

COASTAL WILDLIFE SURVEY



NRA

*National Rivers Authority
Anglian Region*

ENVIRONMENT AGENCY



055575

In a Region where a quarter of the land lies below sea level, coastal defences provide important flood protection for people and property from the sea. The NRA assesses the effects of flood defence work on the environment to ensure that engineering solutions not only provide effective flood defences, but are sympathetic to the wildlife of Anglian Region's coastline.

Coastal flood defences range in type from traditional 'hard' concrete or rock structures to 'softer' alternatives such as beach recharge where the height of the beach is raised with shingle material to absorb wave power. Every scheme is assessed to ensure that the option selected for protecting people and property from the effects of flooding is technically, economically and environmentally acceptable.

In 1989 the NRA began a study of the whole Anglian coastline funded by the Flood Defence section, known as the Coastal Wildlife Survey (CWS). The survey provided detailed ecological information about Anglian Region's coastal habitats. The information collected from the survey is used to determine areas of high ecological importance, for their protection and possible enhancement in the course of flood defence work. In addition the data can be used to plan other NRA works which are sympathetic



Wading Greenshank

towards nature conservation, such as grazing or habitat creation schemes.

Types of Coastal Survey

Two types of coastal surveys are being undertaken: summer surveys of plants and birds on sea flood defences, and winter surveys of estuaries for the presence of wading birds and waterfowl. These provide data that enables the conservation interest of each section of coastline to be placed into a local, regional, national and international context.

EXAMPLE SEA BANK SURVEY REPORT

PLANT COMMUNITIES

COAS 484

An angled section of the sea bank with saltmarsh and reedbeds to seaward and with reedbeds and a parallel road to landwards.

The worn bank top supports perennial rye grass, cocksfoot, white clover, creeping buttercup, rough meadow grass, ribwort plantain and greater plantain. The seaward face is dominated by couches and false oat, with common nettle, cleavers, curled dock, oraches and sea beet. The landward face, with scattered bramble, shrubby sea-blite and elder scrub, is dominated by couches, red fescue, perennial rye grass, common reed, common vetch, creeping thistle, false oat and alexanders.



Sea bank survey with saltmarsh and reedbeds seaward and reedbeds landward.

TARGET SPECIES

Landward slope:	Shrubby sea-blite.
Saltmarsh:	Sea thrift and sea milkwort.
3 species.	

Coastal Flood Defence Surveys

SUMMER PLANT SURVEY

The length of coast to be surveyed was divided into 500 metre sections and each section was visited twice. During the first visit (May to July) habitat maps and cross sections of the flood defences were drawn, plant species were recorded and a representative photograph of the section was taken. On the second visit (July to September) the habitat maps and cross sections were checked for accuracy, lists of plants completed and any management suggestions noted.



Shingle ridge at Cley, North Norfolk

SUMMER BIRD SURVEY

The sea defences surveyed for plant species were also visited three times by ornithologists, in April, May and June. On each visit every bird seen or heard within the survey area was recorded on a visit map using Common Bird Census (CBC) species codes and activity symbols. On the first visit, habitats within the survey area were recorded, and on subsequent visits these habitat details and any changes in management were recorded.

Winter Wildfowl and Wader Surveys

Estuaries are of greatest value to birds in the winter months. Wildfowl, gulls and waders enjoy the rich food and shelter provided by estuaries to prepare for the northward journey back to their breeding grounds in northern Europe.

Using a standard approach all major estuaries are being surveyed in Anglian Region to determine their use for feeding and other activities at low tide. The survey results show the areas of estuaries with important concentrations of wildfowl and waders, enabling environmental considerations to be built into the planning of work schemes.

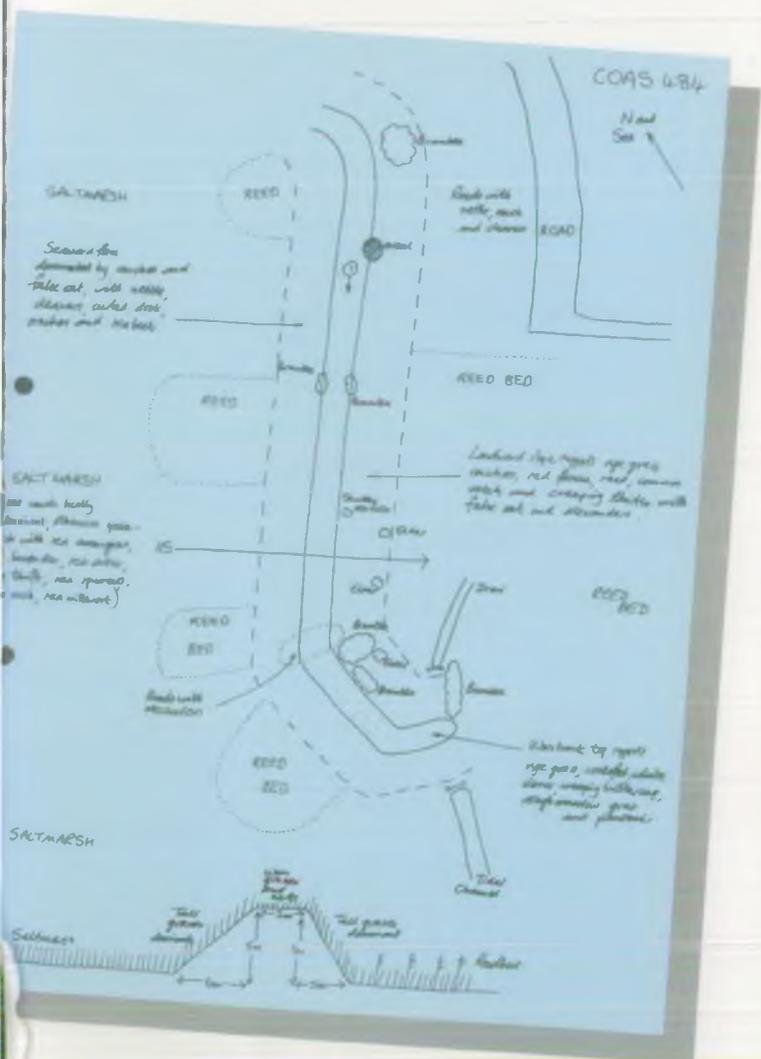
HOW THE SURVEY IS CARRIED OUT

Each estuary is divided into standard units for count purposes, and fieldwork occurs throughout the winter months, typically from November to March. Within each count unit, all wildfowl and waders are counted and their activities and feeding distributions noted. Other waterbirds, birds of prey, kingfishers, and songbirds are also counted. All observations are made from sea walls or from the outer edge of mudflats at low tide.

How is the Coastal Wildlife Survey Being Used?

FLOOD DEFENCE MAINTENANCE PROGRAMME

Coastal flood defences are routinely maintained by the NRA to keep them in good condition and the Coastal Wildlife Survey provides a valuable liaison tool between conservation staff and flood defence engineers. The summer survey data ensures that conservation staff have enough information available to make recommendations that minimise the effects of maintenance work on the conservation value of the sea defence.





Map of Mersea Island, Essex, showing the areas that were surveyed for wildfowl and waders and areas of particular importance for the Redshank.

FLOOD DEFENCE CAPITAL SCHEMES AND ENVIRONMENTAL ASSESSMENT

Anglian Region NRA spends £50m per year on maintaining, renewing and replacing 1000 miles of coastal flood defences between the Humber and the Thames. Anglian Region is fortunate in having some of the most biologically important estuaries and coastline in the country, so it is important to ensure that any effects on the environment are carefully considered in scheme development.

All new schemes have some form of environmental assessment undertaken to ensure that schemes are environmentally as well as technically and economically acceptable. The Coastal Wildlife Survey provides information at this phase of the project. In 1994, thirty-six such schemes had environmental safeguards built in as a result of environmental assessments, which are now a routine and essential environmental component of the NRA's approach to all projects.

SHORELINE MANAGEMENT PLANS

The shoreline is subject to use by a wide variety of activities (for example recreation, conservation and development), many of which interact giving rise to some conflicts. To balance these uses and activities, the NRA in Anglian Region is aiming to develop and implement a series of "Shoreline Management Plans", by working with the many people and organisations who have a vested interest in the future of the Region's coastline. The Coastal Wildlife Survey is used with other information to develop Shoreline Management Plans; this ensures that known sensitive areas of coastline are included within the plan.

MONITORING

It is important to assess the effects of engineering works on the environment after they have been completed. The Coastal Wildlife Survey will continue to be updated regularly to determine whether changes occurring along the coast are as a result of natural processes or are caused by the NRA's work. Anglian Region use a large computer system, "the Shoreline Management System", to monitor and predict the effects of engineering schemes. The Coastal Wildlife Survey is to be integrated within this system to ensure that engineers and conservation staff have up-to-date ecological information available at their fingertips.

RESEARCH AND DEVELOPMENT

The Coastal Wildlife Survey is a large project and contains a lot of information that could further benefit the NRA's day to day activities, and the water environment in general. Further research into the data will lead to a greater understanding of Anglian's coastal wildlife. By determining why the species found are there, and what we need to do to protect and improve their surroundings, the NRA can adopt and adapt policies for the benefit of all the Region's wildlife.

The Coastal Wildlife Survey information is used throughout the NRA's coastal activities. The information ensures that wherever the NRA undertakes essential work on flood defences, it does so with a sympathetic understanding of the needs of the wildlife of East Anglia's remarkable coastline.

