



# Poole and Wareham Flood and Coastal Erosion Risk Management Strategy

Statement of Environmental Particulars

Final March 2015

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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## Statement of environmental particulars for the Poole and Wareham Flood and Coastal Erosion Risk Management Strategy

**Introduction** This statement of particulars indicates how environmental and consultee considerations were taken into account during the preparation of the plan and how the Environment Agency selected the approach adopted in the final plan. The statement goes on to set out the monitoring procedures that have been set in place to monitor the significant environmental effects of the implementation of the plan/programme.

The environment during the development of the plan

### **Integration of environmental considerations**

Environmental considerations were integrated throughout the development of this plan by following the Environment Agency's SEA operational instruction. This document ensures the potential significant effects of the plan on the environment are considered throughout its development.

### **Influence of the environmental report**

The environmental report that was open to public consultation influenced the development of the plan by identifying environmental enhancements and setting out requirements for mitigation, where significant negative effects were identified.

### Mitigation and Enhancement

Environmental Topic	Agreed Mitigation/Enhancement activity	Responsibility for implementation
Population and Human Health  Some isolated properties across the southern side of Poole Harbour and at Studland will be affected by increased flooding and/or erosion in the long term, as policies leading to a more 'natural' shoreline are delivered.	These properties will require local resistance or resilience measures to be implemented by their private owners.  Some local raising of roads may also be required such as at Arne village, which may become tidally cut-off in extreme events in the long-term.	Property owners.  as Local Authority or Highways Agency
Changes in coastal processes in areas of NAI have the potential to affect fishing activities and the distribution of commercial fish/shellfish in the harbour – these impacts (which may be positive and negative) remain uncertain but would also occur in the	Care will be taken at project level to implement managed realignment schemes that avoid compromising commercial fishing activity (e.g. access to fishing grounds) and shellfisheries in the harbour.  We will closely monitor	Environment Agency

<p>absence of the Strategy.</p> <p>However, further such changes may occur associated with proposed MR sites along the estuarine shoreline at Ridge and in Lytchett Bay. Changes in coastal processes here might affect water quality locally and in the wider harbour, with the potential for changes in fisheries and associated loss of commercial fishing revenue.</p>	<p>changes in geomorphology to improve our understanding of the implications of the change.</p> <p>Before, during and after delivery of MR we will monitor water quality at commercial (shell)fishery locations associated with MR sites and monitor fisheries productivity/quality adjacent to MR sites.</p>	
<p><b>Biodiversity Flora and Fauna</b></p> <p>Continuing to hold the line at Sandbanks to Hamworthy and at Wareham may significantly adversely affect intertidal habitats for birds and other species in the Poole Harbour SPA and Ramsar site as a result of habitat loss due to coastal squeeze (i.e. hard flood defences restricting the natural development of intertidal habitats as sea level rises in the future).</p> <p>Defence maintenance and improvements around the eastern side of Poole Harbour may also result in small additional encroachment into the Poole Harbour SPA and Ramsar site.</p>	<p>Managed realignment will mitigate the effects of coastal defences elsewhere in Poole Harbour. This will create compensatory intertidal mudflat, saltmarsh and grazing marsh. The Strategy identifies indicative areas and defence alignments, with further information on specific sites to be identified as individual sites are taken forward. These MR sites will be taken forward as projects.</p>	<p>Environment Agency</p>
<p>Preferred compensatory habitat sites may be vulnerable to the formation of algal mats if they are in areas with low rates of flushing and if hyper-eutrophication in the harbour is not reduced</p>	<p>We already undertake water quality monitoring within Poole Harbour. Additional sites will be added as required to provide information on water quality (in particular nutrients) associated with the selected compensatory habitat sites. This will provide us with an improved understanding of nutrient levels in these areas. If further nutrient reduction actions need to be delivered this will be through Water Framework Directive and Catchment Sensitive Farming</p>	<p>Environment Agency plus other strategic delivery partners.</p>

	delivery projects.	
<p><b>Historic Environment</b></p> <p>The gabion works proposed at Hengistbury Head may encroach on the boundary of the Scheduled Monument. Elsewhere construction work may affect local intertidal archaeological remains.</p> <p>There may be some potentially adverse effects on archaeological remains and areas of historic landscape in particular in locations proposed for managed realignment where historically reclaimed land and shorelines will be lost as will near to shore archaeological remains.</p> <p>Some prehistoric burial mounds on Arne peninsula will remain at risk of flooding and coastal erosion through the continuation of No Active Intervention policy.</p>	<p>Detailed design at the project level may be able to lessen or avoid potential impacts. Scheduled Monument Consent will be required.</p> <p>The managed realignment delivery project(s) will encompass archaeological assessment (including, if necessary, field investigations) to establish appropriate mitigation related to new defence alignments and footprints, (palaeo)-archaeological recording, etc.</p> <p>No specific mitigation identified at this stage. If deem that protection or other mitigation is desirable against natural shoreline evolution, this might be developed locally.</p>	<p>Environment Agency and/or appropriate Risk Management Authority.</p> <p>Environment Agency</p> <p>No single body or organisation is identified at the moment for managing the risks of natural erosion on historic sites. A local solution may be appropriate in this instance. Further advice may be available from Historic England.</p>
<p><b>Landscape and Visual Amenity</b></p> <p>In those areas where the standard of flood protection will be maintained (Hengistbury Head to Sandbanks, eastern Poole Harbour, Hamworthy, Lytchett Bay, Wareham and Swanage) there is potential for effects on landscape character and visual amenity. Consequences could be greatest in areas within the Dorset AONB and along the Jurassic Coast World Heritage Site.</p>	<p>Potential adverse landscape and visual impacts including loss of vegetation and land cover will be avoided or offset through the incorporation of project level mitigation including: possible use of suitable material finishes to hard defences; subtle earthworks designs to avoid harshly engineered profiles; sensitive alignment and footprint of the works to avoid valued vegetation. Raised defences will where required be sympathetically designed to maintain key views including the geological features of the Jurassic</p>	<p>Environment Agency and/or appropriate Risk Management Authority.</p>

	coastline.	
<p><b>Access and Recreation</b></p> <p>In a few areas there will be an ongoing risk to parts of the South West Coast Path (e.g. at The Pinnacles and the seafront north of Swanage) and some Sustrans cycle routes (e.g. at Arne and Middlebere) in areas of continued No Active Intervention.</p>	<p>In such areas the footpaths or cycle ways may need to be relocated inland or along the new shoreline alignment.</p>	<p>Dorset County Council and Purbeck District Council.</p>
<p>Potentially adverse impacts on the geological exposures of Poole Bay Cliffs SSSI, by constraining erosion through continuing to defend Bournemouth Sea Front.</p> <p>The replacement of rock filled gabion baskets along the toe of the cliffs at Hengistbury Head has the potential to affect the geological exposures of Christchurch Harbour SSSI.</p>	<p>Designs at project level will ensure that any works do not obscure the geological exposures, although as the objective is to constrain erosion some impacts will remain. Natural England will be consulted with regard to any changes in condition of the SSSIs as a result of our management activities and how these should be mitigated, and such measures monitored.</p>	<p>The Environment Agency, Poole, Bournemouth, or Christchurch Borough Councils depending on location of works.</p>

#### Consultation responses

#### **Responses to consultation period (February 2013 until April 2013)**

In total 147 consultation responses were received during the 6 week period of consultation on the draft plan and its accompanying environmental report. The majority of consultation responses related to data gaps/further information that the Environment Agency may wish to take into account during the finalisation of the plan. Such issues were updated as appropriate. The table below indicates where consultation responses led to wider changes to the plan.

Consultee	Summary of comments	Action taken to finalise Plan
Private Business	Concerns were raised over the deviation from the SMP policy of Managed Realignment through the inclusion of the policy of no active intervention for the policy unit Ham Common to Rockley Point.	The preferred option was amended to be specifically managed realignment, as in the Shoreline Management Plan, no active intervention for the Ham Common section was removed.

Trans-boundary consultation responses

The SEA did not identify any significant environmental effects that required trans-boundary consultation on this plan. Due to this, no consultation responses were received via this consultation route.

Reasons for selecting the adopted plan in light of reasonable alternatives

The approach adopted in the final plan was considered against a number of reasonable alternatives during its development. The major reasons for selecting the adopted plan over the reasonable alternatives were that the alternative solutions:

Had an adverse impact on the environment and did not meet environmental legislative requirements, notably the Conservation of Habitats and Species (Amendment) Regulations 2010 (amended in 2012) and the Water Environment (WFD)(England and Wales) Regulations 2003.

Did not adequately address flood and coastal erosion risk to people, property and critical infrastructure within an FCRMU, now and in the future.

Were not flexible enough to cope with changes in our knowledge.

Were assessed to be technically or economically unfeasible.

Further details on the selection of the preferred option, which was developed into the adopted plan, are presented in the environmental report. Information on how to access a copy of the environmental report can be found in the post-adoption statement, which can be found at [www.gov.uk/government/publications](http://www.gov.uk/government/publications)

Environmental monitoring measures during Plan implementation

The table below sets out the indicators that will be monitored to ensure that unforeseen significant environmental effects are not generated during implementation. These indicators will also monitor the success of mitigation measures and environmental enhancements in the adopted plan. Developments implemented as a result of the plan will be assessed for environmental impacts at a project level using the Environment Agency’s internal Environmental Impact Assessment (EIA) operational instruction.

Environmental effect/mitigation/enhancement	Indicator	Monitoring method	Responsibility
There is the potential for changes in coastal processes during MR to affect water quality with the potential for changes in fisheries and associated loss of commercial fishing revenue	Water quality	Water quality at commercial (shell)fishery locations associated with MR sites (before, during & after delivery of MR)  Fisheries productivity/quality adjacent to MR sites	Environment Agency
Potential damage to Poole Bay Cliffs SSSI	Changes in condition of the SSSI	Where adverse impacts are	Environment Agency, Poole, Bournemouth,



<p>by defence works undertaken along Bournemouth Seafront</p> <p>Potential damage to Christchurch Harbour SSSI by works to the toe of the cliff at Hengistbury Head</p>		<p>anticipated, based initially on scheme outline and then detailed designs, Natural England will be consulted with regard to any changes in condition of the SSSI as a result of our management activities and how these should be mitigated, and such measures monitored</p>	<p>or Christchurch Borough Councils depending on location of works.</p>
<p>Loss of intertidal habitat SPA and Ramsar sites due to coastal squeeze and direct loss in footprint of raised or new defences (with associated bird disturbance)</p>	<p>Designated intertidal habitat type and extent.</p>	<p>Monitoring of habitat types, extents and distribution to confirm whether predicted losses are occurring and to ensure that the rate of habitat creation keeps pace with measured losses.</p>	<p>Environment Agency</p>
<p>Success of habitat creation schemes to achieve target conditions.</p>	<p>Habitat created</p>	<p>Monitoring of success of intertidal habitat creation at MR sites will be undertaken through post-implementation survey and aerial photography.</p>	<p>Environment Agency</p>

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