

EA ANGLIAN Box 1



www.environment-agency.gov.uk

Southwold Coastal Frontage Options Consultation

May 2003



ENVIRONMENT
AGENCY

www.environment-agency.gov.uk

The Environment Agency is the leading public body protecting and improving the environment in England and Wales.

It's our job to make sure that air, land and water are looked after by everyone in today's society, so that tomorrow's generations inherit a cleaner, healthier world.

Our work includes tackling flooding and pollution incidents, reducing industry's impacts on the environment, cleaning up rivers, coastal waters and contaminated land, and improving wildlife habitats.

Published by:

Kingfisher House

Goldhay Way

Orton Goldhay

Peterborough PE2 5ZR

Tel: 01733 371 811 Fax: 01733 231 840

© Environment Agency May 2003

All rights reserved. This document may be reproduced with prior permission of the Environment Agency.

Context

The Environment Agency (The Agency) is responsible for managing the flood risk in many areas arising from rivers and the sea.

At Southwold, the Agency is responsible for the flood defences at Easton Marshes and Southwold Denes. Waveney District Council (WDC) is responsible for the sea defences along the Southwold Town frontage (see Figure 1).

Prompted by growing concerns over areas susceptible to flooding and erosion, Halcrow Group Ltd (Halcrow) were appointed to prepare a Strategy Plan for the management of the coastal frontage between Lowestoft and Thorpeness.

The Strategy Plan recommended maintenance of the existing flood and erosion protection structures over their lifetime and further improvements for flood and erosion protection along this length of coast over the next 5 - 15 years. The strategy identified areas of the frontage where more urgent works need to be undertaken to maintain and improve the current standards of defence. One such area identified was the Southwold Town frontage.

Halcrow has now been appointed by the Agency and WDC to assess options to undertake some of these identified areas of work. Three key areas have been identified where the coastal defences may need to be improved in the short term: Easton Marshes, Southwold Town and Southwold Denes. This document highlights possible options to manage these defences. **We would like your comments on the options suggested.**

The study area

The study area lies on the Suffolk coast between the low-lying land of Easton Marshes at the northern extremity and the River Blyth Estuary. The town of Southwold is located centrally within the study area and is primarily built on high ground with cliffs to the promenade and seafront.

The area is designated under the Suffolk Coasts and Heaths Area of Outstanding Natural Beauty (AoNB) for its nationally important landscape. There are three areas of nature conservation interest; Southwold Denes County Wildlife Site to the south of the study area, and the Easton Marshes County Wildlife Site and the Easton Bavents Cliffs SSSI to the north of the study area (see Figure 1). The Southwold Denes consist of well vegetated dunes whilst Easton Marshes are low-lying wetlands.

An environmental assessment will be carried out as part of this study to inform and assist in the selection of appropriate engineering options.

Southwold Town is a popular tourist location and the recently renovated pier and the beach provide public amenities to the many holiday-makers that visit the town during the summer period. The Town provides a centre for commercial properties such as hotels, shops, public houses and restaurants as well as being a large residential area.

The Environment Agency has commissioned a separate strategy study for the River Blyth and estuary that will overlap with, and be completed following, this study. The River Blyth and estuary study will be subject to a separate consultation process.

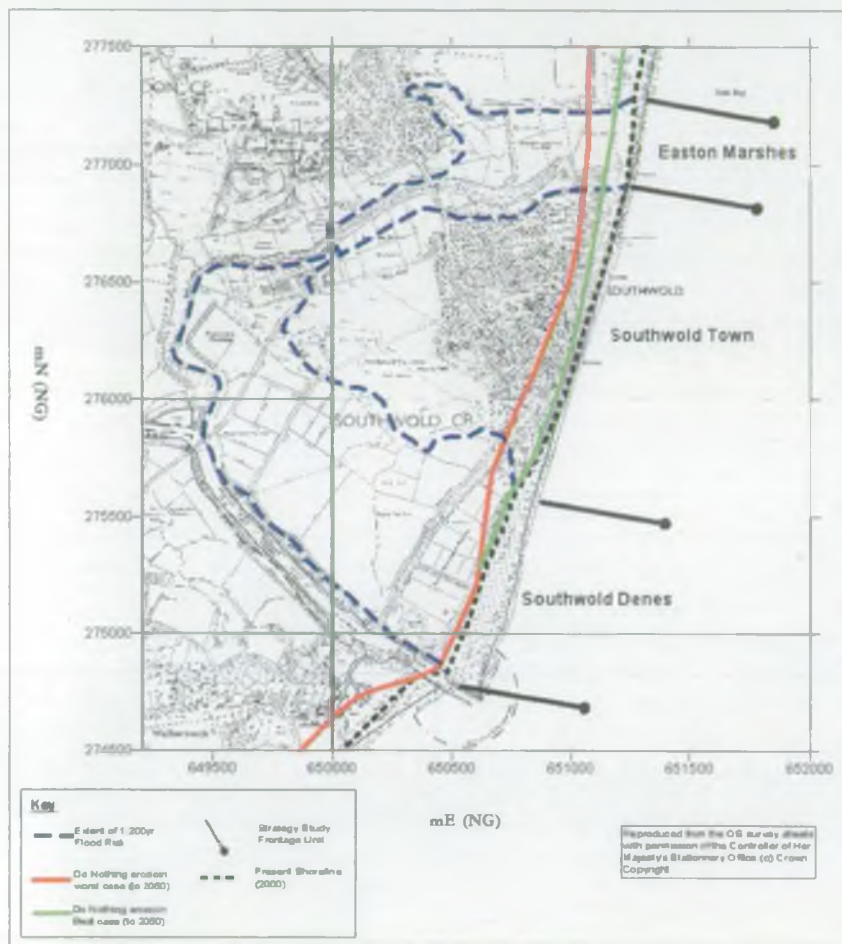


Figure 1 Location map

The problem

The key objective is to deliver the management policies determined by the Lowestoft to Thorpeness Strategy Study. This will be achieved by appropriate works that avoid flooding and resist erosion.

Frontages that have flood defences are Easton Marshes, Southwold (Havenbeach) Denes and the River Blyth. Erosion defences are in place over the developed Town frontage from the Amusement Pier to Gunhill.

Easton Marshes

Easton Marshes are low-lying wetlands, protected from the sea by a concrete wall. The beach over the frontage is low due to the poor condition and irregular spacing of the groynes. This has caused the foundations of the seawall to be exposed which, during winter storms, creates a high risk of failure by undermining.

The management policy for the cliffed frontage to the north of the seawall (Easton Bavents) is one of No Intervention. Erosion will therefore continue over that part causing a realignment of the coast and placing increased pressure on defences at the junction of those two zones.

Should the defences fail, or be outflanked (an expression meaning by-passed by cliff erosion allowing water to get behind the intact defence line) then low-lying areas behind will be exposed to a high risk of flooding. In response to the outflanking risk, it will be necessary to consider works that extend beyond the current northern extent of the defences.



Erosion of cliffs beyond the seawall is raising the risk of failure by outflanking.



Ineffective groynes contribute to low beach levels that threaten seawall stability and lower amenity value.



Short, closely spaced groynes appear to be more effective at retaining a beach than longer, more widely spaced groynes.

Southwold Town

The coastal defences at Southwold consist of a groyned beach fronting a concrete wall with toe piling. The defences primarily protect cliffs and the residential properties on the high level ground from erosion.

The beach is narrow along the town frontage but widens to the south. The level of the beach at the seawall toe is generally low and in parts the foundations have become exposed, raising concerns as to the effectiveness of the groyne field.

It is anticipated that if the defences were not maintained or improved, the wall would become at risk from undermining. Failure of the defences would expose the cliffs to erosion with the risk of loss of properties and public use of the foreshore and seafront would be significantly disrupted. In addition the failure of the seawall would expose adjacent defences to outflanking risks and the areas of Reydon, Easton Marshes and the low lying areas at Southwold would become at risk from flooding.

The Lowestoft to Thorpeness Strategy Study assumption is that works are required at Southwold Town by 2010. This assumption will be reviewed and may be changed.



Groynes in poor condition and not providing intended function.

Southwold Denes

This section of the frontage consists of a wide sand and shingle beach that accumulates against the northern entrance pier of Southwold Harbour. The beach is backed by a well-vegetated dune system. There are concerns about the landward face of these dunes, which drop directly on to Ferry Road. In the past, after significant surge events, a degree of seepage has occurred through the dunes, and this may have the potential to destabilise the back face.



Southwold Denes — A well vegetated dune system



The back face of the Denes - seepage has occurred in this location that could cause instability of the back face.

The current height and width of the foreshore and dunes mean the system offers protection from flooding against a 1 in 100 year storm event. However, changes in the foreshore width and saturation of the dunes would reduce this standard of protection.

Failure of the defences would have wide-ranging impacts on the hinterland. There would be increased flood risks to Ferry Road, Havenbeach and Town Marshes including the caravan park.

The strategy study assumption is that major works will be required at Southwold Denes by 2015. An investigation into the composition of the Denes was undertaken in April 2003 to determine the structural stability of the sand dunes. The nature and timing of appropriate works will be identified by this study.

The assessment process

The engineering options will be assessed against technical, economic and environmental criteria. Part of the work is to undertake an Environmental Impact Assessment, a process by which the effects of a development on the environment are evaluated against specific criteria, and issues of concern investigated in more detail.

This consultation document aims to provide interested parties with a chance to express their opinions regarding the suggested options for Easton Marshes, Southwold Town and Southwold Denes coastal defences and to identify the main impacts associated with the proposed works.

Halcrow will assess the potential impacts of the proposed works and recommend a preferred option for works to improve the coastal defences.

Please find enclosed a consultation reply slip intended to aid you in making a response. We would appreciate the return of all comments to Paul Patterson (WDC) at the address shown on the back page of this document by 30th May 2003.

Consultation with organisations and individuals who have an interest in the scheme will be undertaken at key stages throughout the study as shown in Table 1.

Table 1

Outline of the consultation process

| Stage in Programme | Consultation Opportunity |
|---|---|
| 1. Baseline Consultation | Initial consultation booklet and meeting outlining the proposed approach to the study. |
| 2. Options Consultation (Present Stage) | Consultation booklet on the engineering options. Public meeting to give additional information and opportunity to comment. |
| 3. Preferred Option Consultation | Consultation booklet giving further information on the preferred option for each of the three frontages. |
| 4. Implementation | On completion of the study, a further public meeting to outline the likely implementation programmes for the preferred options. If any of the options require planning permission, there will be an opportunity to comment at that stage. |

Key issues

The assessment process will consider all aspects of the natural and human environment. Southwold town is a tourist area, with a caravan site and other tourist accommodation, which sustain many businesses in the surrounding areas. In addition to the tourist issues the beach is used for fishing and amenity. Potential impacts for this area could include:

- General disturbance (noise and visual) during the construction period.
- More traffic on the roads near the works.
- Movement of construction machinery close to any works.
- Potential closure or restrictions on use of promenade area and beach and access to the sea during the construction period.

With regard to the Easton Marshes, Southwold town and Southwold Denes options, consideration will be given to any potential impacts on the sites designated for nature conservation, which are close to the works.

Halcrow staff are aware that the issues outlined in this document may not be exhaustive and would appreciate any comments or advice that you can offer. Please see the enclosed consultation reply slip for specific information that we would be grateful to receive.

The options

A number of possible options have been considered for which we seek your comments. These options are outlined below. Some of these options are only applicable for certain frontages as indicated.

Do Nothing

Deterioration of structures leading to failure allowing flooding/erosion and denial of public access.

Beach Management

Groyne/harbour pier maintenance and/or improvements and/or beach recharge, to create and maintain appropriate beach level and width to protect the seawall and support public use opportunity. Groyne maintenance works would involve replacement wood planking and steel piling. Major groyne/pier improvements and reconstruction would consider rock or concrete materials as an alternative. Nearshore breakwaters may also be an effective beach control option, however impacts on public use may be more significant.



Rock groynes with beach recharge



Nearshore breakwaters

Seawall Management

Maintain and/or improve the seawall to give an appropriate standard of protection against erosion/flooding and support public use opportunity. Over time, improvements to the seawall may include raising the level in response to sea level rise and possibly the addition of beach scour protection in the form of rock or concrete blocks, where beach management is not a viable option.



Scour protection to a seawall

Outflanking Protection

Works to ensure that exposed ends of defences are appropriately protected. This may require a phased approach using flexible techniques and materials able to be reclaimed and rebuilt in new positions in response to changing conditions.



Possible outflanking protection works at Easton Marshes

Secondary Defences

Works to provide protection (usually from flooding) behind the primary defence line to give back-up in the event of front line failure. May take the form of an earth embankment parallel to a dune line or at the perimeter of a flood plain.



Possible secondary defence line landward of the Denes

Set-back Defence

This option would involve management of a defence to maximise its remaining life whilst planning the provision of a new defence on a set-back line. It would be appropriate where the current defence position is now, or predicted to become, unsustainable. This option is predicted by the strategy study to become necessary at Easton Marshes between 2020 and 2030.



Possible set-back defence line at Easton Marshes

Dune Management

Maintain the Denes at an appropriate level and condition to provide flood protection to low ground behind. Measures may include planting and/or protection of existing vegetation, raising levels in response to sea level rise, and measures to ensure stability in storm or flood conditions.

Consultees

The following organisations and individuals are being contacted as part of the options consultation.

Countryside Agency
- Eastern Regional Office
Relevant County and Ward Councillors
DEFRA Fisheries Office
Eastern Sea Fisheries Joint Committee
English Heritage
- East of England Regional Team
English Nature
Environment Agency Anglian Region
Reydon Parish Council
River Blyth IDB
Southwold Beach Hut Owners Association
Southwold Harbour and River Blyth Users Committee
Southwold Town Council
Suffolk Coasts and Heaths Project
Suffolk County Council
- Archaeological Manager
Suffolk County Council
- Countryside Manager
Suffolk County Council
- Environment and Transport Department
Suffolk Wildlife Trust
Waveney District Council
- Leisure Manager
Waveney District Council
- Principal Planning Officer
Waveney District Council
- Tourism Development Officer

Anglian Water
Council for the Protection of Rural England
County Land and Business Association
Covehithe Parish Council
Crown Estate Marine Estates
East of England Tourist Board
Farming and Rural Conservation Agency
- Regional Planning Advisor
Farming and Wildlife Advisory Group
Lowestoft and Waveney Chamber of Commerce
National Farmers Union
- East Anglian Region
National Monuments Record Centre
National Trust Regional Office
North Sea Action Group
Ramblers Association
Royal National Lifeboat Institution
Royal Society for the Protection of Birds
Southwold Pier
Suffolk Biological Records Centre
Suffolk Preservation Society
Walberswick Parish Council
Relevant individuals and landowners

Consultation Contact

Main Contact: Paul Patterson — Project Manager

Waveney District Council
Community Services Department
Mariners Street
Lowestoft
Suffolk
NR32 1JT

Tel: 01502 562111
Paul.Patterson@waveney.gov.uk

Alternative Contact: Loreta Adams — Project Manager

The Environment Agency (Anglian Region)
Kingfisher House
Goldhay Way
Orton Goldhay
Peterborough
PE2 5ZR

Tel: 01733 464699
loreta.adams@environment-agency.gov.uk

CONTACTS:

ENVIRONMENT AGENCY HEAD OFFICE

Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS32 4UD
Tel: 01454 624 400 Fax: 01454 624 409

www.environment-agency.gov.uk
www.environment-agency.wales.gov.uk

ENVIRONMENT AGENCY REGIONAL OFFICES

ANGLIAN

Kingfisher House
Goldhay Way
Orton Goldhay
Peterborough PE2 5ZR
Tel: 01733 371 811
Fax: 01733 231 840

MIDLANDS

Sapphire East
550 Streetsbrook Road
Solihull B91 1QT
Tel: 0121 711 2324
Fax: 0121 711 5824

NORTH EAST

Rivers House
21 Park Square South
Leeds LS1 2QG
Tel: 0113 244 0191
Fax: 0113 246 1889

NORTH WEST

PO Box 12
Richard Fairclough House
Knutsford Road
Warrington WA4 1HG
Tel: 01925 653 999
Fax: 01925 415 961

SOUTHERN

Guildbourne House
Chatsworth Road
Worthing
West Sussex BN11 1LD
Tel: 01903 832 000
Fax: 01903 821 832

SOUTH WEST

Manley House
Kestrel Way
Exeter EX2 7LQ
Tel: 01392 444 000
Fax: 01392 444 238

THAMES

Kings Meadow House
Kings Meadow Road
Reading RG1 8DQ
Tel: 0118 953 0000
Fax: 0118 950 0388

WALES

29 Newport Road
Cardiff CF24 0TP
Tel: 029 2077 0088
Fax: 029 2079 8555



ENVIRONMENT AGENCY GENERAL ENQUIRY LINE

0845 9 333 111

ENVIRONMENT AGENCY F L O O D L I N E

0845 988 1188

ENVIRONMENT AGENCY EMERGENCY HOTLINE

0800 80 70 60



**ENVIRONMENT
AGENCY**

EA ANGLIAN



www.environment-agency.gov.uk

We welcome feedback including comments about the content and presentation of this report.

If you are happy with our service please tell us. It helps us to identify good practice and rewards our staff. If you are unhappy with our service, please let us know how we can improve it.

For further copies of this report or other reports published by the Environment Agency, contact general enquiries on 0845 9333111 or email us on enquiries@environment-agency.gov.uk



ENVIRONMENT AGENCY



125841