



Research Information Note

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The implications of major coastal floods on nature conservation interests in England

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Introduction

Organisations involved in coastal management need to be prepared for and be able to respond to major coastal floods. Despite their low frequency major floods are of high magnitude with the potential to impact on nature conservation sites. Increasing storm levels are predicted over the next century and there is increasing public awareness of the potential devastation caused by major events stemming from episodes like the 2004 Boxing Day tsunami. It is therefore prudent for English Nature to consider its responsibilities and activities prior to and following major storm events. English Nature seeks to provide clarity and direction in the management of coastal conservation interests before and after a major coastal storm.

What was done

This report provides guidance, advice and recommendations on the management of nature conservation sites in the event of a major coastal flood. The report covers:

- the range of major coastal floods & their generic impacts on conservation sites;
- the range of conservation sites most at risk from major coastal storms;
- implications and options for English Nature prior to a major event;
- policy and planning processes that English Nature can influence;
- a potential Emergency Response Plan; and
- criteria for evaluating which areas will be afforded emergency flood management and which should be left to respond naturally.

Results and conclusions

A regional assessment of risk sources identified the East coast of England as most likely to experience a major coastal storm largely due to the tracks of Atlantic storms.

No legal requirements or policy expectations were found that create an obligation on English Nature to either i) prevent change occurring, or ii) remedy effects of changes that occur (now or in the past) to designated areas as a result of an extreme event.

The main actions that might be considered prior to a major storm might be to:

- undertake a risk assessment at individual sites to determine vulnerability of specific habitats and species;

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- consider relocating particularly rare/threatened species; and
- discuss with relevant organisations the production of detailed Emergency Response Plans for key sites to minimise damage during emergency works.

English Nature could influence national and regional policy most effectively by continuing to respond to national consultations in the normal way, and in doing so raise the profile of the need to plan for and consider extreme events.

English Nature's viewpoint

English Nature accepts that irregular flooding of conservation sites at the coast is a reality; indeed there is clear evidence that such events were more frequent in the past (as flood defence standards were lower) and that some sites may actually need occasional sea water incursions to sustain their existing conservation interest. An increase in future flood event frequency coupled with increased saltwater percolation as sea levels rise also means that the conservation interest of coastal sites will continue to evolve and this may involve some marked changes to the mosaic of habitats and species; this was recognised in our 2005 'Our Coasts and Seas' strategy document. However most changes tend to be gradual whereas those caused by an extreme storm event will be sudden, dramatic, widespread and probably at a much larger scale.

Clearly following such an event operating authorities (OAs) will have people as a first priority. However they will also need to address the needs of legally protected sites. English Nature is committed to helping OAs in such circumstances and will seek provide pragmatic advice eg the best solution may be to accept permanent change to a site (rather than rebuilding flood defences) with compensation measures elsewhere to address impacts to vulnerable species.

The report suggests three actions that might be considered prior to an event, our initial thoughts on these points are:

- We will offer advice on the vulnerability of individual conservation sites and a preferred response to a major saline incursion as part of our contribution to SMPs.
- Re: translocating species; this may not always be a suitable response. Our position is explained in a joint policy statement on the JNCC website (<http://www.jncc.gov.uk>).
- Emergency response plans may be useful for key sites. We will further consider this issue.

Selected references

MAFF. 2001. *Flood and coastal defence project appraisal guidance*. MAFF.

Further information

English Nature Research Reports and their *Research Information Notes* are available to download from our website: www.english-nature.org.uk

For a printed copy of the full report, or for information on other publications on this subject, please contact the Enquiry Service on 01733 455100/101/102 or e-mail enquiries@english-nature.org.uk