

Environment, Landscape and Archaeology Report

August 2013



Winter on the Deben

David Thomas

Introduction

The Deben Estuary Partnership is a community group representing the different interests, roles and responsibilities of those living and working within the estuary area. It is developing an Estuary Plan in conjunction with the Environment Agency (EA) and Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) . This innovative partnership approach to formulating the Plan gives local people the opportunity to be involved, at every stage, in formulating policies that will guide the future of an area many care deeply about.

This short report seeks to reflect the points raised in recent consultation with groups and individuals most involved with environmental matters throughout the estuary. It sets out the emerging themes, concerns and proposals that have been put forward and are being considered by the Deben Estuary Partnership's Environment, Landscape and Archaeology Committee. This is not a definitive document but forms the basis for policy development and action planning which will inform the Deben Estuary Plan. Actions in the Plan will be focused on five sectors - from the mouth at Felixstowe Ferry, through the middle reaches, to the tidal limit above Wilford Bridge..

See Map 1



A winter roost

Andrew Excell

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Fundamentals

1. The Deben Estuary is recognised as being of outstanding ecological importance. Consultation and opinion surveys confirm that its tranquillity, wildlife and landscape are highly valued by those who use, visit and live on or near the estuary.
2. Much of the estuary supports wildlife, particularly birds, in numbers and species that have attracted national and international conservation status. Every support must be given to safeguard and sustain the long term future of the sites concerned.
3. There should be a presumption that any development in the estuary is sustainable in terms of protecting the environment and appreciates that the estuary has limited capacity and cannot be all things to all people all of the time. Increased recreational and visitor pressures may be inevitable, but there is scope, through good management, to improve people's enjoyment of the area and at the same time limit adverse impact.
4. Given resources, the Deben Estuary Partnership can play a role in helping to resolve issues through co-ordinating and facilitating dialogue between the various organisations that have formal responsibilities and the many other interest groups – including conservation, amenity, commercial and landowning - with an interest in the estuary.

Acting as an approachable and responsive organisation the Deben Estuary Partnership welcomes close contact and on-going dialogue with all local groups and individuals.

Landscape

The landscape of the estuary is valued and distinctive and falls within the Suffolk Coast and Heaths AONB. There are no dramatic or dominant features and the land, as seen from the river, currently remains largely empty of intrusive urban development. What we see today stems from how the area has been used over generations. Its elements are subtle and the overall “feel” can be very sensitive to change.

The AONB project -Touching the Tide - produced a Landscape Character Assessment (August 2012) which describes the Deben Estuary area. *‘The landscape is made up of saltmarsh and intertidal flats backed by the coastal levels with valley sides comprising rolling estate sandlands. The valley sides comprise gently rising topography, often well wooded. Woodbridge sits at the head of the estuary.’*

See Map 6

Distinguishing characteristics of the area are:

- High scenic quality derived from the relatively narrow, twisting estuary
- The narrow estuary mouth framing the wider seascape
- Intertidal mud flats and saltmarsh - the most complete range of saltmarsh types and habitat in Suffolk
- Outstanding areas for nature conservation – including SSSI, SPA and Ramsar
- Meadows and river tributaries providing a rich, mosaic habitat. Designated County Wildlife Sites, notably Cliff Farm Meadows, Ufford Meadows and Nettle Hill Wood
- An agricultural pattern of land use along the valley sides broken by Scots pine promontories
- Sutton Hoo - the most significant Anglo Saxon burial site in the UK
- Historic churches – such as Ramsholt and Bromeswell
- The Woodbridge Tide Mill, built in 1793, providing the focal point for the waterfront at Woodbridge
- Stillness, tranquillity and the slow pace of recreational sailing

The Deben Estuary Partnership’s Environment, Landscape and Archaeology Committee support the 2013 AONB Management Plan, which includes actions for the Deben Estuary area.

Designated Areas

The Government is committed to ensuring that nature conservation, landscapes and enjoyment of the natural environment are promoted and enhanced, through the work of Natural England (NE), its statutory adviser on such matters. The Environment Agency, Suffolk County Council (SCC) and Suffolk Coastal District Council (SCDC) also have statutory responsibilities and duties to safeguard and protect aspects of the environment.

Sectors 1 – 5, including saltmarsh and creeks, have been designated as **Ramsar** sites, **Special Protection Areas** (SPA) and **Sites of Special Scientific Interest** (SSSI)

See Maps 2 and 3 and **Appendix 1**

The estuary has **12 County Wildlife Sites**

See Map 4. and **Appendix 2** “Suffolk County Wildlife Sites”.

All designated areas are subject to occasional review and it is possible that, subject to finance, Natural England will carry out an SSSI Detailed Notification Review (DNR) on the Deben in the near future. With this in mind it has been proposed by some local groups and conservation bodies that a case should be made to extend some sites in order to recognise the importance of land behind the river walls and include hinterland bird roosts and feeding areas. Other groups believe that the area has sufficient designations in place to ensure the right levels of environmental protection. Extension proposals would need to be backed by clear evidence based on sound science and must demonstrate tangible environmental gains.

Extending protection to areas which act to support the features listed within a designated site (feeding or roosting areas for birds listed in Ramsar, SPA or SSSI designations) has been suggested. Consideration could be given to creating further local County Wildlife Sites if landowner support and the required criteria can be met and the sites pass the designation procedure. Although not a statutory designation, County Wildlife Site status is an important “first rung” on the conservation ladder, highlighting the value of the site.

The maintenance, monitoring and management of designated areas requires significant resources and in these challenging times the question needs to be asked as to whether designation, without available resources, can be managed or achieve the practical protection desired.

The Deben Estuary Partnership’s Environment, Landscape and Archaeology Committee support and stress the importance of partnership working between landowners and environmental organisations in order to safeguard and enhance designated sites and the wider estuary landscape.

Stewardship

How the river and the hinterland surrounding the Deben Estuary are administered is important and the sympathetic management of areas providing wildlife refuge and habitat is a vital issue.

Land Stewardship See Map 5.

Landowners and farmers have a major influence on the estuary landscape. The way their land is managed governs the pattern of the landscape; at the present time agricultural management is mostly traditional and forms a sympathetic backdrop to the AONB.

Stewardship schemes are widespread and help to secure a worthwhile level of biodiversity. Good environmental practice is, at present, enhanced by way of Stewardship Grants. There is scope to increase the amount of land benefitting in this way if funding remains available under a new Rural Development Programme of the reformed Common Agricultural Policy (CAP). The extent and administrative requirements of future funding will be important but information on this has yet to be announced.

It may be helpful to explore the possibility of landholdings combining in order to provide the co-ordinated and environmentally sympathetic management over a wider area which would attract funding. The RSPB are pioneering such an approach with their "Thorney Farmland Bird Friendly Zone" where 14 farms in the Peterborough area have joined forces to bring increased benefits for wildlife and farmland birds

Estuary Stewardship

Intertidal

Saltmarsh is important for many reasons and is often protected under European and UK legislation. Where it is being lost or damaged the UK Government has a duty to restore or recreate it elsewhere. Saltmarsh is an important habitat for hundreds of different animals, birds and insects as well as providing vital nurseries and feeding grounds for fish. Most saltmarsh is backed by sea walls. It acts as a natural flood defence around the estuary, breaking up wave action and reducing tidal currents within the network of creeks. Where there are areas of saltmarsh in front of the sea walls the level of required wall maintenance is likely to be much less but, as the climate changes and sea levels rise, the saltmarsh is likely to suffer from increased erosion. Recent work by the EA and NE has also revealed a problem of 'fragmentation' within certain areas of saltmarsh.

It is important that saltmarsh is not lost. Two methods can be used to balance possible erosion –

- Use of the mud and sediments dredged, for navigation purposes, from within the estuary. These can be used beneficially for restoration - to build up badly eroded areas and, in some cases, to raise the level of whole marshes, encouraging new vegetation at the right tidal level.
- It is also possible to use small structures – such as fencing, faggots or straw bales – to help trap sediments, build up the level of the saltmarsh and create the right conditions for new plants to grow.

Both these approaches are tried and tested. They can be effective and will help to restore the saltmarsh and keep the estuary in balance. We are still learning from projects on the Deben - some schemes have been carried out and others are being planned.

The Environment Agency can create and fund new intertidal areas through its Regional Habitat Creation Programme (RHCP). The RHCP can create new habitats before others are completely lost and replace other important habitats, like reed beds and saline lagoons. In the much longer term - 20 years hence - if a lot of saltmarsh is lost it may be necessary to consider 'recreating' this habitat - which could be done by removing sections of estuary defence and allowing the low-lying land behind a wall to go back to being intertidal. This process of 'managed re-alignment' may have other benefits, such as absorbing flood water during storm events, but would require the full co-operation of the landowners concerned.

Fisheries

The Deben, like the Stour and Orwell, is fished on a small scale from open boats - for shrimps, sole and eels and provides sheltered water for the cultivation of oysters. A small number of commercial fishermen work from Felixstowe Ferry. It is important to support river businesses and ensure their viable future.

The Eastern branch of the Inshore Fisheries and Conservation Authorities (EIFCA) protects the marine inshore environment. Their Officers work throughout the District, both on land and at sea, on a variety of activities – which can include managing fisheries and enforcing fisheries legislation, meeting with fishermen and anglers, conducting survey work and stock assessments and responding to external consultations on planned marine development work.

Saltmarsh Regeneration below Sutton Hoo



Before work - October 2010

DEP



After work - October 2012

DEP

Disturbance

Disturbance is one of the greatest threats to the estuary's value as an ecological asset. It takes a variety of forms and can be difficult to evaluate objectively. However the AONB and Natural England in collaboration with Wildside Ecology, have developed a method which we strongly recommend as an instrument for testing situations on the Deben estuary.

See **Appendix 3** "A simple method for assessing the risk of disturbance to birds at coastal sites – November 2012". Another study on the Stour and Orwell assesses these risks and their impact on SPA birds <http://www.suffolkcoastandheaths.org/projects-and-partnerships/stour-and-orwell-estuaries-management-group/>

Without prejudging future research findings, the survey work to date points to some of the most disruptive activities. On the Deben these are

- Dogs running loose, particularly in winter when birds are feeding and during the breeding season
- Helicopters and light aircraft
- Speedboats and jet skis – which disturb wildlife and generate a wash which can exacerbate erosion of saltmarsh and river walls
- Shots and other loud noises

Additional problems are caused by

- Intrusive recreational activities near high tide roosts
- Kite and wind surfing
- Off-road vehicles

Bearing in mind any seasonal variation in the level of the disturbance, these activities take place in one part or another of the estuary.

Consideration must be given to exerting much greater control, or even banning inappropriate activities, where it can be proved that they have an impact on the most sensitive areas of the estuary. Work of the Felixstowe Volunteer Coast Patrol Rescue Service www.emergencyrescue.com needs to be encouraged and this service utilised with the support of estuary communities.

Every effort should be made to avoid disturbance to roosting areas – particularly important where high tide restricts available space for birds. A report by A. Excell and K. O'Mahoney (SWT) identifies sensitive zones. See **Map 7.** and **Appendix 4** "The River Deben Estuary – Ornithological Importance and Status for Water birds".

Improved management of visitors coming to the estuary area could be a significant factor in alleviating disturbance problems. Certain areas should be considered for restricted access, particularly at given times of the year, or even off limits. Circular walks and improved facilities should make it attractive to use less sensitive routes.

The need to consider dog walkers, cyclists and horse riders should not be forgotten. The Deben Estuary Partnership Access Group is working with ELAC on prioritisation of routes and quiet zones.



Off Felixstowe Ferry

Leigh Belcham

Pollution

Pollution can be classified under several headings, but consultation raised two main categories – light pollution and water quality. (Noise and people are recognised under the Disturbance heading.)

Light Pollution see Map 8.

There is a need to address the increase in light pollution that is likely to come from new development on the fringes of the estuary area. Already junction lights on the A14 can be seen from Sectors 1 and 2. At the present time there is intermittent light from the floodlights at the Dellwood Avenue football ground on the outskirts of Felixstowe but this will reach an unacceptable level if the club moves to pitches on the northern fringe of the town at Eastward Ho!. The golf range lights at Gulpher Road can be seen from the opposite side of the estuary

There is concern that light pollution will become more intrusive with the increase in housing development on the fringes of Martlesham, Woodbridge and Melton. Future lighting in these areas should recognise the need to meet the highest environmental standards in order to minimise pollution across a sensitive AONB landscape.

Water Pollution

The EA collate and analyse data on instances of on-going pollution. Such monitoring, in the context of the requirements of the Water Framework Directive (WFD), allows consideration of how best to work in partnership to highlight and reduce any adverse impact.

There is evidence of agricultural run off in water quality samples collected on the Deben. However Catchment Sensitive Farming is supported in the Estuary area and work with farmers and landowners goes on to reduce the risk of diffuse water pollution from agriculture. As standards become more demanding the aim is to inform in order to benefit farm business as well as the environment. Events, farms walks and advisory visits are all offered, free of charge, in order to highlight the latest techniques and improve current water issues on a voluntary basis.

Water quality at the head of the river (Sector 5), above the tidal reach, has also been questioned. Information and views can be sought from the EA.

Recent concern has been expressed regarding the possible leaking or draining of sewage into the estuary. Provisions for sewage disposal (and other services) may be inadequate for houseboats and boats on swing moorings. The present situation should be monitored and any appropriate enforcement carried out. More attention may need to be given to the potential impact of any unplanned increase in numbers of houseboats and other water craft.

Flood Defence

Communities and a majority of landowners are in favour of safeguarding the estuary in its present form for as long as possible. This will require the current defences to be maintained and, where necessary, strengthened to provide survivability during extreme weather or surge tide events. The extent and cost of the work involved is likely to be in the region of £2m to £3m. Government finance is scarce and partnership funding from a range of sources - landowners, communities, river users, businesses - will have to be sought to help meet the cost of future flood defence in some parts of the estuary.

See **Map 9**.

For the foreseeable future, the need will be for the restricted river mouth to continue to limit the amount and flow of water in the estuary and so guard against increasing the risk of flood and erosion.

The current work and initiatives of the Deben Estuary Partnership's Saltmarsh Group focus on monitoring and promoting the restoration of saltmarsh. This is important in combating the erosion of river walls as well as providing habitat for various forms of wildlife.

The manmade defences – walls and dykes - that protect the hinterland also provide a complex and rich matrix of habitats. Estuary walls need careful management both as flood defence and sites for flora and fauna. The EA holds a wealth of ecological data on estuary walls but we suggest that closer liaison with organisations like the Suffolk Wildlife Trust (SWT) and RSPB could be beneficial in fine tuning maintenance regimes (cutting, mowing, tree and shrub removal etc.).

The EA are considering future management options for different sections of wall. It is necessary to mow all faces of the walls in order to inspect the banks adequately but, as well as making sure that the flood risk function isn't compromised, it is encouraging that the EA are looking at how to take account of different ecological features. They plan to introduce carefully timed and rotational cutting regimes which will result in increased ecological benefit without compromising the flood risk function.

Broadland Environmental Services Ltd. commissioned the Halcrow Group to examine the management of river defence banks. Their recommendations set out standards which ELAC supports as being applicable on the Deben and would wish to see applied by the Environment Agency.

See **Appendix 5**.

Where work is contracted out the Deben Estuary Partnership may be able to perform a co-ordinating role, ensuring, as far as possible, that there is good communication, that activities are well timed and any adverse impact is minimised.

Wildlife

Habitats

The Deben supports a range of important wildlife habitats. Much of the estuary area is taken up by the tidal river itself, intertidal mudflats plus the more sandy deposits occurring where exposed Red Crag erodes from cliffs. The Deben estuary contains approximately 40% of the total saltmarsh in Suffolk - with extensive areas at Falkenham Creek and marshes to the north and south of Waldringfield. In places there are important habitat transitions from saltmarsh to swamp and reedbed, such as at [Hemley](#), Sutton and above Wilford Bridge.

At the mouth of the estuary there are shifting sand and shingle banks at the mouth, known locally as the Knolls, providing a safe resting place for seals and seabirds. Adjacent to the estuary are grassy seawalls beyond which borrow dykes, freshwater reedbeds, coastal and floodplain grazing marsh, meadows and arable land provide a valuable mosaic of habitats – each valuable in their own right.

See Maps 2 & 3

Species

Birds – notably wintering wildfowl and breeding waders, are of great interest on the Deben. The estuary is also rich in many other forms of wildlife

Mammals - including otters, badgers, water vole, water shrew, bats and the brown hare.

Reptiles - lizards, slow worms, grass snakes and adders are commonly found on seawalls and in other habitats

Amphibians - such as toads, frogs and newts are in wetter habitats.

Invertebrates - including many rarities, such as the protected Whorl snails, are diverse across a range of habitats in the Deben. There are notable insects and beetle species.

Plants

The Deben supports a range of rare and important plant species, for example; eelgrass grows on the mudflats. Sea aster, annual seablite, glasswort, sea purslane, common sea-lavender are all found on the saltmarshes. Sea couch and marshmallow may be found on seawalls. Swamp areas support sea club-rush, greater pond sedge or, most frequently, common reed. Meadows are often species rich in flora and rare arable weeds can be found on farm land.

Wildlife Records

Sustaining, modifying or creating new or better managed habitats can only be achieved if good, up to-date information is available. This enables understanding of the species present at any one site, highlights any trends in population and ensures that conservation measures can be targeted at those areas and species most at risk.

A large amount of data from different organisations, groups and individuals already exists but collating and verifying information is needed in order to draw up a comprehensive picture of the Deben Estuary. Creating a central data base for the whole estuary will require significant resources but is nevertheless key to the good ecological management that is essential for the future. **Map 11** is a recently compiled record of four important mammals and is an example of how information of this sort can be presented in an accessible form.

The Suffolk Biological Records Centre (SBRC), based at Ipswich Museum, provides a one-stop-shop for all wildlife information in Suffolk. SBRC provides stakeholder partners with a vast array of verified and validated biological data in forms to match their requirements. This information, which includes data for protected, locally scarce and rare species (including Schedule 9 invasive species) and non-statutory designated sites (County Wildlife Sites) can significantly help inform the planning process as well as conservation projects.

Data is also made available for conservation, research and educational purposes and is usually free to non-commercial users. For more information and guidance on how to submit records online can be found at <http://www.suffolkbrc.org.uk>



Black tailed godwits on the Deben

Andrew Excell

Archaeology & Geology

From earliest times, the Deben has been an important water way with settlements and fertile land farmed along the valley sides. The estuaries of East Suffolk provided safe harbourage for coastal trade and fishing and for contact with northern Europe. This perhaps best illustrated by the royal Anglo-Saxon burial mounds overlooking the Deben at Sutton Hoo. Reclamation of saltmarsh and construction of the river walls was underway in the medieval period. Overlaying all this, 20th century military activities have also left their mark.

The county Historic Environment Record (HER) holds information about all recorded archaeological sites and finds, scheduled monuments, listed buildings and other structures of heritage interest. It is the first place to check for the potential impact of any changes in land use. Information about access to the HER can be found on the SCC web pages.

<http://www.suffolk.gov.uk/libraries-and-culture-and-heritage/archaeology/historic-environment-record>

Map 10 shows archaeology recorded on the Historic Environment Record for Suffolk.

Areas within the Estuary seen as having particular significance include:

- Sutton Hoo
- Military defence structures
- Woodbridge Tide Mill
- Churches and chapels
- Old landing hards and quays
- Ancient fish traps
- Wrecks (some of interest, others to be cleared)
- Crag pits
- A number of geological features
- Hyracotherium, a fox-sized ancestor to the modern horse and zebra.

The message should be “tread carefully” when any significant engineering or maintenance activity is planned. It is important that Suffolk County Council Archaeology Department has adequate opportunity to comment before work takes place.

The Environment, Landscape and Archaeology Committee suggest that there may be a role for the Deben Estuary Partnership in ensuring this process is positive and not unnecessarily restrictive.

Funding and Resources

There are a number of organisations which have statutory obligations for the environmental wellbeing of the Deben Estuary and its hinterland. In order to carry out their functions they will have access to some resources. There are also trusts and charities that take an active interest in the wildlife and habitats and who may be able to gain support and resources from community volunteers and experts.

Community Wildlife Groups, such as Waldringfield Wildlife Group or Bawdsey Bird Club, can do much and ELAC is keen to support the work of the groups on both banks of the river.

Major organisations include :

- Natural England
- The Environment Agency
- The Royal Society for Protection of Birds
- The Suffolk Wildlife Trust
- The National Trust
- Suffolk County Council
- Suffolk Coastal District Council
- Suffolk Coast and Heaths AONB Unit

There is a real need to supplement the work already carried out by seeking additional external funding. The following opportunities for Grant Aid will be pursued, along with other sources of funding which might emerge:

- **E U Connects** - This resource is primarily for local authorities, the voluntary sector etc. and is relevant for conservation projects where SPA designations exist
- **AONB** - The Sustainable Development Fund (SDF) and The Community and Conservation Fund have already supported small projects within the Estuary over the last three years
- **The Crown Estate** – Marine Stewardship Fund
- **Suffolk County Council** – Biodiversity Projects Fund
- **Partnership Funding** – pooled funds and other resources from partner organisations

Other areas to be explored will include :

- Enabling development – proceeds from the sale of land put forward for housing development
- Voluntary contributions based on the principal of 'Beneficiary Pays'

Consultation

The Deben Estuary Partnership has sought to listen and respond to the views of local groups and individuals. Interaction with local communities, landowners and businesses is a vital ingredient in achieving action to conserve and protect the Estuary.

The following people have provided input and highlighted over 100 issues. Points raised at an initial workshop have been tabulated across the five estuary sectors and will form part of the evidence base for work and consultation on the development of an estuary action plan. See **Appendix 6**.

- Trazar Astley-Reid (Estuaries Officer)
- Christine Block (DEP Chairman)
- Andrew Excell (Suffolk Wildlife Trust)
- Emma Hay (Natural England)
- Peter Holborn (Suffolk County Council)
- Phil Watson (Suffolk County Council)
- John Jackson (Natural England)
- Bill Jenman (Suffolk AONB unit)
- Adrian Judge (Wildfowler)
- Grant Lohoar (National Trust)
- Jacqui Miller (RSPB)
- Kieran O'Mahony (Graduate)
- Phil Pearson (RSPB)
- Jude Plouviez (Suffolk County Council)
- Simon Read (DEP & River Deben Association)
- Sally Redfern (Waldringfield Wildlife Group)
- Martin Sanford (Suffolk Biological Records Centre)
- Chris Strachan (Environment Agency)
- Michael Thomas (Felixstowe Ferry Golf Club, chairman of ELAC)
- Linda Wilkins (Waldringfield Wildlife Group)
- Rob Wise (National Union of Farmers)

Special thanks to Kieran O'Mahony for the maps that accompany this report.

Maps

- Map 1.** Deben Estuary Plan Boundary
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Appendices

Appendix 1. Glossary of useful terms and designations

The following appendices can be found on the Deben Estuary Partnership's web site.

Appendix 2. Suffolk County Wildlife Sites

Appendix 3. "A simple method for assessing the risk of disturbance to birds at coastal sites – November 2012".

Appendix 4. "The River Deben Estuary – Ornithological Importance and Status for Water birds". *Produced for the ELAC Group. Further work is being progressed*

Appendix 5. Sensitive habitat management approach for managing flood defences

Appendix 6. Report of the DEP Environment, Landscape and Archaeology Knowledge Sharing Workshop - May 2012

An Action Plan will follow this Report.

Appendix 1.

Area of Outstanding Natural Beauty (AONB): Areas of national importance because of their high landscape quality created under the National Parks and Access to the Countryside Act 1949. Their purpose is to conserve and enhance the natural beauty of the area.

Biodiversity Action Plan (BAP): Strategies for conserving and enhancing wild species and wildlife habitats in the UK.

Birds Directive (EU Birds Directive): The abbreviated term for Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds. This Directive aims to protect bird species within the EC through the conservation of populations of certain birds and the habitats used by these species.

Conservation Areas: Areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance.

County Wildlife Site (CWS) or County Geological Site (CGS): Also known as RIGS Non-statutory designations for sites of county significance for wildlife or geology. Positive management of CWSs and CGSs is encouraged and development affecting them is controlled by Local Plan policies. Local authorities are involved in the selection of CWSs and CGSs, on the basis of standard criteria. Some Local Plans adopt different names for sites of county or local importance.

Entry Level Stewardship (ELS): provides a straightforward approach to supporting the good stewardship of the countryside. This is done through simple and effective land management that goes beyond the Single Payment Scheme requirement to maintain land in good agricultural and environmental condition. It is open to all farmers and landowners.

Environmentally Sensitive Area (ESA): The ESA scheme was introduced by MAFF in 1987 to pay farmers for maintaining or adopting agricultural methods which promote the conservation and enhancement of the countryside in areas of high wildlife, landscape or historic value.

European Marine Site: A European Site (SPA or SAC), which consists of, or in so far as it consists of, marine areas.

European Site: A classified Special Protection Area, designated Special Area of Conservation, site of Community Importance (selected as a candidate SAC, adopted by the European Commission but not yet designated), candidate Special Area of Conservation (in England only), or a site hosting a priority species in respect of which Article 5 of the Habitats Directive applies.

Flood Management Strategy: A long-term plan developed for an estuary, which sets out the policy and objectives for flood defence taking into account a broad range of local interests and issues.

Foreshore: The part of the shore between high and low tide marks.

Geographical Information System (GIS): A system for capturing, storing, checking, integrating, manipulating, analysing and displaying digital data which are spatially referenced to a geographical region.

EU Habitats Directive: The abbreviated term of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora. It is the aim of this Directive to promote the conservation of certain habitats and species within the European Union.

Habitats Regulations: The common term for the Conservation (Natural Habitats, &c.) Regulations 1994, which transpose the requirements of the Habitats Directive into national law and provide for the conservation of SACs and SPAs in Great Britain.

Higher Level Stewardship (HLS): A selective, environmental stewardship land management scheme involving more complex types of management and agreements which are tailored to local circumstances and priorities. HLS applications are assessed against specific local targets and agreements and are offered where they meet these targets and represent good value for money.

Intertidal: Of or being the region between the high tide mark and the low tide mark.

Listed building: A building that has been designated of special historic or architectural interest. The building may be graded I,II* or II and alterations will have to be determined by either the District Council or by English Heritage.

Local Nature Reserve (LNR): Site of local nature conservation importance owned or managed by a local authority. LNRs are designated by local authorities in agreement with English Nature, under the National Parks and Access to the Countryside Act 1949

Managed Realignment: Realigning of a seawall landward or seaward at a designated site to allow the tide to inundate the site over each tidal cycle.

Mudflat: Flat un-vegetated wetlands subject to periodic flooding and minor wave action.

National Nature Reserve (NNR): Site of outstanding wildlife or geological importance managed either by, or on behalf of, English Nature in the interests of wildlife, research and public appreciation (where appropriate). NNRs are declared by English Nature under the National Parks and Access to the Countryside Act 1949 or the Wildlife and Countryside Act 1981

Pollutant: A substance that occurs in the environment, at least in part as a result of anthropogenic activities, which has a deleterious effect on living organisms.

Organic Entry Level Stewardship (OELS): The organic strand of ELS. It is geared to organic and organic/conventional mixed farming systems and is open to all farmers not receiving Organic Farming Scheme aid.

Ramsar Convention - 1971: The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

Register of Historic Parks and Gardens: A list managed by English Heritage of nationally important parks and gardens.

Rights of way (RoW) Highways (which can include anything from footpaths to bridleways to roads) along which any member of the public has a right to pass and re-pass at any time.

Roost: A place where birds regularly settle in order to sleep.

Saltmarsh: A community of salt tolerant plants growing on intertidal mud in brackish conditions in sheltered estuaries and bays.

Scheduled Monument: An archaeological site protected under the Ancient Monuments and Archaeological Areas Act 1979. The schedule is managed by English Heritage.

Shoreline Management Plan (SMP): A plan used to decide flood and coastal defence policy for a geographic unit with identifiable coastal processes. The document brings together information pertaining to coastal issues such as flooding, erosion, coastal processes and human and environmental needs.

Site of Special Scientific Interest (SSSI): A UK designation given to sites considered to be of nature conservation and/or geological importance in a national context.

Special Protection Area (SPA): A site designated under the Birds Directive by the EC where appropriate steps are taken to protect the bird species and their habitats for which the Site is designated. These sites form part of a European network collectively known as Natura 2000 sites.

Water Framework Directive (WFD): Directive 2000/60/EC. An EU Directive introducing a single system of water management through river basin management.

Wetland: Wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life. They occur where the water table is at or near the surface of the land, or where the land is covered by shallow water.

Wildlife and Countryside Act 1981: The principal mechanism for the legislative protection of wildlife in Great Britain.