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## **5 Future studies and SMP review**

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### **5.1 The East Solent Coastal Group**

The SMP process is intended to be ongoing, with studies and surveys providing information for future reviews. Management of this process by the East Solent Group will require an organizational framework and funding arrangements. The following framework is suggested:

- a core Management Group comprising representatives from the Operating Authorities, as follows:
  - Havant Borough Council
  - Fareham Borough Council
  - Gosport Borough Council
  - Portsmouth City Council
  - Chichester District Council
  - Environment Agency (Hampshire and Sussex areas).
  
- a wider Steering Group comprising the Management Group plus the Statutory Consultees and the Chairman of the adjacent Coastal Groups, as follows:
  - Hampshire County Council
  - West Sussex County Council
  - Arun District Council
  - English Nature
  - Langstone Harbour Board
  - Chichester Harbour Conservancy
  - MAFF Regional Engineer
  - MAFF Marine Protection Branch
  - Department of Transport
  - Ministry of Defence
  - Crown Estate Commissioners
  - Countryside Commission
  - Chairman of the South Downs Coastal Group
  - Chairman of the West Solent Coastal Group.

These members may wish to be represented by more than one interest (e.g. Planning and Technical Services)

In addition, information relevant to the SMP should be circulated to a selected group of further Consultees, with an open invitation to attend meetings. This wider group should include:

National Farmers Union  
English Heritage  
Hampshire Wildlife Trust  
Sussex Wildlife Trust  
The Port of Southampton  
The Dockyard Port of Portsmouth  
Royal Yacht Association  
Marine Conservation Society  
Hampshire and Isle of Wight Trust for Maritime Archaeology  
Country Landowners Association.

It is suggested that the Management Group appoint a Chairman and establish funding arrangements as a matter of priority.

### **5.2 Annual meetings**

To ensure the long term continuation of the SMP process it is suggested that the East Solent Steering Group implement a programme of annual meetings in addition to those already arranged by SCOPAC. The purpose of these meetings would be:

- to establish committees with terms of reference as required to progress the SMP process
- to maintain awareness of the SMP process and its aims and objectives
- to facilitate consultation and coordination between the major interest groups within the East Solent
- to plan, implement and review future revisions of the SMP
- to plan, implement and review progress on monitoring and further studies
- to update on the status of scheme strategy plans
- to update on work in progress
- to update on Government and European guidance and legislation
- to update on changing concerns and views on environmental, development, recreational, cultural and other coastal issues as they affect shoreline management
- to update on the status of other coastal zone initiatives and statutory planning documents
- to update on MAFF (or other) policy developments as they affect scheme planning, funding, implementation and appraisal.

It is suggested that brief reports be prepared and circulated by the committees prior to the annual meetings and that summary reports be prepared by the Management Group after the meetings. These records will be beneficial to the SMP revision process and will facilitate ongoing consultation. They will also serve to inform the statutory planning process.

### **5.3 Scheme strategy plans**

Following adoption of this SMP operating authorities and frontagers will wish to plan and implement coastal defence schemes. The schemes should be consistent with the preferred coastal defence option for each management unit and should achieve the objectives of the SMP. Where applicable, schemes must be in accordance with MAFF Project Appraisal Guidance, entailing “*a rigorous examination of all the options, including benefit-cost analyses*” (MAFF 1993a).

At present MAFF are preparing new guidance on appraisal and prioritization of schemes in response to increasing demands for limited grant aid. In view of likely restrictions on grant aid, operating authorities and frontagers may choose to proceed with schemes independently. Schemes will still need to comply with the planning process and environmental requirements, and must always take a strategic view on long term sustainability and impacts on adjacent frontages consistent with the SMP objectives.

Within the discussions for defence options in each open coast or harbour Unit suggestions are made for setting boundaries relevant to the scheme strategy studies that will follow the adoption of the SMP. On the open coast the scheme strategy units are based on coastal processes and backshore risk areas, and may include parts of the harbours that are directly influenced by open coast processes or are linked by overlapping flood risk areas. Within the harbours these boundaries consider areas linked by flood risk areas as other coastal processes generally do not have impacts beyond a very localised area. Environmental management must be considered on a regional basis for all of the harbours and the Solent as a whole in order to comply with the Habitats Directive.

Where strategic boundaries are not proposed then shoreline operations need only consider local factors plus environmental management.

### **5.4 Monitoring and further studies**

The Stage I documents (Volumes I and III) contain the background information considered in preparation of the East Solent SMP. This information was obtained from a wide range of sources and in many respects may be

considered to be both extensive and of a very high quality relative to many other areas of the UK. Full references are given for all of the sources to allow more detailed analysis for specific purposes.

Despite the generally high standard of information there are a number of areas where further studies are recommended. These recommendations are generally applicable to both the open coast and the harbours; where they are specific to one or other area then this is indicated. Field surveys and studies are required to improve:

- the database on the physical, natural and human environment
- the performance standards and residual life of existing defences
- the management methods to achieve the aims of the Habitats Directive in harmony with the Operating Authorities' and frontagers' flood and coast protection objectives
- the procedures for assessing and implementing managed retreat schemes
- the procedures available to planners and shoreline managers to reduce or avoid risk to property or life in the future.

#### *Coastal processes*

Although the coastal processes of the East Solent are amongst the most thoroughly studied of any in the UK, they are also amongst the most complex. Further information is required on:

- long term changes to relative sea levels and wave conditions on a regional basis in cooperation with other Coastal Groups
- re-evaluation of the information on changing relative sea levels at Portsmouth to determine the validity of the locally increased rate of future sea levels (review original POL analysis, plus consideration of ongoing tide recordings)
- definition of actual transport rates based on on-going research into transport processes and prediction techniques, particularly in relation to beach control structures (open coast only) and the harbour entrance channels
- nearshore, intertidal and backshore changes in topography to further the understanding of ongoing coastal morphology development, particularly in areas with shifting nearshore banks (improve Environment Agency aerial survey where necessary, extend aerial survey to include harbours, post storm GPS or traditional surveys of at-risk beaches, annual nearshore bathymetric surveys to 5m CD contour)
- impacts of all aggregate and navigation dredging operations on coastal processes.

It is also recommended that the TELEMAC model of the East Solent be retained and updated as new information becomes available.

#### *Coastal defences*

The standards of service and residual life of existing defences are set out in the SMP based on the Coast Protection Survey and the Flood Defence Survey, with updates, corrections and additions based on work completed for the SMP. A number of defence lengths are identified in the Stage 1 volumes as being in need of substantial maintenance or replacement. These preliminary appraisals need to be followed up by detailed surveys as follows:

- condition surveys of all identified at-risk sites, including estimation of overtopping or breach risks where appropriate (site visits, numerical modelling)
- annual walkover inspections of all defences to monitor condition and identify priority areas for maintenance or upgrading
- annual aerial survey of extent, species distribution and condition of saltmarshes to determine their contribution to coastal defence; surveys can be combined with topographic surveys of intertidal areas (harbours only).

#### *Flood areas*

The potential extent of flooding and flood related damage is not well defined. The flood areas plotted for the SMP are based on limited Ordnance Survey contours and spot height data, land form assessment from aerial photographs and evidence of past flood events. The exception to this is Hayling Island where a recent aerial survey has been completed giving contours to 0.5m intervals. Apart from the need for this basic ground level information, there is also a need to understand the wider implications of flooding on ground water levels and land drainage, and therefore on land use, property damage and agricultural implications. Specific investigations should include:

- topographic surveys of all flood risk areas between MHWS and 5m OD, to provide 0.25m contours
- land drainage and ground water flow surveys to determine wider implications of flooding or changes in shoreline location, with particular reference to agriculture, property damage, habitat change and damage to infrastructure
- a full assessment of flood risk, based on recently developed prediction techniques and the survey data collected under the above recommendations.

#### *Natural environment*

Shoreline management operations will impact on the natural environment, though in most cases the significance of the impact is not fully understood. As much of the East Solent SMP area is within designated areas of environmental protection, including those subject to European Union legislation through the Habitats Directive, then it is important that further studies are carried out to establish the most appropriate approaches to achieving satisfactory shoreline management. These include:

- defining the term “significant damage” with respect to potential management operations along all frontages within SPA and SAC.
- defining the term “overriding public interest”
- establishing baseline information on existing significant habitats and species, including trends of change that are independent of shoreline management operations (i.e. the growth or decline of a species/habitat primarily controlled by factors not directly related to coastal defence such as water quality or recreation pressures)
- defining species and habitats within SPA and SAC that are considered to be of national or international importance, and that cannot be replaced regionally within the timescale of the SMP process (up to 50 years)
- investigating practical procedures to establish compensatory habitats for replaceable ecosystems, to mitigate against damages to areas protected by the Habitats Directive (including sources of funds for land purchase, site development and future management in the absence of grant aid from MAFF, identification of suitable sites for both salt water and freshwater habitats and management approaches to encourage and maintain new habitats).
- establishing specific values for environmental assets for consideration within an economic appraisal (research is underway, and when developed and agreed the findings should be incorporated within SMP revisions and scheme strategy appraisals).

#### *Managed retreat*

Within this document the concept of managed retreat or “retreating the line” has been qualified by the less emotive and more informative options of maintaining or upgrading the defence standards by realigning the defences to landward or by establishing a tiered defence. Although these options will always be controversial, with differing perceptions of gains and losses, the SMP suggests that they may be appropriate for a number of frontages within the harbours. However, the guidance for planning and implementing realignment schemes have not kept pace with the proliferation of the concept around the coast of England and Wales as a result of the SMP process.

Apart from the issues of land drainage, habitat change and defence assessment already discussed, there are a number of issues to be considered at a national policy level. These include:

- compensation or compulsory purchase of land where the frontagers are not in agreement with proposed realignment, and where a non-intervention option is not an acceptable alternative

- funding arrangements for purchase and establishment of compensatory habitat if realignment includes areas subject to the Habitats Directive
- definition of land ownership of new intertidal areas following realignment.

#### *Cultural heritage*

Insufficient information is currently available to determine the significance and relative importance of listed sites of historic or archaeological importance, including those in the nearshore zone. Studies should include:

- collection and management of data on known and unresearched sites of historical importance
- evaluation of threats to sites from natural processes and proposed shoreline management operations
- presentation of data in an appropriate format for use by shoreline managers.

#### *Fisheries*

Shoreline operations may temporarily or permanently affect nearshore fisheries. At present little information is available to allow shoreline managers to estimate potential impacts and to provide a basis for compensation negotiations with the fishing industry. Studies are required to define:

- areas of importance and expected catches
- potentially detrimental operations
- potential economic and environmental impacts.

#### *Recreational benefit*

Benefit-cost assessments under MAFF guidelines may take account of lost recreation value but information of a suitable quality is rarely available. Surveys of asset user numbers and contingent values should be commissioned well in advance of an economic assessment if they are to provide adequate supporting evidence.

Surveys are required for all frontages with significant recreational value and particularly those where future shoreline management operations are not readily justified against tangible property benefits.

#### *Traffic disruption*

Impacts of flood or erosion on road traffic may also be included in economic assessments under MAFF guidelines.

Although minor impacts could be considered for a number of open coast and harbour frontages, they may be of particular importance at Hill Head. Surveys of road user numbers and costs of alternative route use may be required to support scheme strategies for Units 12 and 13 and should be undertaken in advance of economic assessment if capital schemes are proposed for the future.

#### *Planning and public information*

Existing planning policies for the East Solent generally take account of available information on flood and erosion risk areas in the allocation of land for future development, and thereby reduce the need for upgrading or extending coastal defences. However, limited attention is given to the potential for the future retreat of existing development away from risk areas to allow the downgrading or removal of defences. Existing examples of retreat planning are the Chichester District Council policies of purchasing a continuous access strip along the backshore and the restriction on additional residential development within 25m of the existing shoreline to reduce future overtopping damage.

Removal of high value assets from risk areas will allow more appropriate land use, reduced coastal defence costs and possible environmental enhancement. However, this forward planning approach will be controversial and potentially expensive. Further studies are required to establish the potential benefits and the appropriate mechanisms for implementation of this long term management approach.

Related to these studies is the need to determine a procedure for informing developers, owners and potential owners of the predicted risks to their property and defining their situation with regard to compensation for loss or damage.

At present the insurance industry is taking the lead by defining risk areas and applying appropriate premiums.

## **5.5 SMP review process**

In view of the time required to prepare an SMP and the need for further studies, it is recommended that the SMP is reviewed and updated on a 5 yearly basis. Table 5 presents the suggested programme up to the first review.

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**Table 5 SMP review programme for the East Solent**

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Year	Activity
1997	<ul style="list-style-type: none"><li>- Adoption of the present SMP</li><li>- Set up new East Solent Coastal Group, with management framework, funding and working committees</li><li>- Define responsibilities for recommended studies and surveys</li><li>- Implementation of recommended studies and surveys</li><li>- Commencement of scheme strategy studies</li></ul>
1998-2001	<ul style="list-style-type: none"><li>- Undertake and complete (where possible) recommended monitoring and other studies</li><li>- Implement shoreline management operations upon successful completion of scheme strategies</li><li>- Collate findings of monitoring and studies</li><li>- Annual meetings of Coastal Group</li></ul>
2001	<ul style="list-style-type: none"><li>- Commence SMP review</li><li>- Issue draft Revised SMP</li></ul>
2002	<ul style="list-style-type: none"><li>- Issue and adopt Revised SMP</li><li>- Continue existing monitoring programme</li><li>- Implement further monitoring and other studies recommended by Revised SMP</li></ul>