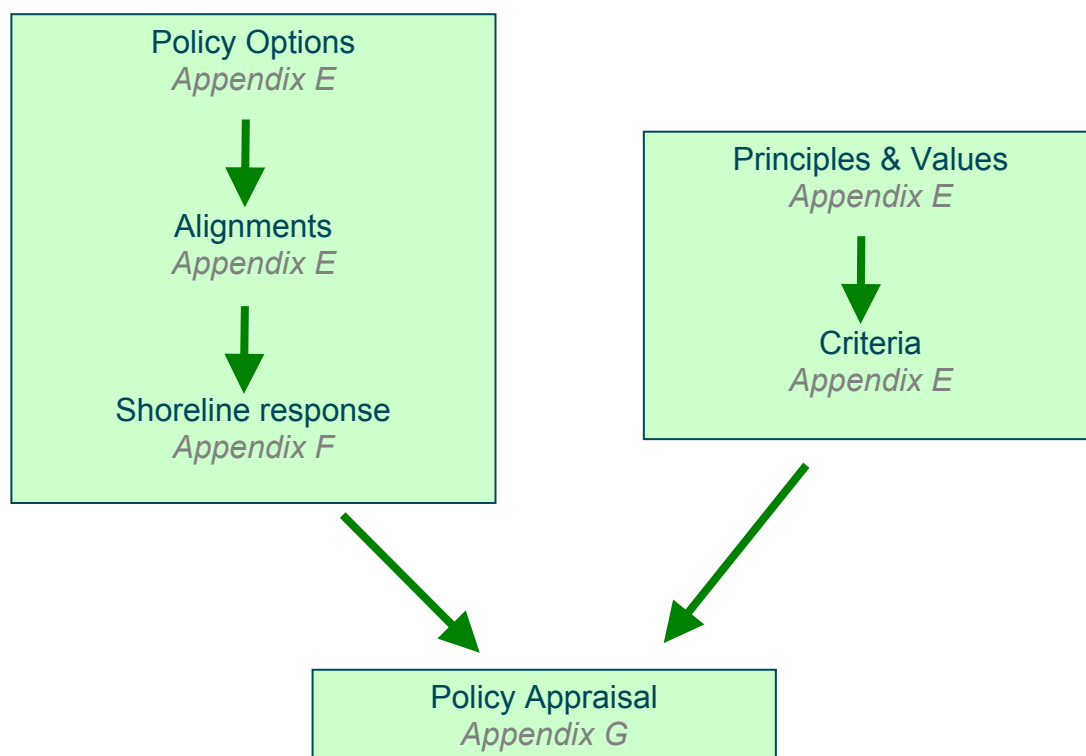
The ‘coastal policy context’ analysis results in the conclusion that for most frontages with flood defences, Hold the Line and Managed Realignment are in principle both realistic options. However, it is possible to further refine the coastal policy context by selecting those frontages for which there are practical and local drivers for Managed Realignment; these are the frontages where the existing defences are under pressure from coastal or estuary processes. For the frontages where this is not the case, the constraints for Managed Realignment (i.e. sustaining existing land use) can be seen to outweigh the drivers. Continuation of No Active Intervention is always a realistic option for currently undefended high ground frontages. However, for frontages where ongoing erosion could affect features, it could be a realistic option to start defending against erosion. Within the context of the Essex and South Suffolk SMP, holding the shoreline in the same location (Hold the Line) is unlikely to be a realistic option for these Policy Development Zones (PDZs): this would have an unacceptable impact on the natural processes, and the costs are unlikely to be justified by the features to be protected.

The setting and refining of the policy context produced a complete list of options per Policy Development Zone (PDZ). For those PDZs with more than one realistic policy option, appraisal against the principles in Task 3.2 was needed to choose the draft policy. The setting of the policy context is described in **Chapter 2 of Appendix E**, and the further refinement in **Chapter 3 of Appendix E**.

#### A2.3.2 Policy Assessment (Task 3.2)

For those PDZs with more than one option, the impacts of the policy on the principles were assessed, using the criteria and indicators as developed in Stage 2 (see A2.2). For low-lying PDZs with a Managed Realignment option, this also required an initial assessment of the new alignments (to enable assessment of impacts). For all options, an assessment of the shoreline response has fed into the appraisal.

**Figure A2.4 Policy Option Assessment**



The appraisal was carried out in parallel with the Appropriate Assessment (see section 2.2.6), to ensure that the legal requirements from the Habitats Regulations were taken into account. In addition to the Guidance requirements, the appraisal included an initial assessment of economic viability.

### A2.3.3 Draft Policies Identification - appraisal against principles (Task 3.3)

The identification of the draft policy options was carried out with full involvement from the CSG and EMF. The technical work in task 3.2 led to a tabular overview of how each option performs against each objective (see **Appendix G**).

The technical appraisal from Task 3.2 did not by itself lead to draft policy options, because it was felt that the right balance of the features can only be determined through CSG and EMF discussion. For the Essex and South Suffolk SMP this required a number of iterations with officers and elected members, including input from Key Stakeholder Group meetings. These additional assessments are reported on at a high-level (implications for policy development) in **Appendix E** and at a technical level in **Appendix F**. This was followed by a further process of finetuning in close cooperation with the CSG and EMF, which has finally produced the draft plan as described in Section 3 and 4 of the main SMP document; the appraisal results of the draft plan are included in **Appendix G**.

### A2.3.4 Confirm Draft Policies (Task 3.4)

The draft plan and policies were selected in Task 3.3 based on the principles. In line with the SMP guidance, the draft plan was then confirmed through an assessment of economic viability. The economic viability of the draft plan was assessed in terms of whether it is not viable, marginally viable, or viable, using a simplified approach in line with Defra's Project Appraisal Guidance. The economic assessment for the SMP is provided in **Appendix H**.

The SMP guidance suggests that a sensitivity analysis of the draft plan is performed as part of this Task 3.4. This is reported in **Chapter 6 of Appendix E**.

### A2.3.5 Draft SMP Document Preparation (Task 3.5)

This task involves the drafting of the main document and its appendices. The document was developed through an iterative process and with full involvement from CSG and EMF. An annotated Table of Contents was first produced and agreed, and then the document was developed on that basis, with a number of feedback cycles from EA, CSG and EMF.

## A2.4 Stage 4: Public Consultation

The public consultation stage aims to ensure that all stakeholders and the general public have the opportunity to review and comment on the SMP. In the early stages of the plan, it is up to the CSG and EMF members to disseminate the documents to a wider public audience if they feel it is necessary. Throughout the SMP, there have also been opportunities for

Stakeholders to comment at meetings organised by the Environment Agency alongside evening public presentations (see **Appendix B**).

#### **A2.5 Stage 5: Finalise Plan**

Finalisation of the plan following public consultation is the opportunity to incorporate any changes that are deemed necessary by the CSG with regards to opinions and comments made by stakeholders and the general public.

#### **A2.6 Stage 6: Plan Dissemination**

The actual plan dissemination makes the SMP accessible to the public in a publishable format alongside an action plan for further studies that are required for the plan to be fulfilled.