

Southend-on-Sea Borough Council

Agenda
Item No.

Report of Corporate Director for Place
To
Place Scrutiny Committee
On
7th October 2013

Report prepared by: Richard Atkins
Coastal Defences Engineer

**Southend Foreshore Erosion
For information
Executive Councillor: Councillor John Lamb
A Part 1 Public Agenda Item**

1. Purpose of Report

To inform members that the report commissioned to investigate the erosion of the Southend Foreshore and mud flats has been produced and to advise what the findings of that report are.

2. Recommendations

2.1 That Members note the content and conclusions of the Report

3. Background

3.1 Members will be aware that during the late Summer and early Autumn 2012 concerns began to be raised at the altered appearance of the foreshore, particularly at Chalkwell, but also at other locations along the frontage between Leigh and Shoebury. Areas that had been a soft mud surface had become a stony one in a number of locations. Additionally the remains of old timber foreshore structures which had been buried, began appearing above the surface.

3.2 This led to concerns that something had occurred to cause the mud surface to begin to be eroded on a significant scale. The potential consequences of such a situation were:-

- that the features for which the foreshore is designated as important European protected habitats could be compromised, a matter of great significance to the Environment Agency (EA) and Natural England;
- that, depending on the cause of the erosion, if it were confirmed, the local fishing industry could be severely impacted by depletion of food sources for inshore fish and fry [baby fish]; and
- that the beaches could be subject to erosion and ultimately the sea defences undermined.

- 3.3 In September 2012 members of the Economic and Environmental Scrutiny Committee received a report which had been prepared following a request from Cllr Terry, Cllr Wexham and Cllr Norman who were concerned about the impact of coastal erosion on the Southend Foreshore.
- 3.4 Members of the Scrutiny Committee were advised that the EA in partnership with the Council, the Kent & Essex Inshore Fisheries and Conservation Area (K&EIFOA) and DP World London Estuary had begun to undertake investigations to try and ascertain the nature of the erosion and the reasons for it.
- 3.5 The investigation was undertaken by specialist geomorphologists and was jointly funded by EA and the Council.
- 3.6 Dr Andrew Bradbury, a prominent scientist and practitioner working principally on the South Coast was appointed by EA to carry out the investigation.
- 3.7 The available data sources were reviewed, and it was found that the best quality and most reliable were EA's annual foreshore surveys. These consist of physically surveyed cross sections of the foreshore at 1km spacings, from the sea wall out to edge of the deep channel. Although , because of the spacing of these sections, they may not coincide with the general widespread trends. Twenty years' results were examined across the whole frontage in a desk study, with detailed analysis of years 2008-2010 (pre-dredging) and 2010-2012 (post-dredging).

4. Findings of the Report

- 4.1 The final Report by Dr Bradbury, a copy of which is available for reference in the Members' Room, was presented in August 2013. Its findings are that there is no evidence of widespread erosion across the frontage, beyond normal natural variability; in fact the general trend was one of very gradual accretion of material at the majority of section lines.
- 4.2 It would appear from this that the change in appearance of the foreshore may be due to a redistribution rather than the loss of the mud surface, which may be confirmed by the appearance of mounds of material at various locations at Chalkwell. It would be speculative to attempt to attribute this to any particular phenomenon without further study, but the frequent occurrence of torrential rain during the Spring and early Summer of 2012, and consequent high flows from the foreshore surface water outfalls, may be a possible cause.
- 4.3 A summary of the report is attached as Appendix 1.

5. Other Options

- 5.1 Members have options to either:-
 - 5.1.1 Accept the findings of the report and resolve that no further action be taken beyond continuing observation, or
 - 5.1.2 Instruct further studies to seek to identify the cause(s) of the disruption of the foreshore surface.

6. Reasons for Recommendations

- 6.1 The investigation carried out by Dr Bradbury appears to be rigorous and conclusive that no widespread loss of foreshore mud is occurring.

7. Corporate Implications

- 7.1 Contribution to Council's Vision & Corporate Priorities.

The report was commissioned in order to help understand the potential causes to changes observed on the Foreshore and therefore supports the Council's objective of supporting the maintenance and protection of Southend's coastal maritime environment.

7.2 Financial Implications

There are negligible financial implications for the Council, in respect of completed or future activity on this issue.

7.3 Legal Implications

- 7.3.1 The entire foreshore of Southend is covered by domestic and international ecological designations (Special Protection Area, Ramsar and SSSI) which afford it a very high standard of protection against disturbance. The citations for these designations refer to the high quality food sources provided by the mud for nationally and internationally important numbers of a range of migrant waders and other sea birds.

- 7.3.2 These designations impose a duty on the Council to maintain the quality and integrity of the area in respect of the cited assets. It could be argued, however, that it would be unreasonable to hold the Council liable for disturbances due either to natural causes or to activity by parties outside of the Council's control. It is therefore not considered that any liability could be found against the Council in respect of this issue.

7.4 People Implications

There are no implications for staff resources in continuing to observe the condition of the foreshore.

7.5 Property Implications

The report identifies no risk to coast defence structures, and no other Council owned property is affected.

7.6 Consultation

The report by Dr Bradbury was commissioned by Environment Agency following a meeting with representatives from EA, the Council, Natural England, Port of London Authority and Halcrow consultants. No wider consultation has been held.

8. Background Papers

None.

9. Appendix 1

South East Strategic Regional Coast Monitoring Programme Southend-on-Sea.