



for birds
for people
for ever

SUFFOLK'S CHANGING COAST

making space for wildlife and people

Suffolk's coastal habitats – valuable for wildlife

Suffolk's coast has a wealth of wildlife-rich habitats including saltmarshes, mudflats, shingle beaches, saline lagoons and sand dunes, as well as coastal freshwater habitats such as reedbeds,

grazing marshes and fen. These habitats support some of Britain's rarest and most attractive wildlife, and many are specially protected by national and international law.



Black-tailed godwits by Gerald Downey (rspb-images.com)

Black-tailed godwits winter on Suffolk's estuaries including the Deben and the Orwell.

Suffolk's coast needs action to:

- promote the need for and benefits of habitat creation for wildlife and people
- replace coastal habitats already lost to the sea through erosion and coastal squeeze
- plan for the replacement of coastal habitats vulnerable to climate change
- ensure that Suffolk's estuary strategies, shoreline management plan and other plans provide clear guidance on planning for habitat creation.

Minsmere – valuable for wildlife

Minsmere RSPB nature reserve is famous for its wildlife, particularly birds. With a variety of habitats including reedbeds, grazing marshes and lagoons, it provides a year round bird spectacle – 327 species have been recorded there. Minsmere is well known as a place to see bitterns, marsh harriers and avocets. It is also valuable for other wildlife, including otters, water voles, flora and invertebrates.

The Environment Agency has recently brought forward a study looking at the future of Minsmere's sea defences given climate change and erosion, and the implications this might have on the reserve and its wildlife. The RSPB is currently working with the Environment Agency and others to determine the most appropriate flood risk management options for this important site.

Minsmere receives over 90,000 visitors annually and contributes more than £1 million pounds per year into the Suffolk coast economy.¹

Once extinct in the UK, avocets chose the Suffolk coast to return to breed in 1947 and are now a familiar sight.



Avocets by Bob Glover (rspb-images.com)

Suffolk's coastal habitats – valuable for people

Suffolk's coastal habitats are also good for people. They provide open spaces for outdoor recreation, and form a vibrant, attractive and diverse landscape within which people live. This creates the unique appeal of the Suffolk coast, attracting visitors and underpinning tourism, which makes a valuable contribution to the local economy.

It has been estimated that the environment sector supports some 108,000–180,000 jobs in the East of England; this amounts to between 6% and 9% of regional employment.² The proportion is likely to be higher in coastal Suffolk.

Outdoor activities are popular on Suffolk's coast.



Minsmere by David Tipling (rsqb-images.com)



David Levenson (rsqb-images.com)



Dunwich by Malcolm Watson (Countryside Agency)

The Suffolk estuaries provide wonderful opportunities for many types of recreation including walking, fishing, birdwatching and sailing. They are picturesque places that are popular with visitors and residents, many of whom derive their living either directly or indirectly from the estuaries, for example boat repair and maintenance businesses, or through the provision of tourist accommodation, restaurants and cafés.

The anticipated effects of climate change represent a major challenge to the Suffolk coast and estuaries, which will need to be both planned for and managed.

Naturally functioning coasts

Coastal habitats have other important, but less obvious, benefits. Saltmarshes and shingle beaches act as natural flood defences, reducing the erosive power of waves³. Saltmarshes can also harmlessly lock-up pollutants, reducing their wider environmental impact, and estuaries act as nurseries for commercially valuable fish stocks⁴. Freshwater wetlands can act as buffers for the effect of pesticides and as a means of storing and managing floodwaters.

Changing habitats

Climate change is causing sea levels to rise in the east of England. In addition, land in the east of England, including the Suffolk coast, is slowly sinking due to natural movements of the earth's crust, and this is also causing relative sea levels to rise. Combined, these factors threaten habitats like saltmarsh by squeezing them against man-made sea defences which stop the marshes from moving inland.

Increased storminess associated with climate change is also threatening to flood freshwater habitats, such as reedbeds, by over-topping sea defences or by breaching natural defences such as shingle beaches. In a naturally functioning coastal floodplain these freshwater habitats would also move inland, up river floodplains, but modern drainage and agricultural practices have prevented this occurring.



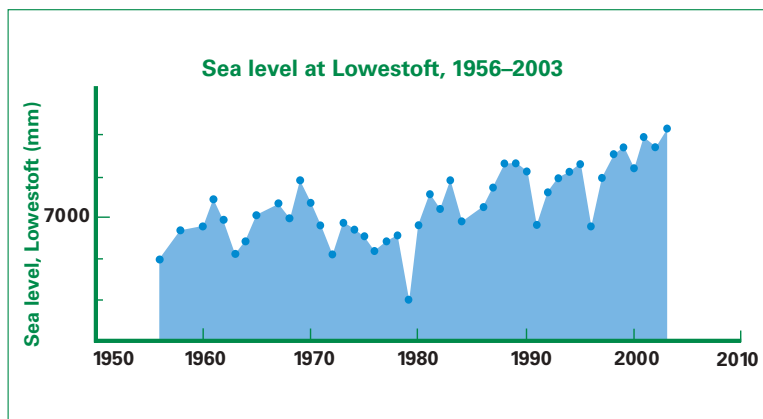
Shingle is a distinctive and valuable coastal habitat.



Sea level rise

Global mean sea level increased by about 2 mm per year during the last century. It is predicted to rise by 22–82 cm by the 2080s as a result of further thermal expansion of seawater and melting of land ice.⁵ Sea level rise in the southern and eastern parts of England will be greater than the global average due to natural movements of the earth's crust, causing the land to sink.

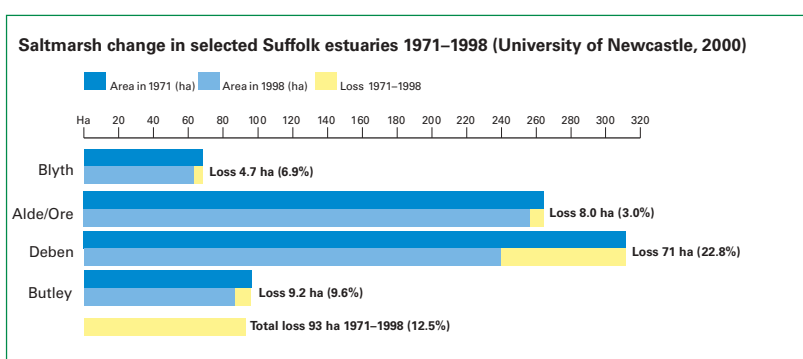
At Lowestoft, where sea levels have been recorded for many years, mean sea level increased by about 3.4 mm per year over the period 1956–2003, as shown right.⁶



Suffolk's disappearing saltmarsh

Suffolk's estuaries, notably the Deben, have lost large areas of saltmarsh in recent decades.⁷ These saltmarshes are important for wildlife, but also act as natural flood defences and extend the life of man-made sea defences by buffering the energy of waves.

New saltmarsh and mudflats need to be created in suitable locations to ensure a healthy coastal ecosystem.



Lost saltmarsh: these estuaries have lost more than 93 hectares of saltmarsh since 1971 – the loss of an area about the size of Southwold. A further 203 hectares of saltmarsh was lost from the Stour and Orwell estuaries between 1973 and 1997, due to erosion and land claims.

Dingle Marshes at risk

Dingle Marshes RSPB/Suffolk Wildlife Trust nature reserve near Dunwich shows how higher seas and winter storms threaten to inundate freshwater habitats. The reserve has been flooded by seawater several times in the last five years, as a result of the shingle ridge breaching. In December 2003, one kilometre of the ridge was washed away, leaving freshwater reedbed

and marshes flooded with seawater.

Repairing the ridge is costly and also damages the important shingle habitats. Conservation bodies recognise this is not sustainable in the long term and so are planning ahead to manage for future change.

Framing a response – the legal perspective

On the Suffolk coast therefore, with the threat of habitat losses due to sea level rise, there is a pressing need to create new habitats by:

- re-aligning flood defences to allow the creation of new mudflats, saltmarsh and coastal lagoons
- finding sites for freshwater habitats, such as reedbeds and wet grassland, in locations safe from inundation.

The response is underpinned by obligations under the EU Habitats Directive to take appropriate steps to avoid the deterioration of habitats and reinforced by UK Biodiversity Action Plan targets to create new habitats.



Andy Hay (rspb-images.com)

Breaches of sea defences between Walberswick and Dunwich have prompted planning for new habitats.

Planning for a changing coastline

The effects of climate change will force us to change the way we manage our coastlines and estuaries. This will alter the landscapes we take for granted. People, as well as wildlife, will be affected by climate change and their needs also need to be met. To plan for change to ensure the best outcomes for wildlife and people we need a coastal flood risk management strategy that is sustainable.

The Government recently published its draft new strategy for flood and coastal erosion risk management. According to the Government 'the results of the strategy will be seen on the ground in the form of more flood and coastal erosion solutions working with natural processes. This will be achieved by making more space for water in the environment

through, for example, appropriate use of realignment to widen river corridors and areas of intertidal habitat, and of multi-functional wetlands that provide wildlife and recreational resource and reduce coastal squeeze on habitats like saltmarsh'.⁹ Once complete, the strategy will form the basis upon which decisions about the future of the Suffolk coast and estuaries will be made.

Steps have already been taken to understand and plan for change on Suffolk's coast. Last year the Environment Agency started a new project looking in detail at flood risk management in the Suffolk and Essex estuaries (see Solutions 1).

Solutions 1 – Coastal and estuary management strategies

A number of strategies and plans already exist which have sought to understand and manage change in Suffolk's estuaries. Most recently, prompted by growing concern over several areas in Suffolk that are susceptible to flooding, the Environment Agency commissioned the development of flood management strategies for the Alde-Ore, Blyth, Deben, Orwell and Stour estuaries. These will be completed over the next few years and will identify the best approach to managing the estuaries' flood defences in the long term. A related Environment Agency project is quantifying the amount of replacement freshwater and intertidal habitat needed to offset those likely to be lost to flood risk management activities in the East Anglian region, including the Suffolk estuaries.

There will also be important opportunities in the forthcoming revision of the Suffolk Shoreline Management Plan and the development of Catchment Flood Management Plans to identify which new habitats will be needed and where these could be best located to provide the greatest wildlife and public benefits. Creating these habitats will involve finding suitable inland sites for reedbeds and grazing marshes, and suitable coastal sites where intertidal habitats might be created through managed realignment (the controlled breaching or setting back of sea defences). These replacement habitats, either freshwater or intertidal, should not be created on areas with existing wildlife value.

The creation of replacement habitats will need to take place within the local planning system. It is important therefore that Local Development Frameworks (LDFs), which are currently being prepared by local planning authorities, recognise the need for new wildlife habitats and presume against development in areas at risk of flooding and suitable for habitat creation. LDFs also need to recognise and plan for the impacts of climate change on people.

Together these strategies and plans should provide a coherent framework for decisions about managing flood risk on Suffolk's coast and estuaries, while also bringing substantial environmental, social and economic benefits.



River Alde by Malcolm Farrow

Difficult choices for the Alde lie ahead as its flood management strategy gets under way



Blythburgh by Malcolm Farrow

Managed realignment and new habitat creation are proposed in the Blyth flood management strategy.

Solutions 2 – Hen Reedbed

The Suffolk Wildlife Trust created this popular reserve on the north side of the Blyth estuary in 1999. The Trust transformed the existing degraded grassland into a mosaic of reedbed, fen, dykes and pools that have developed into an excellent site for birds, including bitterns, and mammals such as otters and water voles. The reserve demonstrates that there are opportunities to create valuable new freshwater habitats which contribute to national and local biodiversity targets.

Bittern by David Tipling (rspb-images.com)



Twenty of the UK's 46 booming bitterns in 2005 were on the Suffolk coast, all in freshwater wetlands vulnerable to rising sea levels.

Solutions 3 – RSPB Havergate Island nature reserve

Havergate Island RSPB reserve sits in the middle of the River Ore and is famous for its breeding avocets. The RSPB created an area of mudflat and saltmarsh in 1999 by making a breach in a floodwall and flooding a compartment of the reserve, a process known as managed realignment. This has developed well and now supports a good range of saltmarsh plants and invertebrates, almost indistinguishable from that of the adjacent estuary, and birds are regularly using the site. The project demonstrates that new intertidal habitats can be quickly and successfully created.

Havergate Island by Ian Partridge (RSPB)



High tide on the managed realignment at Havergate Island.

Solutions 4 – Dunwich Heath

The National Trust acquired Dunwich Heath in 1968 to protect the cliff top heathland. Erosion is vital to maintain the cliff but means the gradual loss of the heath. Therefore, when the opportunity arose to buy Mount Pleasant Farm to the landward side of the heath, the National Trust bought the site jointly with the RSPB. Newly created heathland on the farm will form the future coastline as the cliffs and present heathland slowly erode.

Dunwich Heath by David Tipling (rspb-images.com)



Heathland creation is underway near Dunwich to make up for losses as cliffs erode.

Next steps

Creating replacement habitats requires resources, planning, management and time. Given the threats to Suffolk's coastal habitats, commitment is needed to identify and begin work on suitable sites now.

Various stakeholders will need to be involved in promoting and creating new habitats in Suffolk. These include:

- Coastal local authorities through their coastal defence responsibilities and planning powers can provide a framework within which habitat creation can take place.
- The Environment Agency, through its flood risk management and conservation functions, can help fund replacement habitats for internationally important wildlife sites.
- The Department for Environment, Food and Rural Affairs (Defra) can help fund habitat creation, such as saltmarsh and wet grassland, through the new Environmental Stewardship Scheme, which landowners may wish to investigate.
- Wildlife conservation organisations, like the RSPB, Suffolk Wildlife Trust, English Nature and the National Trust, can help provide the skills and expertise to support a wide range of new habitat creation projects.
- The Suffolk Coast and Heaths Area of Outstanding Natural Beauty Partnership can help co-ordinate an integrated approach.
- And of course local communities and individuals have an important part to play, in joining the debate and making their views known.

We often need reminding that in addition to providing a valuable environmental resource, new wildlife habitats provide social and economic benefits, including recreational opportunities and tourism, as well as forming part of sustainable flood risk management. These new wildlife habitats are urgently needed and we now have an important opportunity to work together to begin to meet the challenge.

Action is therefore needed to:

- promote the need for and benefits of habitat creation for wildlife and people
- replace coastal habitats already lost to the sea through erosion and coastal squeeze
- plan for the replacement of coastal habitats vulnerable to climate change
- ensure that Suffolk's estuary strategies, shoreline management plan and other plans provide clear guidance on planning for habitat creation.

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