

Medway Estuary and Swale Shoreline Management Plan SMP

Appendix A – SMP Development

Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Approved by
1	0	Consultation Draft	01/05/07	N Pontee
	1	Amendments following public consultation and QRG review	31/10/08	N Pontee
	2	Amendments following completion of retrospective SEA, WFD and AA	23/10/09	M Smith
2	2	Final	19/11/09	N Pontee
	3	Final	04/06/10	N Pontee

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Appendix A: SMP Development

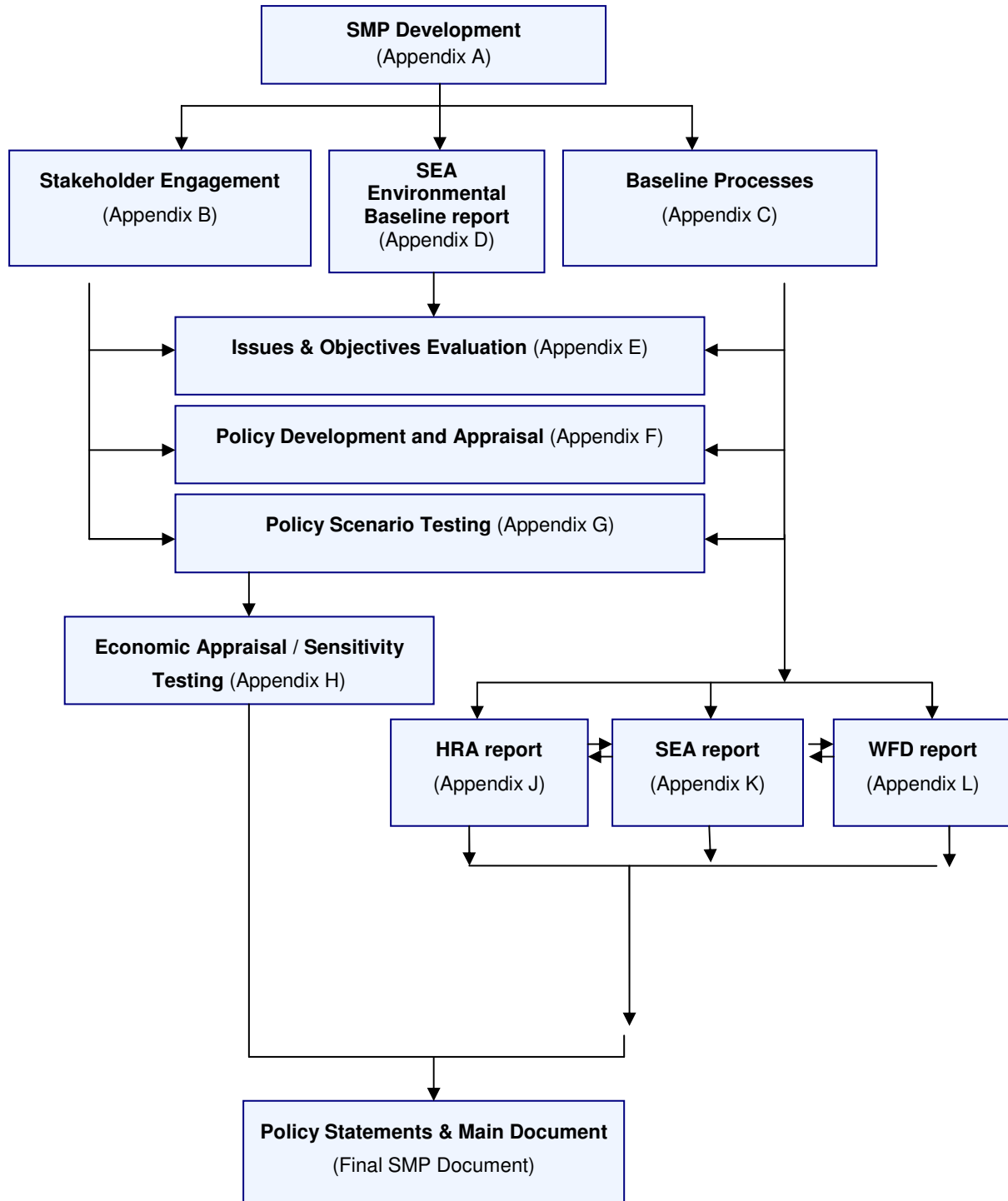
- A1 Introduction.....2**
- A2 Project Information.....3**
- A3 SMP Programme5**
- A4 Stage 1: SMP Scope6**
- A5 Stage 2: Assessments to Support Policy Development9**
- A6 Stage 3: Policy Development13**
- A7 Stage 4: Public Examination.....16**
- A8 Stage 5: Finalise Plan17**
- A9 Stage 6: Plan Dissemination.....19**

The Supporting Appendices

This appendix and the accompanying documents provide all of the information required to support the Shoreline Management Plan. This is to ensure that there is clarity in the decision-making process and that the rationale behind the policies being promoted is both transparent and auditable. The appendices are:

A: SMP Development	This reports the history of development of the SMP, describing more fully the plan and policy decision-making process.
B: Stakeholder Engagement	All communications from the stakeholder process are provided here, together with information arising from the consultation process.
C: Baseline Process Understanding	Includes baseline process report, defence assessment, NAI and WPM assessments and summarises data used in assessments.
D: SEA Environmental Baseline Report (Theme Review)	This report identifies and evaluates the environmental features (natural environment, landscape character, historic environment, land use, infrastructure and material assets, and population and human health).
E: Issues & Objective Evaluation	Provides information on the issues and objectives identified as part of the Plan development, including appraisal of their importance.
F: Initial Policy Appraisal & Scenario Development	Presents the consideration of generic policy options for each frontage, identifying possible acceptable policies, and their combination into 'scenarios' for testing.
G: Scenario Testing	Presents the policy assessment and appraisal of objective achievement towards definition of the Preferred Plan (as presented in the Shoreline Management Plan document).
H: Economic Appraisal and Sensitivity Testing	Presents the economic analysis undertaken in support of the Preferred Plan.
I: Metadatabase and Bibliographic database	All supporting information used to develop the SMP is referenced for future examination and retrieval.
J: Habitat Regulations Assessment	Presents an assessment of the effect the plan will have on European sites.
K: Strategic Environmental Assessment	Presents the Strategic Environmental Assessment of the Plan.
L: Water Framework Compliance	Presents a retrospective Water Framework Directive Assessment.

Within each appendix cross-referencing highlights the documents where related appraisals are presented. The broad relationships between the appendices are as below:



A1 Introduction

This Appendix provides a full explanation of the Shoreline Management Plan (SMP) process adopted and a description of the policy decision-making process and outlines the chronology of the SMP development (see **Section 1 of the Main Document**).

A1.1 WHAT IS THE SHORELINE MANAGEMENT PLAN?

A Shoreline Management Plan (SMP) provides a large-scale assessment of the risks associated with coastal evolution and presents a policy 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. It takes account of other existing planning initiatives and legislative requirements, and is intended to inform wider strategic planning. It does not set policy for anything other than coastal defence management. As such, it does not set policies for the management of issues such as land drainage.

A1.2 BACKGROUND TO THE MEDWAY ESTUARY AND SWALE SMP

The Environment Agency commissioned consulting engineers Halcrow Group Limited to prepare an SMP for the Medway Estuary and Swale based upon new Shoreline Management Plan Procedural Guidance (Defra, 2006)¹.

The SMP commission took account of:

- Latest coastal and estuarine studies;
- Issues identified by recent defence planning (i.e. coastal defence strategies);
- Changes in legislation (e.g. European Union Habitats Directive); and,
- Changes in national flood and coastal defence planning requirements (e.g. the need to consider a 100 year timeframe rather than the original 50 years in the first round of SMPs).

¹ Defra (2006) Shoreline Management Plan Guidance. www.defra.gov.uk/enviro/fcd/policy/smp.htm

A2 Project Information

A2.1 SMP BACKGROUND

This SMP is the first SMP produced for the Medway Estuary and Swale. The SMP has been developed and produced in accordance with the revised Procedural Guidance (PG) (Defra, 2006) for the second generation of SMPs. This SMP was developed between September 2005 and April 2007.

A2.2 CLIENT STEERING GROUP (CSG)

The coastline covered by this Plan comes within the boundaries of three local authorities. They and the Environment Agency have certain permissive powers for defending the coast. The local authorities for the most part deal with defences which protect the coast from erosion by the sea, and the Environment Agency deal with flood risk management. Together they are required to produce an SMP for sustainable coastal defence management. This is achieved through the auspices of a Client Steering Group made up of the three local authorities, the Environment Agency and other key bodies. Other members of the group are; Natural England, who provide guidance on nature conservation; Kent County Council, with coastal management interests; English Heritage, who provide guidance on heritage issues, and a representative from Herrington Consulting, who provides local and strategy knowledge. Officers from these organisations have managed the development of the SMP by Halcrow Group Ltd.

The Client Steering Group comprised the following core members:

Name	Representing	Role
Mr Ian Lewis	Swale Borough Council	Engineering & Dev. Control
Mr Steve Bessant	Swale Borough Council	Development Control
Mr Brian McCutcheon	Medway Council	Development Control
Mr Ron Bonner	Medway Council	Engineering
Mr Steve Medlock	Tonbridge and Malling Borough Council	Engineering & Dev. Control
Ms Elizabeth Holliday	Kent County Council	Coastal Management
Mr Simon Herrington	Herrington Consulting	Coastal Engineering/ SMP Specialist
Ms Susannah Peckham / Ms Ingrid Chudleigh	Natural England	Ecology Conservation
Mr Peter Kendall	English Heritage	Heritage Conservation
Ms Carol Peirce	Environment Agency	Environmental Assessment
Ms Helen Dalton	Environment Agency	Technical Lead
Ms Yolanda Foote / Mr Mark Smith	Environment Agency	Medway SMP Project Manager
Steve McFarland	Canterbury City Council	Isle of Grain to South Foreland SMP2 Project Manager
Mr Clive Older	Environment Agency	Kent Flood Risk Manager
Ms Anne Thurston	Environment Agency	North Kent Asset Management Team Leader

Additional attendees included:

Name	Representing
Ms Hannah Gribben	Environment Agency
Mr Frank Chester / Katharine Matthews	Environment Agency

The Client Steering Group had overall responsibility for the delivery of the SMP and was involved throughout the life cycle of the SMP. As well as initiating the development process and defining the scope and extent of the SMP, they were responsible for managing the development of the SMP through guidance and review of work undertaken.

A2.3 CONSULTANT

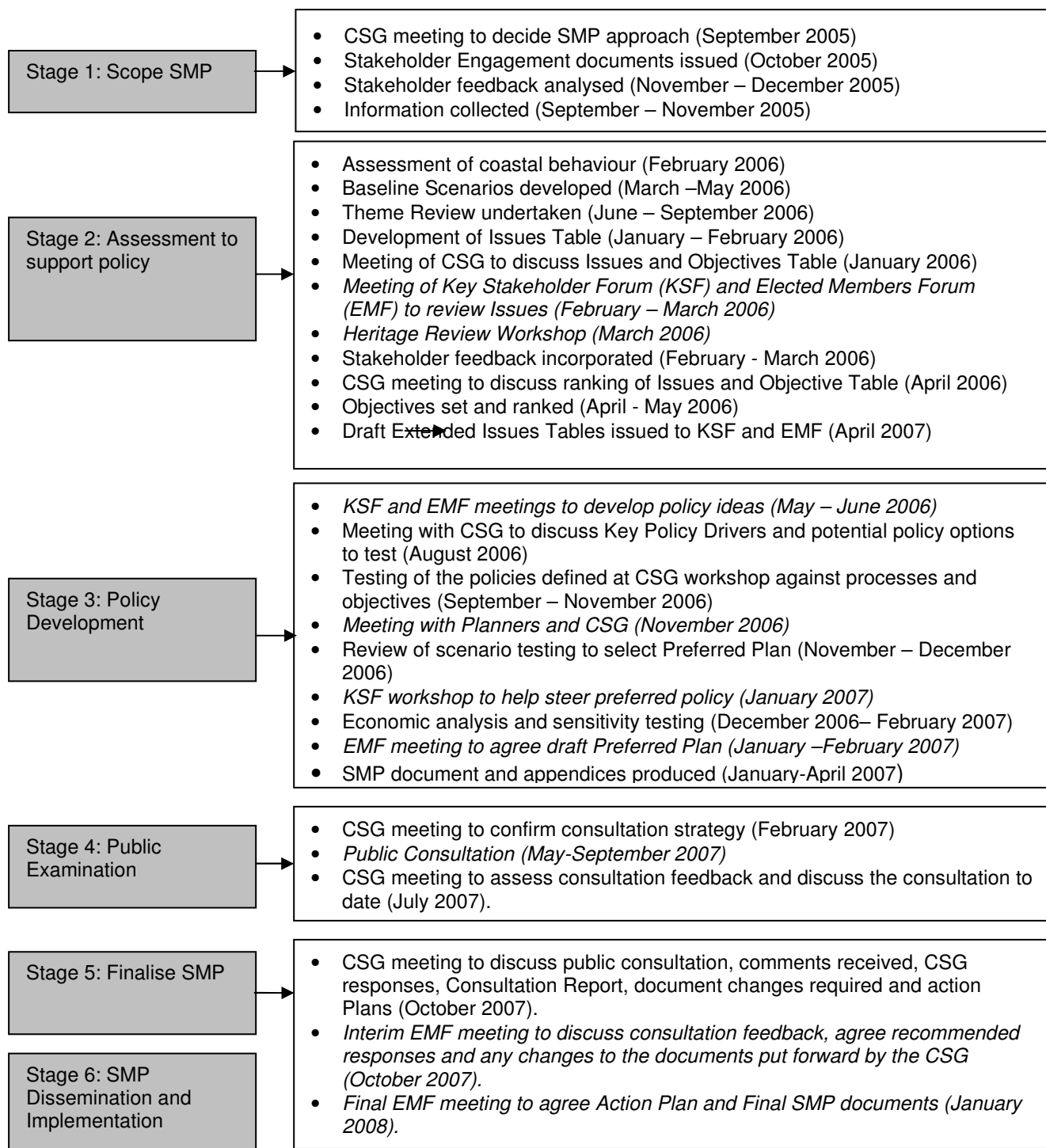
Halcrow Group Ltd was commissioned to produce the SMP by the Environment Agency. The initial baseline defences task and involvement in stakeholder engagement was sub-contracted, with agreement from the Environment Agency and the Client Steering Group, to Herrington Consulting.

Key team members included:

Name	Role
Mr Ben Hamer	Project Director
Mr Adam Hosking / Dr Nigel Pontee	Project Manager
Ms Emma Fisher / Mrs Samantha Box	Deputy Project Manager & Coastal Scientist
Ms Phillipa Harrison / Ms Rhian Jones	Principal Environmental Scientist
Mr Martin Costello	GIS Analyst
Mr Simon Herrington (Herrington Consulting)	Stakeholder consultant

A3 SMP Programme

The Figure below illustrates the timetable of activities carried out as part of SMP development to date. Highlighted in *italics* are the activities that have involved stakeholder engagement (see **Appendix B**).



A4 Stage 1: SMP Scope

A4.1 SMP BOUNDARIES

This SMP relates to Sub-cell E4² and covers both the Medway Estuary, from its mouth between the Isle of Grain and Sheerness in the north to its tidal limit at Allington Lock in the south; and the Swale Estuary, between the western mouth at Queenborough and the eastern mouth between Shell Ness and Faversham Creek, extending to the tidal limits of Milton, Conyer, Oare and Faversham Creeks.

A4.2 STAKEHOLDER ENGAGEMENT STRATEGY

Four groups were involved in the SMP process:

- The Client Steering Group (CSG) – to provide technical expertise;
- An Elected Member Forum (EMF) – to represent the public;
- Key Stakeholder Forum (KSF) – to represent groups with a local, regional and national interest; and,
- Additional stakeholders – to represent specific interests and / or site specific interests.

(a) Elected Member Forum (EMF)

An Elected Members Forum controlled and governed the production of the plan like a Project Board. The forum comprised on democratically elected representative from each of the South East Coastal Group Members. Typically, the members held the relevant local authority portfolio or were involved in flood and or coastal management. For coastal group members without elected representatives, a suitably senior staff member attended. (see **Appendix B**).

For the elected members, the following approach was adopted:

- Each of the proposed members were approached and invited to be a representative of the SMP and attend the first Elected Members Forum;
- At the first Elected Members Forum (6th March 2006) the SMP process was explained, along with work that had been done to date and the 'issue identification';
- At the first Forum a chairperson (Cllr. Mike Harrison, Regional Flood Defence Committee) was nominated and the constitution agreed;
- The Elected Members were invited to a further two forums at key milestones during the development process (8th June 2006 and 12th January 2007), to feedback on the issues table, technical reports and policies proposed, ensure the plan was being developed appropriately and to approve progression of the plan. At the 12th January 2007 meeting, the EMF insisted that consultation on the plan was postponed to May 2007 not to clash with a period of Purdah.
- During SMP development and public consultation, the Elected Members championed the findings of the SMP within the authorities they were representing. Any issues arising were fed back to the consultant (Halcrow);
- The Elected Members attended a fourth forum to discuss consultation comments and responses and to agree changes to the draft document, put forward by the CSG; and,

²The shoreline has been divided into major sediment cells and the identification of the boundaries of these major sediment cells has been based on natural coastal process behaviour. There are 11 major sediment cells around the coast of Wales and England and these have been sub-divided for the purpose of coastal defence management into Sediment Sub-Cells. Sediment sub-cells are discrete lengths of shoreline bounded by either headlands or estuaries and define the limits of each Shoreline Management Plan.

- A final Elected Members forum took place in January 2008 to agree the Action Plans and final SMP documents ready to take forward to each Local Authority for adoption.

(b) Key Stakeholder Forum (KSF)

Representatives were invited from a range of local, regional and national interest groups (**Appendix B**). They were invited because the aim of the SMP was to ascertain a 'holistic' consultation approach. Primarily representatives included:

- Conservation bodies (e.g. Kent Wildlife Trust);
- Residential interest groups (e.g. local planners and Friends of the North Kent Marshes);
- Business and commercial assemblages (e.g. National Farmers Union and Seasalter Shell Fisheries);
- Communication and infrastructure parties (i.e. Network Rail and Medway Ports); and,
- Those with cultural and historic interests (e.g. English Heritage).

For the key stakeholders the following approach was adopted:

- Questionnaires were issued to the stakeholders requesting a contact name and address, data and information relevant to the study area and comments from the individual / organisation;
- Key Stakeholders were differentiated from stakeholders i.e. key stakeholders are generally local or regional representatives from organisations with a higher level of interest in the shoreline at the study;
- From the questionnaires that were returned, responses were entered into a database.
- Any information and data relevant to the study area, provided by the key stakeholders was catalogued and recorded, this included maps, information booklets etc; and,
- Key Stakeholders were invited to three Key Stakeholders Forums: 8th February 2006, 4th May 2006 and 8th January 2007. At each of these forums the SMP process was explained along with work to date.

A4.3 DATA COLLECTION

Data was collected via a number of sources including stakeholders, literature searches and web-related searches. Key resources included:

Base data:

- Ordnance Survey data; and,
- Environment Agency Indicative Floodplain data (2005).

Defence and property data:

- Coastal Protection Survey NFCDD³; and,
- National Property database.

Thematic data:

- MAGIC downloads⁴;

³ NFCDD: National Flood and Coastal Defence Database.

- Natural England / English Nature;
- English Heritage;
- Nature Conservation Designation information;
- Futurecoast (2002)⁵; and,
- Site visit.

Local and regionally specific data:

- CHaMP⁶; and,
- Local Plans.

All the data and information gathered and used within the SMP development is referenced and recorded in **Appendix I**. Some of the data collected was reviewed as part of separate tasks, such as that completed for the baseline understanding of Shoreline Interactions and Response (**Section A5**).

⁴ MAGIC is the first web-based interactive map to bring together information on key environmental schemes and designations in one place. MAGIC is a partnership project involving seven government organisations who have responsibilities for rural policy-making and management (i.e. Defra (Department for Environment, Food and Rural Affairs), Countryside Agency, English Heritage, English Nature, Environment Agency, Forestry Commission, ODPM (Office of the Deputy Prime Minister)).

⁵ Halcrow (2002), Futurecoast CD, Produced by Halcrow Group Limited as part of the Futurecoast Study for Defra 2002.

⁶ English Nature (2002) North Kent Coast Habitat Management Plan (CHaMP), Final Report.

A5 Stage 2: Assessments to Support Policy Development

A5.1 BASELINE UNDERSTANDING OF SHORELINE BEHAVIOUR AND DYNAMICS

(a) Assessment of estuarine processes and evolution

A desk top baseline review of estuarine processes was produced using existing data and geomorphological concepts (**Appendix C**). The baseline review includes statements on sediment budget and hydrodynamic interactions, historical estuary evolution and predictions of future shoreline evolution. It underpins the estuarine process understanding of the study area and is the basis for the development of the baseline scenarios.⁷ The draft baseline report was issued to the stakeholders for review prior to it being finalised. During policy development this estuary wide baseline assessment was directly used to inform policy decisions.

(b) Assessment of coastal defences

Data collated from NFCDD was validated using defence history, present defences and residual life plus natural features where documented (**Appendix C**). This information was also ground-truthed by representatives on the Client Steering Group. Note: The draft report was reviewed by the CSG members.

A5.2 BASELINE SCENARIOS

To assist in the development of future policy, future shoreline response⁸ was assessed, assuming two scenarios for the whole of the shoreline (termed 'baseline scenarios'):

1. 'No Active Intervention' (NAI), assumes that existing defences are no longer maintained and will fail over time (their residual life) or undefended frontages will be allowed to evolve naturally; and,
2. 'With Present Management' (WPM), assumes that all defences are maintained to provide a similar level of protection and defence to that currently provided. These assessments provide an understanding of the influence of defences on coastal behaviour and evolution.

Both assessments build upon the estuarine process and evolution baseline report and the baseline assessment of estuary defences. Key reference documents used were Futurecoast, current studies and NFCDD.

The study frontage was divided into a number of discrete spatial (according to estuarine processes and management) and temporal (0-20 years, 20-50 years and 50-100 year) units. The baseline scenarios are presented west to east.

The outputs give an indication to shoreline position spatially and temporally and have been used to

⁷ Baseline scenarios are 'hypothetical' case studies of how the coast is likely to act given the 'baseline' conditions i.e. no defences, defence failure, maintaining and sustaining the defences and beach management practise, introducing defences and beach management practises.

⁸ In this instance, future coastal response is a theoretical concept of how the coastline will react to the proposed management option selected, detailing the possible effects on the position of the shoreline and the form of the back and foreshore.

review the outcome of the various assets / issues. Summary statements were produced for both the 'No Active Intervention' and 'With Present Management' scenarios, outlining the main implications for each of the three epochs (0 – 20, 20 – 50 and 50 – 100 years) (**Appendix C**).

Key Stakeholders, Elected Members and the CSG reviewed the two assessments. A series of maps were produced to supplement the two scenarios, of 'No Active Intervention' and 'With Present Management'. These provide a visual indication of how the shoreline is likely to change. The mapped shoreline positions show the estimated maximum extent of change and are a combination of scientific evidence and geomorphological interpretation. The mapping also shows estimated 'zones' of likely future erosion and Indicative Flood lines, as denoted by the Environment Agency's Indicative Flood Map (IMF)⁹, basically the main areas at risk from coastal flooding.

A5.3 DEFINITION OF FEATURES, BENEFITS AND ISSUES

(a) Strategic Environmental Assessment (SEA) Baseline Report

A central element of the identification and assessment of objectives¹⁰ is the SEA Environmental Baseline Report. This has identified key features along the shoreline and why these features are important to stakeholders, i.e. the benefits that the feature provides in terms of nature conservation, landscape and character, human environment, including current and future land-use, and heritage. Information from the SEA Environmental Baseline Report, along with the other technical reviews, has been used as a basis for developing policy options and assessing the implications and thus suitability of these options.

A Heritage Workshop, attended by representatives from the Environment Agency, Kent County Council, Canterbury City Council, English Heritage and Halcrow, took place in March 2006, to discuss, assess and prioritise existing heritage data in relation to the SMP policy units, in order to inform both the Medway Estuary and Swale SMP and Isle of Grain to South Foreland SMP SEA Environmental Baseline Report. The workshop succeeded in agreeing a method for assessing and prioritising non-statutory and non-designated heritage features within the policy setting process. Key archaeological features were identified and prioritised according to risk of loss. All four policies (i.e. Hold the Line, No Active Intervention, Managed Realignment, Advance the Line) were tested in relation to the heritage features along each frontage. The outcomes of the workshop, including results and required action under each policy, are recorded in the table in **Appendix D, Annex D2**.

Existing and newly procured data, from stakeholders, was collated. The data has been mapped e.g. boundaries of environmental designations, locations of heritage features.

The full report and supporting maps found in **Appendix D** include information on the following themes:

- Nature conservation;
- Landscape;
- Historic environment; and,
- Current and future land use.

⁹ This has been based on data supplied by the Environment Agency defining the Indicative Floodplain for 2005.

¹⁰ Objectives detail the purpose of preventing a feature and its associated issue from coastal flooding and / or eroding.

Information from the SEA Environmental Baseline Report was taken forward and incorporated in the Issues Table.

(b) Issues Table

A Table identifying features and benefits was developed (see **Appendix E**), which clearly sets out for each location:

- The feature;
- Issues associated with the feature;
- Why the feature is important i.e. the benefit/s provided;
- Who the beneficiaries are; and,
- Whether it affects policy.

The Issues Table was issued to the Key Stakeholders, Elected Members and Client Steering Group for review. Comments received from this were addressed in the Issues Table and amended where necessary.

A5.4 DEFINITION OF OBJECTIVES

The next stage was to use the features, issues and benefits identified to define objectives. These objectives fulfil two roles; firstly, they help inform the development of policy options, secondly, they help provide a focus for consensus amongst the SMP stakeholders on the various issues, sometimes conflicting, that are raised during the process of plan formulation.

Significant effort was undertaken in defining a feasible approach to determine the objectives; this included additional consultation with English Nature, English Heritage, the Environment Agency as well as planning officers from local authorities. Additional meetings were held with the aforementioned bodies for a number of reasons: 1) to reduce potential conflicts of interest and to try and agree a solution; and, 2) to try and bridge the gap between the approach adopted by planning and that of coastal and defence management.

A5.5 IDENTIFICATION OF FLOOD AND EROSION RISKS

The mapping of the predicted shoreline change for *No Active Intervention*, along with the Environment Agency's IFM data, was used as a baseline against which features were identified to be at risk from coastal flooding and / or erosion. This approach highlighted what features were potentially at risk in 0-20years, 20-50 years and 50-100 years.

A5.6 ASSESSMENT OF OBJECTIVES

To prioritise, or rank, the objectives generated, five fundamental questions were addressed (**Appendix E**):

- *At what spatial scales is the benefit important?* This ranges from local scale, for example it provides local access to car parks, to international scale, and e.g. where an area is designated as an area of environmental interest;
- *In what timescale is the benefit important?* As the policy of the SMP may change over time, (e.g. hold the line to managed realignment), whether the feature or benefit has a finite importance needs to be considered;
- *Can the benefit be substituted?* Can the benefit be replaced at the appropriate scale? This is quite an important question as it raises the issue of mitigation and one has to consider not only the spatial scale involved for replication but also how long it will take. Some geological

assets, for example, cannot be substituted, as the environment they were created under was in the historic past and therefore unique;

- *Is there enough of the benefit?* Scarcity of the benefit at the scale at which it is important; and,
- *Importance of the benefit at the SMP scale or greater?* If the feature were lost tomorrow, what would the impact be on the beneficiaries?

The SEA Environmental Baseline Report assisted in answering the questions, as did engaging with the stakeholders and CSG members. Using the answers to the above questions, the objectives were then ranked. The revised SMP Procedural Guidance (Defra, 2006)¹¹ recognised that it is neither possible nor appropriate to compare different types of features, e.g. environment site with housing, therefore a comparative ranking was generated specific to each 'theme', i.e. commercial, infrastructure, residential, landscape and heritage, segregating them in this manner meant that the objective could be more readily ranked.

Ranking was initially reviewed by the stakeholders and the CSG before being discussed in greater detail at the second stakeholder (Key and Elected Member's) forum (**Appendix B**).

¹¹ Defra (2006) Shoreline Management Plan Guidance. www.defra.gov.uk/environ/fcd/policy/smp.htm

A6 Stage 3: Policy Development

A6.1 DEFINITION OF POLICY SCENARIOS

(a) Identification of key policy drivers

The ranking of objectives and identifying their relative importance at each location enabled 1) key policy drivers (*Filter 1*) and 2) other objectives (*Filter 2*) to be identified (**Appendix F**). For frontages where the objectives of a particular feature i.e. a key policy driver, point towards a single appropriate management policy then the term '*Filter 1*' is applied.

Proposed key policy drivers were put forward to the CSG, i.e. Grain Power Station, Kingsnorth Power Station, and large conurbations like Frindsbury, Strood, Chatham, Gillingham, Sheerness, Queenborough and Rushenden. These Potential Key Policy drivers were discussed with the CSG. However, the CSG decided that the proposed key policy drivers could not be justified for the 100 year period and therefore it was decided that all areas should be tested to ensure the robustness of the SMP. The initial screening process therefore resulted in no key policy drivers being identified for the Medway Estuary and Swale SMP frontages.

(b) Identification of potential policy options

Where no key policy driver is present and several policies are applicable then the '*Filter 2*' was applied. At these locations any one of the generic policy options could potentially be appropriate. Suitability was therefore reviewed by not only the objectives, but by technical feasibility and economic justification. The broad-scale potential benefits and opportunities arising from each of the proposed policies were identified for each of the three epochs, at each of the *Filter 2* frontages'. A number of policy options / scenarios were identified for appraisal by the CSG, to meet stakeholders' aspirations. In developing these scenarios the understanding of the implications was improved.

It should also be noted that to fully contemplate and appreciate the potential implications of the generic policy options, discussions were held during stakeholder and elected member forums to discuss issues along the frontages through appreciation of other stakeholders' views and to identify potential policy options which they would deem acceptable to be appraised for each frontage. These stakeholders' views were taken into consideration when undertaking scenario development.

A6.2 POLICY SCENARIO ASSESSMENT

Having defined scenarios of possible policies for future shoreline management, it was then necessary to appraise how the coast would evolve under these policy combinations, and the implications of this for the important features along the shoreline. This process had two main stages of assessment:

(a) Assessment of shoreline interactions and response

Drawing on the plan wide evolution / coastal processes of the estuary in the baseline review and the two baseline scenarios of '*No Active Intervention*' and '*With Present Management*' a series of statements were produced that documented shoreline interaction and response for the proposed scenarios of policies to be tested, in each of the three epochs (**Appendix G**). Within an estuary, form and process are inextricably linked and there is the potential for small changes to have far reaching effects. As a consequence, when developing plans for estuary management, it is important to retain a

clear estuary wide perspective, even when addressing seemingly local issues (Pontee and Townend, 1999¹²). Therefore, the policy scenario assessments, undertaken for each frontage, considered linkages between frontages and, where applicable, identified implications on other areas within the wider estuary at both spatial and temporal scales. (New Defra Guidance on predicted sea level rise¹³ and potential climate change were built into the shoreline assessments).

The assessment considered the changes in the character of the frontage (e.g. the creation of large realignment areas) in terms of its impact on the features / issues / benefits and objectives.

(b) Assessment of achievement of objectives

The Issues Table was used to assess which of the proposed policies fulfilled the objectives (see **Appendix G**). This approach was extremely thorough as it allowed the objectives to be assessed per issue, per location and per policy. In adopting this methodology, it was possible to identify which policy did or did not achieve the objectives. The policy that fulfilled the most individual and generic objectives (technical, social, economic and environmental) was then taken forward as the 'recommended policy'.

Only in extreme circumstances (i.e. over riding public interest) was another policy selected / promoted instead of the recommended policy.

Following on from shoreline response and objective assessment, preferred policies per policy unit were determined. This was achieved by identifying which proposed policy fulfilled the technical, social, environmental and economical specifications best. The Issues Table proved to be a valuable tool as it is both site and policy specific.

The initial proposed recommended policies were discussed with the Coastal Steering Group. For frontages where a conflict of interest was identified, further discussion and review was required. At specific locations the preliminary boundary limits were also questioned and again this was subject to further evaluation (**Appendix F and G**).

A6.3 PREFERRED SCENARIO IDENTIFICATION

Following re-examination, the preferred policies were defined (on technical, social, environmental and economical grounds) by the CSG and emailed to the Key Stakeholders and Elected Members (December 2006) for review. Areas of conflict previously identified were discussed in greater detail at both the Key Stakeholder and Elected Members Forums (January 2007), so that the stakeholders understood the justification for the policy being proposed (**Appendix B and G**).

Comments and concerns from the Key Stakeholder and Elected Member forums were taken forward to the CSG and discussed further, so that the group were aware of any apprehensions the stakeholders had prior to agreeing what the preferred policies were likely to be.

Once the preferred scenario/policies had been defined, Policy Units were identified to help 'deliver' the SMP. These are simply the frontages for which a discrete shoreline management policy applies.

¹² Pontee, N.I. and Townend, I. H., (1999). The development of a framework for estuary shoreline management plans. Coastal management: integrating science, engineering and management. (ed) C. A. Fleming. *Proceedings of the Maritime Board of the Institute of Civil Engineers*, 22-23 September, 1999, Bristol. 117-126.

¹³ Defra (2006), Flood and Coastal Defence Appraisal guidance, Supplementary Note to Operating Authorities – Climate Change Impacts. October 2006.

These units reflect changes in policy over time, and significant differences in policy implications. The rationale for the Policy Unit breakdown is presented in Chapter 5 of the main document.

A6.4 CONFIRM PREFERRED SCENARIO

Once the preferred policies had been agreed by the CSG, economic analysis was carried out to confirm the viability of the preferred policies, and alternative approach costs/benefits were considered as a sensitivity test (**Appendix H**).

Costs for all options considered have been developed. For the Medway and Swale estuaries these have been calculated using the Modelling and Decision Support Framework (MDSF) tool (which consists of a customised GIS (ESRI ArcView) and a data management toolkit) as no strategy or scheme economics were available. The damages relate only to commercial and residential properties, and agricultural land loss. Average property costs together with the number of homes at risk under the preferred policy have been calculated, for each of the 3 epochs, using current (CV) and present values (PV).

Economic assessment of implementing the preferred policy i.e. the cost of holding the line 'with present management', or choosing 'realignment', have all been offset against 'no active intervention' costs (this being the baseline against which the justification for doing something is based).

An additional Sensitivity Analysis (**Appendix H**) was undertaken for the preferred policy scenario, to highlight uncertainty or risks in key variables that may affect policy decisions, e.g. climate change, change in environmental legislation and changes in development. The analysis also identified the potential consequences of these uncertainties with regard to the preferred scenario.

A6.5 DRAFT SMP DOCUMENT PREPARATION

A draft version of the main SMP was produced, presenting the Preferred Plan and the associated policies for review and consultation. It included:

- Details on the objectives of an SMP and its status;
- A non-technical explanation, which gives background to development of the plan and discusses concepts of sustainability;
- An overview of the preferred plan and its implications for the SMP as a whole;
- Statements for each policy unit outlining:
 - (i) Details of the policies and their implementation
 - (ii) Justification for the policies
 - (iii) Implications for local objectives; and,
- Mapping to support the statements.

A7 Stage 4: Public Examination

A7.1 GAIN APPROVAL IN PRINCIPAL

Prior to a draft version of the SMP document being produced, the Preferred Plan was presented to the Elected Member Forum (January 2007). The proposed policies, together with policy justification, were presented to the Elected Members for review and discussion. The EMF agreed to the Preferred Plan (and its policies), with their feedback at the Forum being minuted (**Appendix B**).

A7.2 CONFIRM CONSULTATION STRATEGY

A strategy for the public consultation exercise was discussed with the Client Steering Group, the Elected Member Forum and Key Stakeholders.

It was agreed that the most effective approach was:

- To make full use of the South East Coastal Group website. The full SMP documentation and consultation response form was available to review and download at www.se-coastalgroup.org.uk;
- To produce a summary leaflet and consultation response form. A leaflet summarising the SMP process and proposed policies was produced and issued to all identified consultees and was available at Local Authority offices, at the Environment Agency office at Addington and libraries, along with consultation response forms;
- To have hard copies of the Draft SMP Document (both the Main Document and the Supporting Appendices) on deposit in Local Authority offices, the Environment Agency office at Addington and libraries;
- To conduct public meetings if and when required;
- To provide Power Point presentations and posters to Local Authorities / Environment Agency to use as required; and,
- To use Canterbury City Council to co-ordinate responses for both the Medway Estuary and Swale SMP and the Isle of Grain to South Foreland SMP2. Canterbury forwarded any responses associated with the Medway Estuary and Swale SMP onto the consultant.

A7.3 PUBLIC CONSULTATION

The consultation period ran from 14th May 2007 to 7th September 2007. The public consultation process employed is described in the Consultation Report (**Appendix B, Section B7**). An interim Client Steering Group Meeting (CSG 7) was held half way through the public consultation process to discuss consultation feedback received and reassess the methodology employed. All responses received were collated by Canterbury City Council on behalf of the South East Coastal Group and forwarded onto Halcrow. Each response received was logged, recorded and assessed individually. Examples of comments received and the Client Steering Group's response to these comments are also included in the Consultation Report.

A8 Stage 5: Finalise Plan

8.1 DETERMINE REVISIONS TO DRAFT SMP

Following public consultation and consideration of all responses received a number of additions / changes to the draft SMP document were put forward to the Client Steering Group (CSG 8 meeting). The proposed revisions and potential impacts of these changes were discussed in detail by the CSG and agreed at the CSG 8 meeting. Following CSG agreement, the changes were put forward to the elected members at an elected members meeting (EMF 4) where they were agreed. A Copy of the minutes from EMF 4 is included in **Appendix B**.

The CSG and EMF did not feel that the comments received in consultation required any changes to be made to the policies presented in the original draft SMP document. Alterations and additions to other sections of the SMP were made, where necessary, in response to comments received. These changes are recorded in the Consultation Report (**Appendix B, Section B7**).

Following CSG and EMF agreement on the proposed changes, the Consultation Report was made available on the internet, via the South East Coastal Group Website: www.se-coastalgroup.org.uk/

8.2 DEVELOP ACTION PLAN

An Action Plan for implementation of the plan has been produced. This document was developed in conjunction with the CSG, and outlines the steps required to ensure SMP recommendations are taken forward in the intermediate term, both in planning and coast defence, and identifies the need to initiate further studies / actions to facilitate the implementation of the longer-term plan.

Following consideration of comments raised and completion of the Action Plan, the SMP was reviewed and finalised by the CSG ready for dissemination.

A final EMF meeting (EMF 5) was also held to discuss and agree the Action Plan and agree the final SMP document ready for adoption by the local authorities. Minutes from this meeting are included in Appendix B.

8.3 RETROSPECTIVE HABITAT REGULATIONS ASSESSMENT

As the Medway Estuary and Swale SMP includes or has the potential to affect a number of European sites (Special Protection Areas, Ramsar sites and a Special Area of Conservation), then the requirements of the European Union Habitats Directive (92/43/EEC) and European Union Birds Directive (79/409/EEC), as implemented in the UK by the Conservation (Natural Habitats &c) Regulations 1994 ("Habitats Regulations") (and the Wildlife and Countryside Act 1981), had to be addressed. A retrospective Habitat Regulations Assessment (**Appendix J**) was therefore undertaken by the Environment Agency in conjunction with Natural England, following public consultation and sign off by the Local Authorities.

Results of this assessment, including implications of the plan on the European sites and the interaction with the requirements of the Habitats Regulations are included in **Appendix J**.

8.4 RETROSPECTIVE WATER FRAMEWORK DIRECTIVE ASSESSMENT

The Water Framework Directive (WFD) came into force in 2000 and is the most substantial piece of European Union water legislation to date. As such the Directive will need to be taken into account in the planning of all new activities in the water environment. Consequently, the Environment Agency

(the competent authority in England and Wales responsible for delivering the Directive) issued new guidance in 2009 explaining how to build the environmental objectives of the WFD into SMPs⁽¹⁴⁾. The SMP was finalised in 2008 and hence, a retrospective WFD Assessment (**Appendix L**) was undertaken for the Medway Estuary and Swale Shoreline Management Plan (SMP) following completion of the Appropriate Assessment. As such, and in line with the guidance, the assessment aims (a) to identify if the proposed SMP policies are likely to result in any hydromorphological or physical changes which would result in a risk of failing the WFD's objectives for the water bodies in question, (b) in the cases where such risk exists, to assess the compliance of the proposed SMP policies with Article 4.7 of the Directive, and (c) if required, to identify any additional mitigation measures which should be included during on-going work to implement the SMP proposals.

8.5 RETROSPECTIVE STRATEGIC ENVIRONMENTAL ASSESSMENT

There is no legal requirement to undertake a SEA for SMPs because they are not required by legislation, regulation or administrative provision. However, SMPs do set a framework for future planning decisions, and have the potential to result in significant environmental effects. As a result, Defra guidance (Defra, September 2004¹⁵), best practice guidelines and internal policy have identified a need for SMPs to undertake a SEA. A retrospective SEA (**Appendix K**) has therefore been undertaken.

Appendix K documents the SEA process undertaken for the Medway Estuary and Swale SMP. It demonstrates how the SEA process has been carried out during the development of the Medway Estuary and Swale SMP and outlines how the SEA Directive's requirements have been met through signposting the relevant places within the main SMP document and associated appendices.

8.6 FINALISE SMP

Following consideration of comments raised during public consultation and by the SMP2 National Quality Review Group, the SMP has been finalised. The Final SMP has been signed off by Natural England and the Environment Agency and has been adopted by Kent County Council, Medway District Council, Swale Borough Council, Tonbridge and Malling Borough Council and the Environment Agency Regional Flood Defence Committee.

⁽¹⁴⁾ Environment Agency, 2009, Water Framework Directive: step by step process for assessing Shoreline Management Plans, 82_09

A9 Stage 6: Plan Dissemination

9.1 DISSEMINATION AND IMPLEMENTATION OF THE PLAN

The CSG will be responsible for making the SMP accessible and for publicising its completion. It will also be the responsibility of the South East Coastal Group to promote and monitor progress, with the Action Plan retained on the agenda for all future Coastal group meetings. The Medway Estuary and Swale SMP web pages (part of the South East Coastal Group website) will have an 'Updates' page on which this Action Plan will be placed and progress against the actions reported. This will include identification of the implications of any study outputs or wider developments for the relevant SMP policies.

It is considered likely that the next review of the SMP will take place within a 5 – 10 year period.