

wash estuary



management plan

June 1996

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THE WASH ESTUARY MANAGEMENT PLAN

Preface

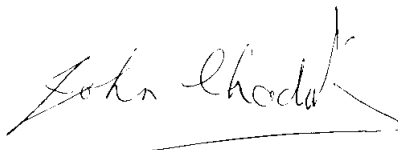
The Wash, shared between Lincolnshire and Norfolk, is very important to local people who rely on it for many of their economic and recreational activities, for fishing, navigation, port uses, sailing, wildfowling, and many other purposes besides. It is also one of the country's most important estuaries for its nature conservation value. Huge numbers of migratory birds stop off here, some to breed or overwinter, others on their way to more distant places. The vast landscapes of the Wash are some of the most remote and wild countryside in this part of England.

Many of Britain's estuaries have changed very greatly in recent years through pressures of development, and their value as habitat, countryside and a place to enjoy has been much diminished. Although this has happened to a lesser degree in the Wash, the area still faces many pressures. The Government is encouraging local interests to collaborate in managing stretches of coast where interests cross local authority boundaries and straddle the divide between land and sea. This is very much the case with the Wash.

Accordingly the Wash Estuary Strategy Officers' Group, made up of officer representatives of the local authorities and a number of other authorities with responsibilities for the area, has prepared a 'broad brush' Strategy for Sustainable Management of the Wash following public consultation on a draft version in 1994, and, based on its principles, a draft Management Plan.

Following public consultation on this draft in 1995 the Local Authority Members' Group set up to oversee the preparation of the Plan has now agreed amendments to the draft and publishes The Wash Management Plan as its proposals for the sustainable management of the area. The individual local authorities represented on this Group have endorsed its contents. The Strategy is appended to this Management Plan, and there is a Glossary at the back of the Strategy which explains some of the terms used in the documents.

This Management Plan is non-statutory and contains specific suggestions for action by all of those statutory and voluntary bodies and individuals with significant interests in the management and use of the Wash. It seeks to encourage them all to work in partnership for the overall benefit of the Wash and of local communities dependent on the estuary. The Local Authority Members' Group is grateful for, and impressed by, the level of comment received during the preparation of this Plan and looks forward to working constructively together with the many organisations and individuals with an interest in promoting wise use of this area in order to protect its best interests for the future.



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INTRODUCTION

- 1.1 Estuaries have long been used for many purposes, for example ports, industrial and other built development, flood protection, land reclamation for agricultural or built uses, fishing, recreation, and the development of marinas and barrages. They are also of national and international importance for nature conservation, and this has recently been further highlighted by a number of initiatives, most notably of English Nature, the Royal Society for the Protection of Birds and the Marine Conservation Society. In many estuaries there are now conflicts between the various demands for estuarine uses and especially with nature conservation. Because they are used by migratory birds, the interconnections between different estuaries in this country and further afield are an additional important nature conservation consideration.
- 1.2 In this context recent government publications have stated the need for mechanisms to be developed for the strategic management of coastal issues where these cross local authority boundaries or straddle the divide between land and sea, as is the case with the Wash. They recognise that estuaries need to be considered as a whole, given the interdependence of different parts. Co-operation between local planning authorities and other agencies to prepare estuary management plans is encouraged, and this is already happening elsewhere where non-statutory plans are being prepared, for example for the Forth, Dee, Taw and Torridge estuaries. In view of this the two County Councils of Lincolnshire and Norfolk together with English Nature formed the Wash Estuary Strategy Group in 1993 with the intention of preparing a Management Plan for the Wash. The Strategy Group brings together the local authorities in the area and all those statutory bodies with an interest in the Wash. A general 'Strategy for Sustainable Management' which provides the strategic framework for the preparation of the Management Plan has already been prepared and amended following extensive consultation, and is appended at Appendix 1. A draft Management Plan, expanding and elaborating the Strategy, was similarly the subject of public consultation during 1995. Following amendment it has been endorsed by the local authorities involved and is presented as this document.
- 1.3 THE MANAGEMENT PLAN IS NOT (NOR UNDER CURRENT LEGISLATION WILL IT EVER BE) A STATUTORY DOCUMENT. IN ORDER TO BE EFFECTIVE IT MUST RELY UPON THE GOODWILL AND CO-OPERATION OF THE LANDOWNERS, LOCAL COMMUNITIES AND USER GROUPS AND THOSE WHO HAVE VARIOUS STATUTORY RESPONSIBILITIES TO OPERATE IN THE AREA. THIS IS THE PRINCIPAL RECURRING THEME THROUGHOUT THE WHOLE OF THE MANAGEMENT PLAN.
- 1.4 The Wash, divided between Lincolnshire and Norfolk, is the largest estuarine system in Britain and is

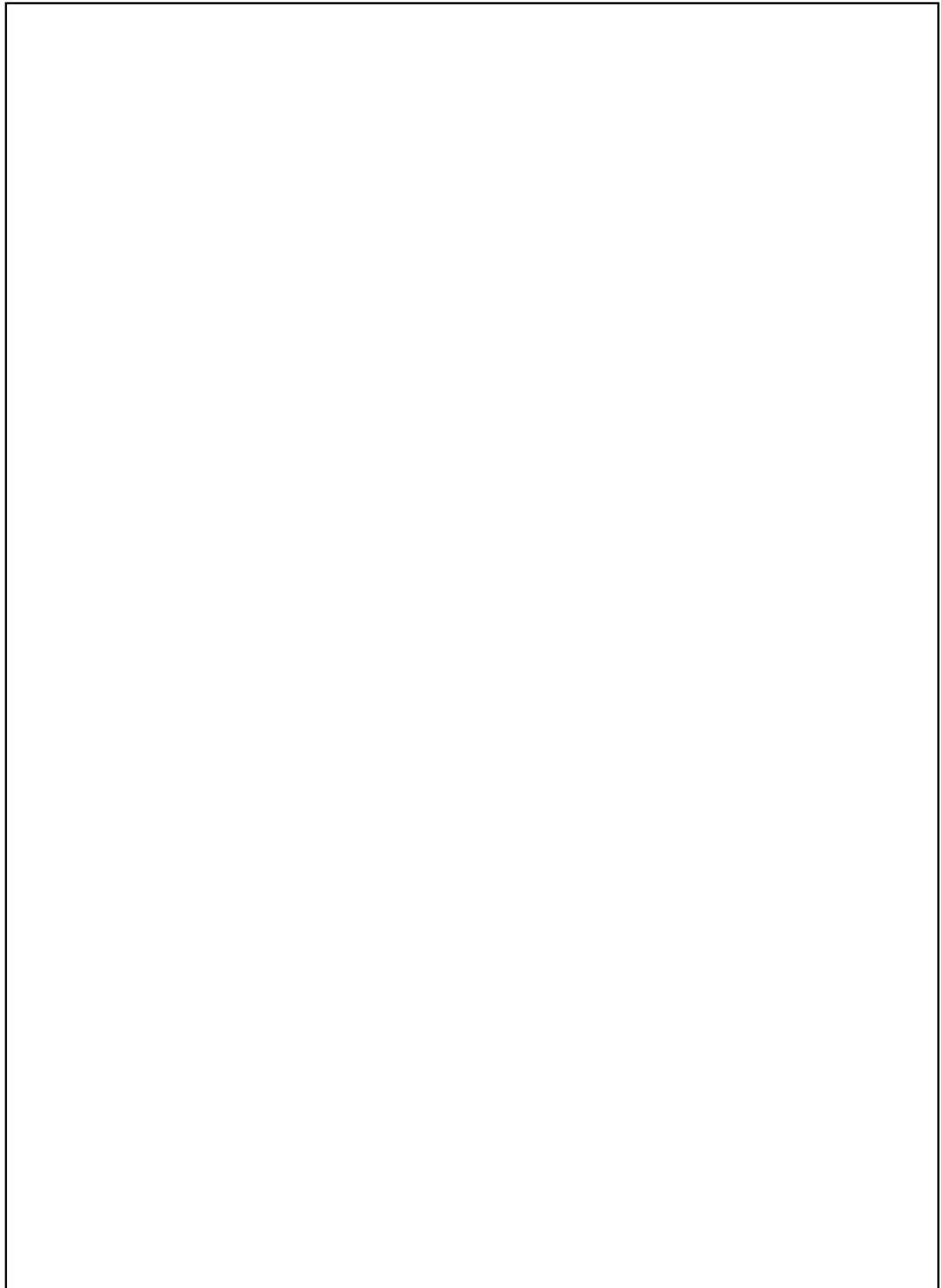
internationally important for its nature conservation value. It has national recognition as a Site of Special Scientific Interest (SSSI), international recognition as a Special Protection Area (EC Conservation of Wild Birds Directive 79/409) (SPA) and as a Ramsar Convention Site (Wetland of International Importance). It has important ecological connections with the Wadden Sea (Netherlands-Germany-Denmark) and with Morecambe Bay as well as with areas further afield as birds move between them. Parts are managed as a National Nature Reserve, other parts are managed as nature reserves by voluntary conservation bodies, and part of the south-eastern coast, including the saltmarsh, mud flats and hinterland, has been designated an Area of Outstanding Natural Beauty, indicating the national importance of the area's landscape. The Wash supports a nationally important shellfish industry for both molluscan and crustacean shellfish which has significant socio-economic implications for the area. It is a very wild and unique stretch of almost entirely undeveloped lowland coast.

- 1.5 The Wash is a proposed Marine Special Area of Conservation (SAC) under the Habitats Directive for its intertidal and subtidal sand, mudflats and Grey Seals, and Gibraltar Point is proposed as a terrestrial SAC for its sand dune habitat. The Directive provides for a network of protected areas across the European Union to be known as 'Natura 2000'. It is an important milestone for the conservation of the most endangered habitat types and species in the European Union. Designation of candidate sites will not occur until 2004. The Directive may be implemented by developing management schemes which ensure that the features for which the site is designated do not deteriorate. The Government has indicated that where an Estuary Management Plan is in place, this could be used as the basis for managing the SAC. This will not affect the non-statutory status of the Wash Estuary Management Plan.
- 1.6 There are, however, a number of other important activities on or near to the coast: flood protection, port and associated industrial uses; major agricultural uses behind the coast on land reclaimed from the estuary, but which also provides important areas used by birds from the estuary; fisheries; Ministry of Defence uses; tourist and recreational uses; water abstraction from inflowing rivers; and other issues. Any of these could have an impact on the continuing importance of the area's wildlife, and responsibility for them rests with a wide variety of local authorities, other statutory bodies, voluntary agencies and private individuals. In the past these have tended to operate in isolation and this has resulted in a short term and piecemeal view of the estuary, rather than a shared resource and a single physical and biological system. The Wash Estuary Strategy Group has brought all the leading agencies together for the first time, and this Management Plan is very much a composite exercise aimed at achieving this goal.
- 1.7 To provide a long term, shared view of how an estuary should be used requires both an Estuary Strategy and a Management Plan, based on the principle of sustainable use. Both the Strategy and Plan should seek to ensure that the natural resources of an estuary can continue to meet both the varied needs and aspirations of future generations and the obligations of Government to conserve the wildlife for the national and the international community. The Strategy, which has already been prepared, provides the guidelines for the wise use of the natural resources of the Wash for the benefit of all. This Management Plan sets out the objectives and describes what action is necessary to meet the broad brush strategic goals set out in the Strategy.

STRATEGIC GOALS

- 1.8 The resources of estuaries need to be used 'sustainably' now, in such a way that they can continue to meet the needs of future generations. Where the effect on the environment of current actions or new proposals is not fully known but is potentially damaging, decisions should err on the side of caution, i.e. the so-called 'precautionary principle' should be pursued. However, it is a recurring theme in the Plan that in such circumstances further investigatory work should be carried out. By adopting this approach not

MAP A : THE WASH SITES OF SPECIAL SCIENTIFIC
INTEREST AND SPECIAL PROTECTION AREAS
(UNDER THE EC'S WILD BIRDS DIRECTIVE)



only should the nature conservation interest of the Wash be safeguarded, as the Government is committed to do through national and international obligations, but so too should the natural character and productivity of the estuary be maintained, upon which the local industries and communities depend.

- 1.9 In this context, the overall framework for the Management Plan is provided by the strategic goals contained in the Strategy. Of equal importance, these goals are that:

- * the Wash as a natural resource of international nature conservation value is recognised, maintained and enhanced;
- * economic activities, including flood protection, that need to operate in the area are able to do so in harmony with the previous goal and with other uses;
- * distinctive landscapes and archaeological and historic features are safeguarded;
- * recreational activities are managed in such a way that the natural beauty of the area can be enjoyed without conflict with the first goal and other uses; and
- * all parties active in the Wash are encouraged to co-operate in the future in using the various powers and rights under which they operate to further these goals.

- 1.10 The Strategy further identified more specific goals directly related to the various issues to be considered in the Management Plan. These are contained in each issue-specific chapter of the Plan. They are printed in white text in solid blue boxes as in the previous paragraph and are followed by objectives and proposed management actions. Potential partner bodies, organisations and individuals who are in a position to implement the various management actions are indicated, and these are invited to adopt the various proposals as their own. There is a considerable number of such partners and, in the interests of brevity, they are indicated by abbreviations as illustrated at the end of this chapter.

MANAGEMENT PLAN AREA

- 1.11 The Management Plan area principally relates to the statutorily designated areas of the Wash, for example the SSSIs/SPAs (Map A), but on occasions it also includes the wider adjoining areas in relation to specific issues, for example, landscape, nature conservation aspects, water quality, development inland but affecting the Wash and individual management actions and initiatives.

TIMESCALE

- 1.12 It is not the intention that the Management Plan should remain unchanged for all time. Much will depend on the success of co-operative implementation, but in general terms it is envisaged that the Plan will provide the management context for the Wash for at least the next five years. Implementation will be monitored throughout this time and inevitably there will be a need for flexibility in this implementation. It is not expected however that the Management Plan will be comprehensively reviewed before the year 2000.

ORGANISATIONS INVITED TO BE PARTNERS IN IMPLEMENTING THE MANAGEMENT PLAN

Anglian Water Services Ltd	AW
Boston Borough Council	BBC
British Association for Shooting and Conservation	BASC
British Trust for Ornithology	BTO
Coastguard	CG
Conservation bodies	CBs
Councils for Sport and Recreation	CSRs
Country Landowners' Association	CLA
Countryside Commission	CoCo
County Councils	CCs
County Wildlife Trusts (for Lincolnshire and Norfolk)	CWTs
Department of Transport	DTp
District or Borough Councils	DCs
East Lindsey District Council	ELDC
East Midlands Regional Planning Forum	EMRPF
Eastern Sea Fisheries Joint Committee	ESFJC
English Nature	EN
English Heritage	EH
Environment Agency (formerly National Rivers Authority)	EA (NRA)
Farming and Wildlife Advisory Groups	FWAGs
Farmers and landowners	FLs
Fishing industry	FI
Forestry Authority	FA
Heritage Lincs	HL
Institute of Terrestrial Ecology	ITE
Internal Drainage Boards	IDBs
King's Lynn & West Norfolk Borough Council	KLWNBC
Land managers	LMs
Lincolnshire & Norfolk Committee for Oil Pollution	LINCOP
Lincolnshire County Council	LCC
Marine Conservation Society	MCS
Marine Pollution Control Unit	MPCU
Maritime users	MUs
Ministry of Defence	MoD
National Farmers' Union	NFU
Norfolk Coast Project	NCP
Norfolk County Council	NCC
Norfolk Landscape Archaeology	NLA
Owners	Os
Parish Councils	PCs
Ports Authorities	PAs
Range Authorities and their Conservation Committees	RAs
Receiver of Wreck	RoW
Recreation user groups	RUGs
Royal Commission on the Historical Monuments of England	RCHME
Royal Society for the Protection of Birds	RSPB
Sea Mammal Research Unit	SMRU
South Holland District Council	SHDC
Standing Conference of East Anglian Local Authorities	SCEALA
Tourist Boards	TBs
Tourist Industry	TI
Training and Enterprise Councils	TECs
Wash Estuary Strategy Group	WESG
Wash Wader Ringing Group	WWRG
Wash Oil Pollution Action Committee	WOPAC
Wetlands Bird Survey participants	WeBS
Wildfowling Clubs and Associations	WCAs

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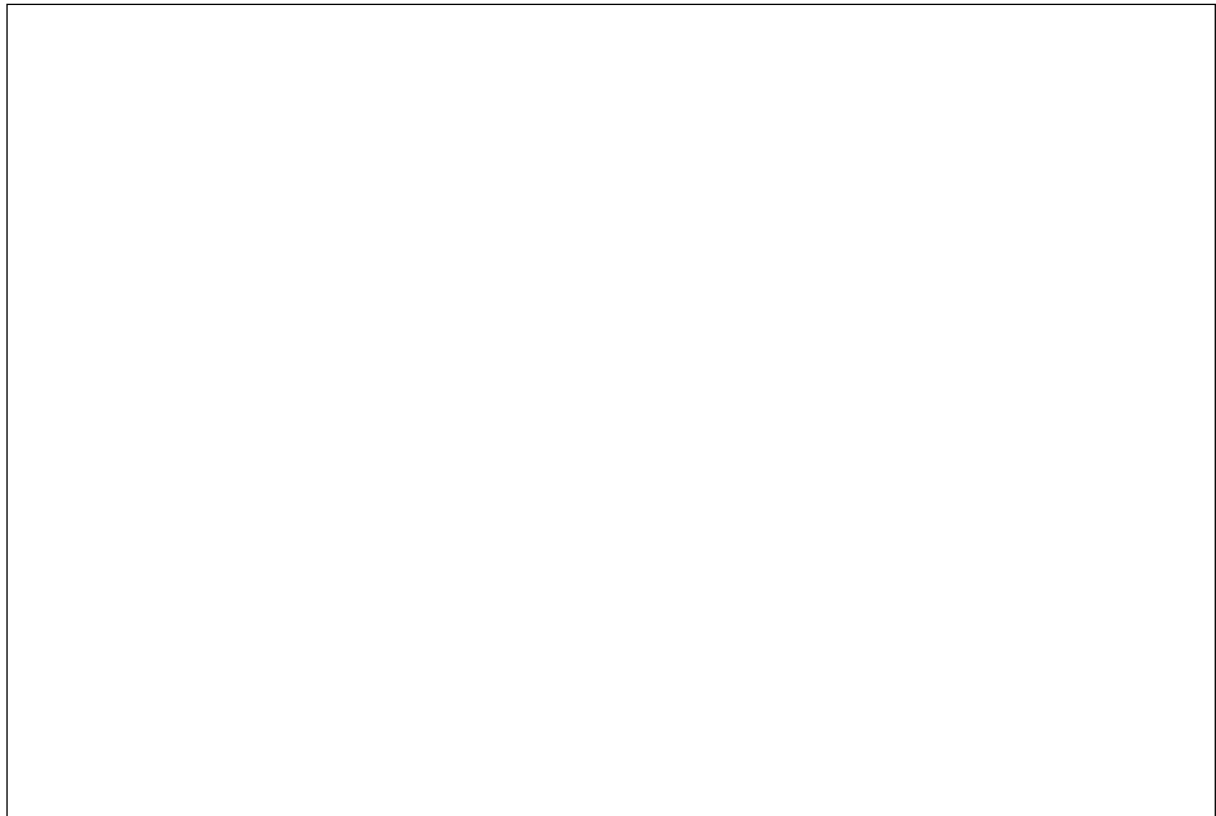
FLOOD DEFENCE AND COAST PROTECTION

The Environment Agency (formerly The National Rivers Authority)

- 2.1 The Environment Agency (EA(NRA)) (which was newly established on 1 April 1996 and incorporated the National Rivers Authority) has permissive powers to construct new works and undertake improvements and maintenance works on or in connection with main rivers and sea defences. Sea defences which are of vital importance are constructed to prevent flooding of land and property by the sea. The EA (NRA) has responsibility for carrying out sea defences except where defences are privately or Local Authority owned. The EA (NRA) has approved indicative standards of protection based on return periods of storm/flood events, e.g. 1 in 100 years for sea defences, tidal river embankments and fluvial river defences. The EA (NRA) also has general duties to promote conservation and the use of inland and coastal waters and associated land for recreational purposes. For this reason all improvement works are appraised to ensure that all options take into account environmental, economic and technical considerations.

The Wash shoreline

- 2.2 The Wash shoreline between Gibraltar Point and Hunstanton (excluding tidal rivers) is approximately 107 km of which more than three quarters is fronted by saltmarshes and mudflats. Gibraltar Point at the extreme north-western margin of the Wash forms the southern-most tip of a shingle ridge and sand-dune complex which extends southwards along the Lincolnshire coast from Skegness. The western shore of the Wash between Wainfleet and Frampton is backed by a wide belt of enclosed former saltmarsh. The shoreline along the southern and eastern sides of the Wash as far as Wolferton is of a similar character but between Snettisham and Hunstanton the upper beaches are composed of gravelly sand and adjoin a maintained shingle seabank. The southern part of Hunstanton is protected by hard sea defences whilst the northern end of the town sits upon a low cliff composed of lower greensand and chalk.
- 2.3 Large areas of the Fens are more than 3 m below Mean High Water Spring Tide Level. The relative level of sea and land around the Wash is changing. The sea is rising, possibly associated with global warming, and south-eastern England is tilting downwards. There is therefore an increasing risk of tidal inundation to large areas of the Fens. In 1953 areas around the Wash suffered devastating flooding, and were reminded of the continuing threat in 1978, when major flooding occurred. Since 1978 conditions which could have caused flooding have re-occurred, and the threat is ever present. The continuing threat



Flood defence bank

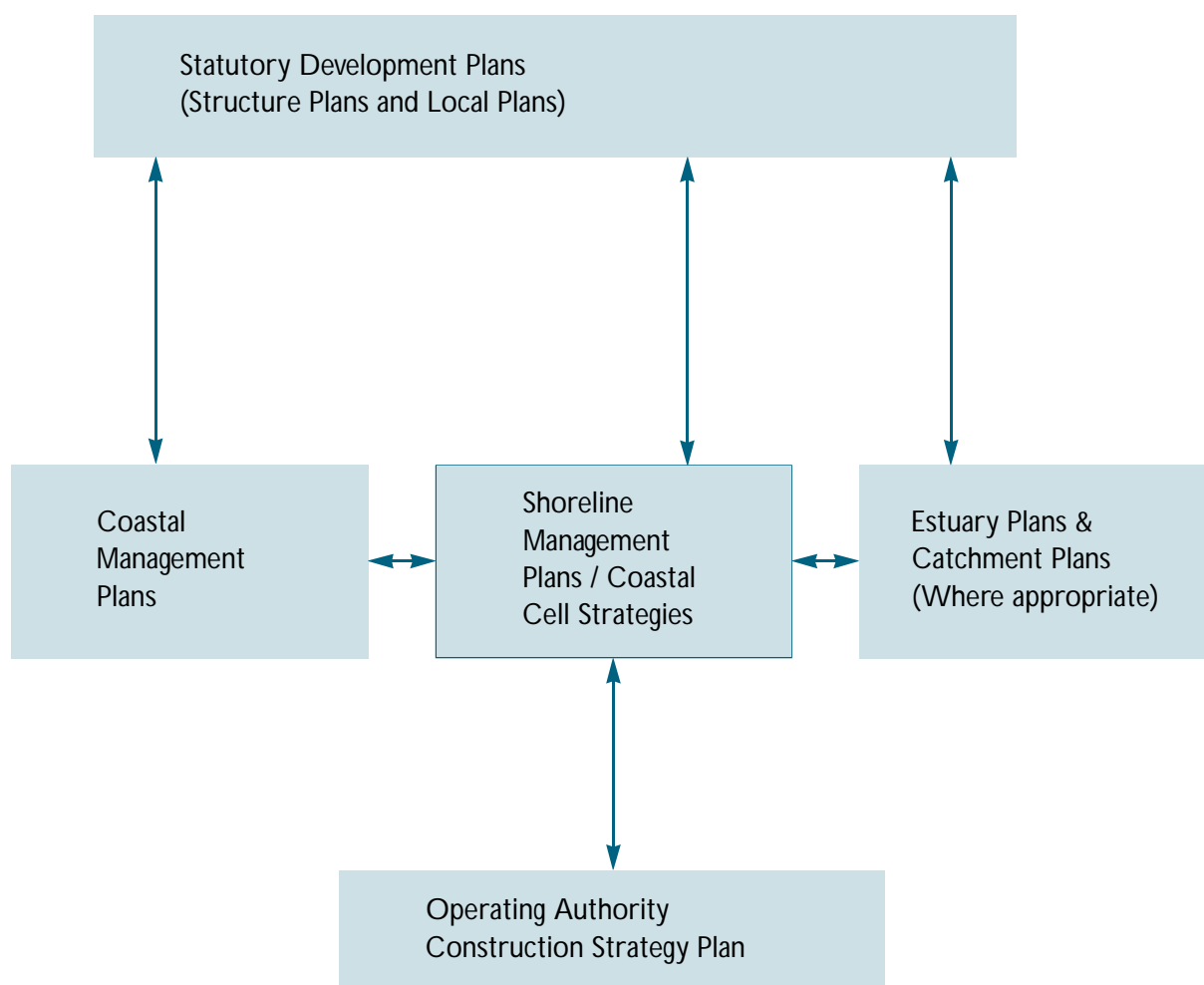
to the lives and livelihoods of the communities around the Wash means that this Plan emphasises the importance of standards of sea defence which protect people and property from flooding. In setting out standards for sea defence this Management Plan also wishes to ensure that the sea defences are technically, environmentally and economically sustainable. This is achieved through the preparation of a Shoreline Management Plan (SMP) by the EA (NRA), following MAFF guidance. The scope of the SMP is explained later in this chapter.

- 2.4 To plan coastal protection and flood defences appropriate to any part of the coast, the nature of the coast, patterns of sediment transport and their effects upon patterns of accretion and erosion all have to be understood.

Sediment transport

- 2.5 Sediment transport within the Wash is dominated by tidal processes. Although extreme wave events may have significant impacts, much of the coastline has experienced significant accretion since before Roman times mainly induced by natural processes but enhanced by human activities including drainage diversion, embankment construction and marsh enclosure, channel dredging and construction of training walls to reclaim land. From a sea defence as well as a conservation point of view, it is advantageous to maintain a zone of healthy saltmarsh and high intertidal flats around the Wash.
- 2.6 Four main rivers, namely the Witham, Welland, Nene and Great Ouse, discharge into the Wash with a total drainage area of some 13,000 sq km, much of which is low lying at or around sea level. The outfalls of these rivers are controlled by sluices which allow freshwater discharge at low tide at Boston on the River Witham, Spalding on the River Welland, Dog-in-a-Doublet on the River Nene and St Ives on the Great Ouse. The direct discharge into the Wash is along the tidal main river lengths which total some 120 km. The gradients of the tidal rivers are very low, 1:10,000, and to provide effective drainage the tidal channels should be self-cleansing. Several Internal Drainage Board areas drain into the tidal rivers by both gravity and pumped discharge.

FIGURE 1 :
RELATIONSHIP WITH OTHER COASTAL POLICIES



Shoreline management planning

- 2.7 The pattern of sediment transport around the coast of Britain can be divided into coastal cells. The effects of sediment movement within these cells are confined to the coast in each cell. However, within each cell there can be a number of sub-cells where the effects of coastal erosion or accretion are partly dependent on the adjacent areas. When planning coastal defences it is important that the potential effects of proposals are considered in relation to adjacent areas. Around the English coast, a lack of such consideration in the past has led to coastal defences at one site causing erosion elsewhere.
- 2.8 The planning of coastal protection and flood defences needs to consider not only the physical processes related to the coastal cell, but also planning pressures, current and future land use, flood defence needs and environmental issues. This requires an overall strategic framework, which can be achieved by an SMP. The relationship of SMPs with other coastal policies is shown in Figure 1. An SMP is both a component part of and may be influenced by other aspects of policies affecting the coastline. An SMP provides the framework for decisions on the management of a sediment cell or sub-cell taking into account the natural coastal processes and human and other environmental influences and needs. The aim is to produce

strategic guidelines and policy for the future management of a length of coastline reflecting wider geographical coastal cell issues.

2.9 The EA (NRA) is producing the Wash SMP during 1995-6 following MAFF guidelines. This SMP is intended to be an integral part of the Wash Estuary Management Plan and it will be a “living” document that needs constant updating to respond to changes in policy and the natural environment. The preparation of the SMP involves consultation with all relevant parties and users. In preparing the SMP a variety of factors are being considered, including

- an analysis of the tidal processes influencing and affecting the Wash, including waves, water levels, tidal currents, and sediment transportation as inputs to a detailed examination of past, present and future geomorphological changes;
- how these natural processes and land use may require changes in the future;
- the strategic concerns of other agencies, e.g. dredging, navigation channels and fisheries, and how such activities might affect the SMP;
- the human and built environment and the aspirations that exist for the Wash; and
- the establishment of environmental objectives for the natural and developed environment, based on consultation with relevant parties.

Environmental baseline surveys and condition surveys of the sea defences and tidal river embankments may be needed and will be conducted in consultation with other agencies and relevant parties. To determine the preferred strategic option for flood defence, the SMP is assessing the four options

- do nothing
- hold the existing defence line
- advance the existing line
- retreat the existing line

in economic, engineering and environmental terms. SMPs are expected to reflect the special protection afforded to sites which are designated as SPA and candidate SACs such as the Wash. However this should not increase the risks to people and property.

FLOOD DEFENCE AND COAST PROTECTION GOALS

- * To maintain adequate standards of flood defence to protect people and property.
- * To consider appropriate alternatives to the further taking of saltmarsh habitat for engineering works or other purposes.
- * To examine the suitability of set-back or foreshore recharge schemes in order to balance the increasing loss of inter-tidal habitats in south-eastern England.
- * To monitor the effects of sea-level rise and the strengthening of sea defences on the physical environment of the Wash.

Within these goals the SMP will have the following objectives:

Objective FDCP1	To develop a sustainable policy which gives due consideration to the environment and potential risk of flooding and erosion.
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Objective FDCP2	To assign standards for the Wash having due regard to land usage, tidal processes, socio-environmental impact, and impact of current defences.
Objective FDCP3	To identify potential environmental enhancements based on environmental, economic and technical criteria.
Objective FDCP4	To review current and future monitoring needs for the Wash both from flood defence and environmental points of view.
Action FDCP1	<i>The Environmental Agency (formerly the National Rivers Authority) will develop a Shoreline Management Plan for the Wash in consultation with all interested parties and users.</i>
Implementation:	EA (NRA)

PLANNING AND DEVELOPMENT

- 3.1 The Wash and Gibraltar Point are Sites of Special Scientific Interest under national legislation, Ramsar sites under international convention, Special Protection Areas under the EC's Birds Directive and part of the Wash is managed as a National Nature Reserve. The south-eastern coast and hinterland in Norfolk is additionally designated as an Area of Outstanding Natural Beauty under national legislation. Other areas are also protected by statutory policy designations, for example Coastal Conservation Areas contained in the Lincolnshire Structure Plan. These all place a degree of constraint upon development in the area for reasons of its nature and landscape conservation importance. In addition, there are also important port, industrial, agricultural, tourist, recreation, potential marine mineral extraction and other economic activities based near to or off the Wash coast. The planning system provides a unique but partial mechanism for trying to reconcile these potentially conflicting roles both through the Development Plan policy making process and through the development control system of determining planning applications.
- 3.2 In general terms, Central Government planning policy advice is now expressed in Planning Policy Guidance Notes (PPGs). The two of most relevance to the Wash Management Plan are PPG 20 on Coastal Planning and PPG 12 on Development Plans and Regional Planning Guidance. PPG 20 states that the key policy issues to be addressed in coastal planning are:-
- conservation of the natural environment;
 - development, particularly that which requires a coastal location;
 - risks, including flooding, erosion and land instability; and
 - improving the environment, particularly of urbanised or despoiled coastlines.
- PPG 12 concerns the preparation of Development Plans and Regional Planning Guidance. It emphasises:-
- the Government's intention to work towards ensuring that development and growth are sustainable;
 - the continued development of policies consistent with the concept of sustainable development; and
 - the requirement that development control decisions should accord with the development plan unless material considerations indicate otherwise.
- 3.3 In addition, PPG 17 (Sport and Recreation) makes it clear that recreation and conservation objectives are capable of reconciliation in most cases, but if there is irreconcilable conflict conservation and

enhancement of the natural beauty must take precedence. PPG 21 (Tourism) emphasises the need to achieve sustainable tourism which serves the interests of both economic growth and conservation of the environment. PPG 7 (The Countryside and The Rural Economy) stresses that in the countryside development should benefit the rural economy and maintain or enhance the environment. PPG9 (Nature Conservation) states the Government's objectives for nature conservation which include minimising the adverse effects on wildlife where conflicts of interest are unavoidable. PPG9 also contributes to implementing the Habitats Directive.

PLANNING AND DEVELOPMENT GOAL 1

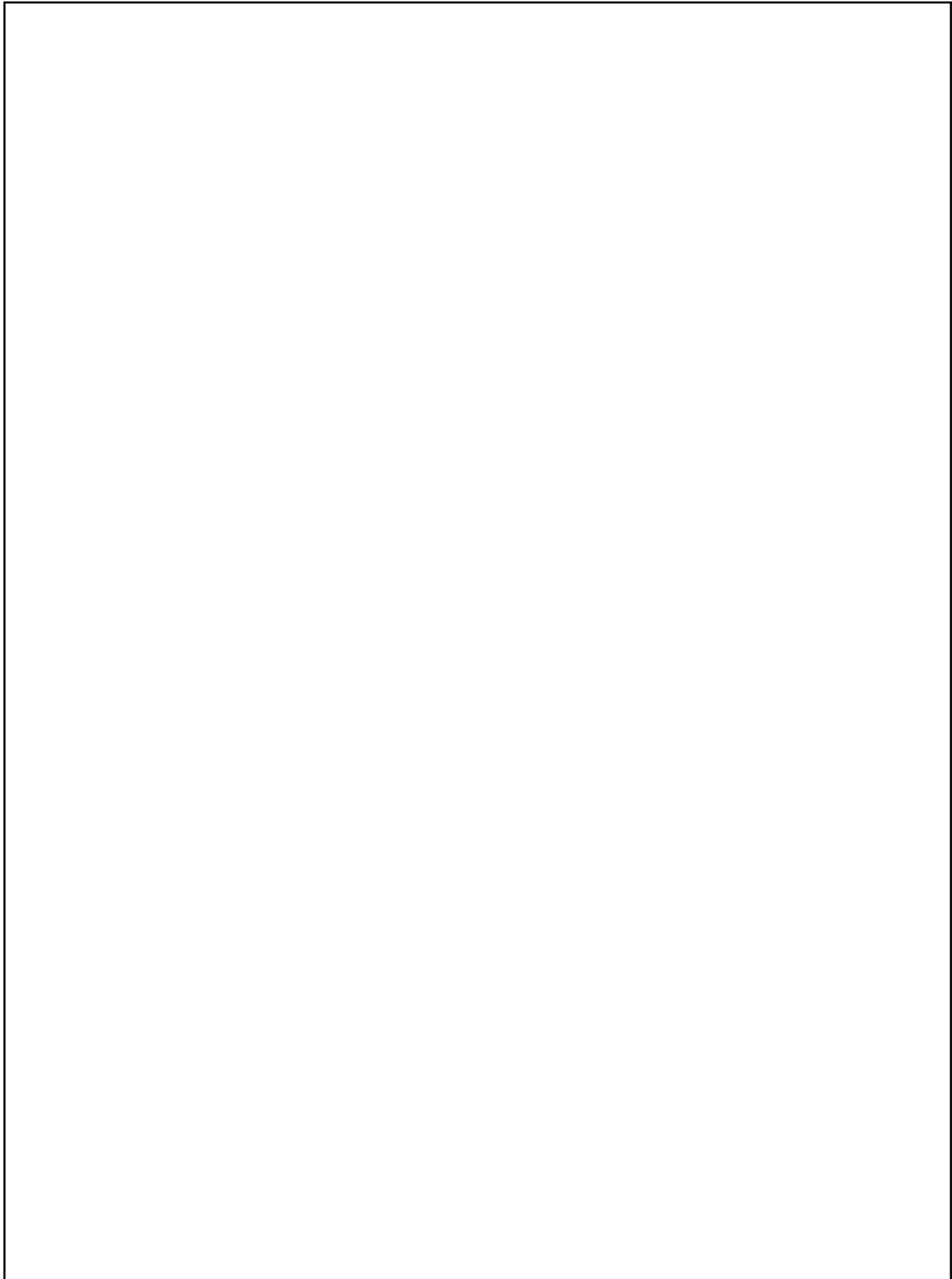
* To ensure that all aspects of the planning system fully recognise the need to safeguard statutorily designated areas, e.g. the Area of Outstanding Natural Beauty, the Sites of Special Scientific Interest, the Special Protection Area etc. in considering development proposals.

Statutory Plans relating to the Wash

- 3.4 Within the overall parameters of national planning policies, Central Government is systematically issuing Regional Planning Guidance (RPG) for the standard regions of the country. The primary function of this Guidance is to provide the necessary framework for the preparation of Structure Plans. The area of the Wash Management Plan is split between two regions. RPG for East Anglia was issued in July 1991 and for the East Midlands in March 1994. Whilst, in both, coastal conservation and development are briefly considered, in neither is the unique importance of the Wash highlighted.

Objective PD1 To ensure that the unique importance of the Wash is adequately and consistently reflected in Regional Planning Guidance for East Anglia and the East Midlands.

MAP B:
COASTAL CONSERVATION AREAS (LINCOLNSHIRE)
AND AREA OF OUTSTANDING NATURAL BEAUTY
(NORFOLK)



<i>Action PD1</i>	<i>The local authorities and other relevant organisations should strongly advocate the importance of the Wash in consultation on future reviews of RPG for East Anglia and the East Midlands.</i>
<i>Implementation:</i>	<i>CCs, DCs, SCEALA, EMRPF</i>

- 3.5 The Management Plan area is covered by the Norfolk and Lincolnshire Structure Plans. The former has recently been comprehensively reviewed and was approved in 1993, whilst the latter, originally approved in 1981, is currently being comprehensively reviewed following the adoption of two Alterations in 1991 and 1994. The latest versions of both Plans contain Policies (see Appendix 2) which explicitly prevent development which would adversely affect designated sites of international importance for nature conservation, Sites of Special Scientific Interest, and National and Local Nature Reserves. The Norfolk Plan further precludes development which would be detrimental to the character of the Area of Outstanding Natural Beauty while the Lincolnshire Plan additionally protects designated Coastal Conservation Areas. The protection of these areas is seen as being of paramount importance unless the overriding national interest prevails. Map B indicates the boundaries of both the Coastal Conservation Areas and the Area of Outstanding Natural Beauty.

Objective PD2	To ensure that the nature conservation and landscape importance of the Wash in the Lincolnshire and Norfolk Structure Plans is safeguarded and whenever possible enhanced.
<i>Action PD2.1</i>	<i>In any current or future reviews of Structure Plans the need to safeguard the nature conservation and landscape importance of the Wash should be fully recognised.</i>
<i>Implementation:</i>	<i>CCs</i>
<i>Action PD2.2</i>	<i>Development proposals within or affecting the Management plan area should be monitored to ensure that they do not conflict with Structure Plan policies aimed at safeguarding the nature conservation and landscape importance of the Wash.</i>
<i>Implementation:</i>	<i>CCs, DCs</i>

- 3.6 The Lincolnshire and parts of the Norfolk side of the Management Plan area are almost entirely rural being devoted to agriculture and as such they do not have a major tourist and holiday function. This is not the case in some areas of Norfolk however, where Hunstanton, Heacham and Snettisham all face pressure for such development. The strategy contained in the Norfolk Structure Plan is generally to focus new development on Hunstanton and to strictly control such development along the undeveloped coast.

Objective PD3	To ensure that new and/or improved holiday associated development is directed towards existing centres, as defined in Statutory Plans, and away from the undeveloped coast.
<i>Action PD3</i>	<i>New and/or improved holiday associated developments should be monitored to ensure achievement of the above objective.</i>
<i>Implementation:</i>	<i>NCC, KLWNBC</i>

- 3.7 Within the overall strategic context set by the Lincolnshire and Norfolk Structure Plans, the District Councils are at various stages of preparing District Local Plans which provide the more detailed planning policy context for the Management Plan area. The relevant plans are: East Lindsey Local Plan (adopted), Boston Local Plan (deposit draft), South Holland District Local Plan (deposit draft), and King's Lynn and

West Norfolk Local Plan (deposit draft). In all of these plans there are policies (see Appendix 2) which re-iterate and where appropriate amplify the Structure Plan framework of safeguarding the nature conservation and landscape importance of the Wash. This consistency is important and should be carried through to the adoption (and ultimate review) of all of these plans.

Objective PD4	To ensure that the nature conservation and landscape importance of the Wash is consistently safeguarded in all Local Plans covering the Management Plan area.
<i>Action PD4</i>	<i>Liaison on and the monitoring of Local Plans as they progress through the required statutory processes should take place to ensure consistency of policy content.</i>
<i>Implementation:</i>	<i>CCs, DCs, EN.</i>

- 3.8 On the Lincolnshire side of the Wash, development pressures within the Management Plan area are not intensive. Nevertheless, following the lead set by the Lincolnshire Structure Plan (1981) and the statutory Local Plan 'Development on the Lincolnshire Coast' (1986) all of the relevant district-wide Local Plans carry forward policies relating to development within defined Coastal Conservation Areas. These policies are intended to prevent all but essential development, although minor developments related to an existing use or to the recreational enjoyment of the countryside and foreshore will normally be permitted.

Objective PD5	To ensure that development within the Lincolnshire Coastal Conservation Areas is restricted to that which is shown to be essential in that location.
<i>Action PD5</i>	<i>Planning applications for development within the Lincolnshire Coastal Conservation Areas should be monitored to ensure that the above objective is achieved.</i>
<i>Implementation:</i>	<i>LCC, ELDC, BBC, SHDC.</i>

- 3.9 On the Norfolk side of the Wash land uses are less uniform, and whilst most of the area remains rural and undeveloped, certain areas are subject to pressure from holiday and recreational activities. These are primarily centred on Snettisham Beach-Shepherd's Port, Heacham and Hunstanton. Here there is conflict between the various users, for example beach uses, bird watching, chalets and caravans, watersports, club entertainments and Coastal Park activities. The deposit draft Local Plan for the area recognises this conflict and provides a policy framework for its resolution (see Appendix 2). Carrying forward the strategy of the Norfolk Structure Plan, the undeveloped coast is protected from development, with holiday and recreational uses being directed to existing areas. There emphasis is placed on the need for environmental improvement, for example upgrading or replacing existing chalet development and implementing landscaping schemes to screen some of the more unsightly aspects of holiday use. Reconciliation of competing uses through management is the overall aim, but if this cannot be achieved conservation and enhancement of the natural beauty must take precedence.

Objective PD6	To ensure that holiday and recreational development along the Norfolk side of the Wash coast is located within existing centres and away from the undeveloped coast.
Objective PD7	To implement management and improvement measures where appropriate to help reconcile conflicting uses and to enhance the environment.
<i>Action PD6</i>	<i>Planning applications for development within the Norfolk area should be monitored</i>

	<i>to ensure that the above objectives are achieved.</i>
<i>Action PD7</i>	<i>Specific management and improvement measures should be identified and implemented where appropriate.</i>
<i>Implementation:</i>	<i>NCC, KLWNBC</i>

PLANNING AND DEVELOPMENT GOAL 2

* To ensure that land- and sea-based development is compatible with the aim of sustainable use.

- 3.10 It is possible that major development proposals some distance from the estuary could significantly affect the environment of the Wash. Such proposals could feasibly include industrial developments with pollution implications, power stations, renewable energy proposals and certain types of port related development. It is not the intention of the Management Plan to constrain such developments unnecessarily as these can often be of great benefit to the local economy, but the environmental implications on the Wash of any such proposal must be a material consideration in the decision making process. Reference of any such major applications to the Wash Local Authorities Members' Group for comment would be a co-ordinated way of ensuring that the implications for the Wash are fully considered and taken into account.

Objective PD8.1	To ensure that the environmental implications of any major proposal for development with an impact on the Wash are a material consideration in the determination of a planning application, and that the environmental impact of any subsequent permission is monitored.
Objective PD8.2	To ensure that any such applications having a significant impact are referred to the Wash Local Authorities Members' Group for comment prior to any decisions being taken.
<i>Action PD8</i>	<i>Planning applications and permissions should be monitored to ensure that the above objectives are achieved.</i>
<i>Implementation:</i>	<i>CCs, DCs, NRA, PAs, ESFJC.</i>

- 3.11 Local authority planning control extends only to mean low water mark. At present there are no sea-based developments outside this control which are known to affect the Wash. However, in the future it is possible that marine dredged aggregate operations and/or oil and gas explorations could impinge upon the area. Applications for the former are made to the Crown Estate but the decision whether or not to permit the proposal is reached through a consultation process known as the Government View Procedure co-ordinated by the Minerals and Land Reclamation Division of the Department of the Environment. It is Government policy to ensure that marine aggregate extraction is not permitted if it would cause damage to sea fisheries or to the marine environment or if there is a risk that coastal erosion would result. Petroleum production licences which govern oil and gas exploration and production are issued by the Department of Trade and Industry. Environmental concerns are taken into account. Any sensitive areas are generally protected by the imposition of appropriate conditions. There is little evidence to suggest that exploration has an environmental impact outside the immediate drilling area. The actual development of an oil or gas field for production carries potentially greater risks for oil spill. All licensees operating within 25 miles of the coast or in other environmentally sensitive areas are required to carry out an Environmental Assessment in consultation with all interested parties including local authorities and English Nature. Development plans for production submitted for approval are required

to describe a wide range of aspects including the arrangements for pollution control. Ministers can reject development plans on the grounds that they are contrary to good oilfield practice or the national interest.

Objective PD9	To ensure that the marine environment, nature conservation, flood protection, fishing and navigation interests of the Wash are adequately safeguarded in relation to any possible future marine dredged aggregate operations and oil or gas exploration and production.
Action PD9.1	<i>In any consultations on the above, the relevant authorities and organisations, including where appropriate the Wash Local Authorities Members' Group, should consistently ensure that the marine environment, nature conservation, flood protection, fishing and navigation interests are adequately safeguarded.</i>
Action PD9.2	<i>Any future marine dredged aggregate and/or oil and gas operations should be monitored to assess their effect on the Wash.</i>
Implementation:	CCs, DCs, EA (NRA), PAs, ESFJC.

Chapter

4

LANDSCAPE

- 4.1 The Wash estuary is an area of acclaimed importance to wildlife on an international scale. It is also an area of unique landscape character, part of which in the south-eastern corner is designated an Area of Outstanding Natural Beauty (under the National Parks and Access to the Countryside Act, 1949) which indicates the national importance of its landscape qualities. Whilst some would refer to the area as bleak, windswept and monotonous, the remoteness and the openness of the intertidal marshes seen against the setting of the agricultural hinterland together with the vast skies, sea smells and above all the teeming bird life combine to form a landscape of rare quality.
- 4.2 A landscape assessment of the Wash was undertaken in February 1994, and this defined the various distinctive areas which, following a brief discussion of the historical background to the area, are described below. Within this context and that of the previously established strategic goals for landscape, objectives and actions for the future management of these differing areas have been formulated. A prerequisite to successful implementation will be co-operation with those farmers, landowners, public authorities and others who together are responsible for managing the land and sea on either side of the sea banks which in combination form the Wash landscape. A landscape assessment for the whole of the Norfolk AONB, including the Wash coast section, has also been undertaken and has been published separately by the Countryside Commission.

HISTORICAL BACKGROUND TO THE LANDSCAPE

People pass over from Lynn in boats into the fenn-country, and over the famous washes into Lincolnshire, but the passage is very dangerous and uneasy, and where passengers often miscarry and are lost; but then it is usually on their venturing at improper times, and without the guides, which if they would be persuaded not to do, they would very rarely fail of going or coming safe.

Daniel Defoe, "A Tour through the Whole Island of Great Britain", 1724-26, (Everyman, 1962, Vol I, p.74)

- 4.3 Early references to the appearance of the Wash coast are scant, but Defoe obviously saw a wild and desolate area, and many would use that description of it today. Since the early 1700s, and indeed since long before then, this coast has undergone many changes, both natural and man-made, before arriving at its current state.
- 4.4 The Wash is the remnant of a once more extensive water-filled basin, formed by the breaking through of the chalk and sandstone escarpment between what are now the cliffs at Hunstanton and the Lincolnshire Wolds. In Iron Age times the Wash lagoon was wide and shallow with a saltmarsh coastline

near what is now the inland Fen edge. Silt was brought into the lagoon from offshore to form an irregular bar on the seaward side of the marshy inlets from Wainfleet to Boston and in a broad arc round to Holbeach and narrowing again towards King's Lynn, broken by the wide tidal estuaries of the Witham, Welland, Nene and Ouse.

- 4.5 Anglo-Saxons established settlements on the silt bar and began to consolidate by small 'intakes' from the marsh. With various vicissitudes of inundation and deposition, more reclamations did not take place until the mid 1500s in the shelter of Gibraltar point. In the time of King James I saltmarsh had grown to impressive extent - up to three miles wide in parts of Holland, and 4500 acres in Moulton and Gedney.
- 4.6 Large scale reclamations got under way in 1632, when Vermuyden embanked 1120 acres in the Nene estuary, and by 1660 a massive 17,374 acres in Gedney, Whaplode, Holbeach and Moulton had been reclaimed and Bicker Haven had been cut off from the sea. With some set backs others followed until the early 1980s.
- 4.7 The outfalls of all the four main rivers emptying into the Wash have been straightened, narrowed and constrained since the early 19th century, up to which time they had periodically shifted within wide estuaries. Before their alteration, the estuaries were sandy and a mecca for the cult of sea bathing in the late 18th and early 19th centuries, notably at Fosdyke Wash, Skirbeck, and Gedney Drove End, but most particularly at Freiston Shore, where hotels were developed and an annual summer Sand Fair was held with horse races. All of this came to an abrupt halt with the opening of the Witham Cut in 1885 which stimulated new saltmarsh to develop along the shores to the north. On the southern shores of the Wash construction of training walls along the lower part of the Welland in 1837/8 resulted in the deepening of the river bed by 7 feet and the grassing over of the sandy foreshores at Frampton and Moulton by 1851. Completion of training walls on the Nene and the Ouse enabled further reclamations to take place.
- 4.8 The whole limit of the outer edge of the intensively used land is now much more completely engineered as evidenced by even a cursory comparison of the first edition Ordnance Survey map of the area, surveyed in the 1820s, and current OS maps.
- 4.9 Other, even larger scale, proposals for reclamations have not come about. They date from the mid 1750s, and include: one to form a new county ('Victoria') of 150,000 acres in 1839; proposals to harness tidal power in 1928; a Wash Speedway between Gibraltar Point and the mouth of the Witham in 1930 (including 200-yard wide race track, 12-mile TT track, 6-mile motorboat speedway, aerodrome, hotels, amusement park, a grandstand four miles long...); a barrage with locks and sluices to cut off about half the area of the Wash and a city of 750,000 people with airport and road and rail links and other reclamations as separate proposals in the mid-1960s; and fresh water reservoir storage proposals in the mid-1970s, some testing results of which still remain. Clearly the Wash coast might have been very different from what we have been bequeathed!

LANDSCAPE GOALS

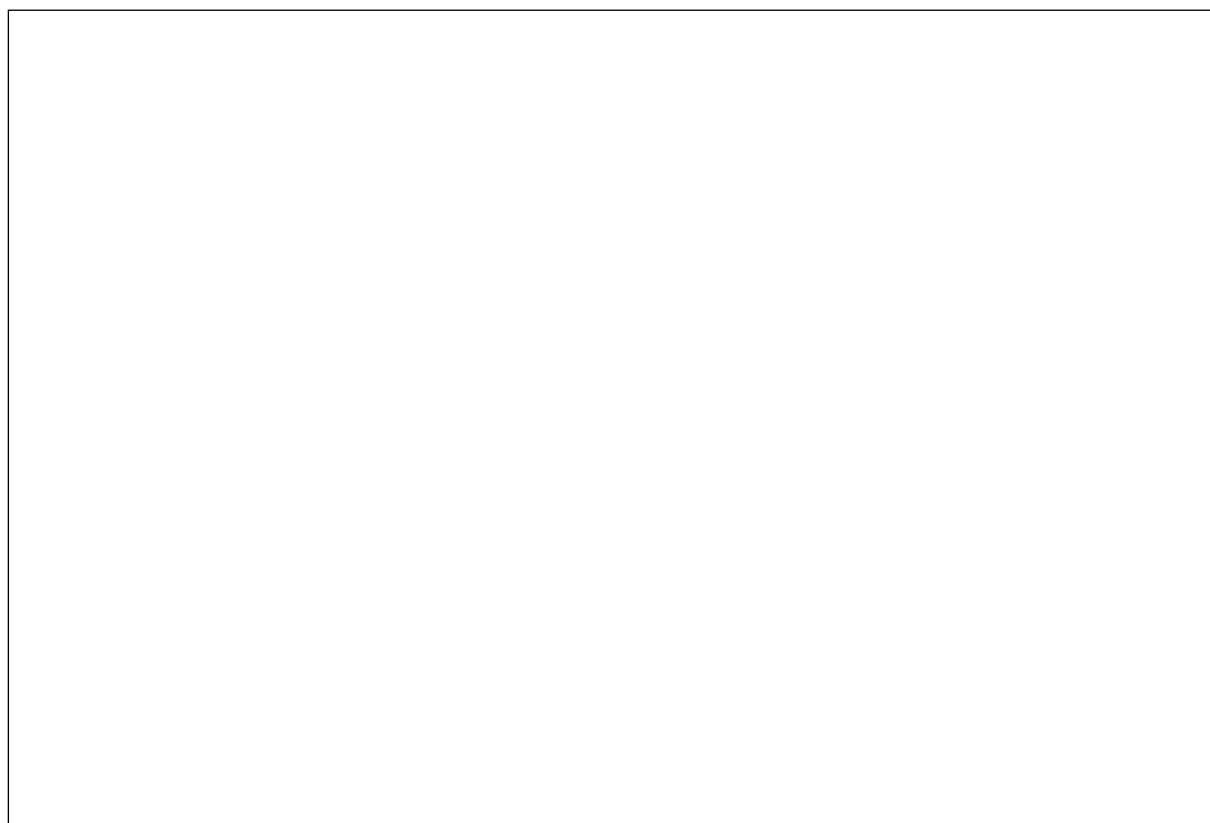
- * To promote policies that conserve the landscape qualities and local distinctiveness of the area;
- * To ensure that the estuary and adjoining areas are managed in ways which reflect the unique character of the Wash;
- * To maximise opportunities for landscape improvement and enhancement; and
- * To investigate the extent of marine archaeological interest, and safeguard important remains.

- 4.10 The landscape assessment identified certain key features of the Wash landscape, the most important of which are: remoteness, wildness, open character, extensive views both seaward and within the hinterland, and the presence and sound of birdlife. Whilst the assessment defined six key landscape zones (shown generally on Map C) which are different from each other in some important details, these overall landscape characteristics are common throughout and need to be maintained. Other landscape elements such as dykes, former and current sea banks, wetlands, grazing lands and different patterns of tree and shrub plantings need to be managed to maintain and reinforce the detailed landscape variations around the Wash that contribute to the overall interest of the area. These are discussed under each landscape zone below together with objectives and actions for management.

THE LANDSCAPE ZONES

Intertidal Marshes

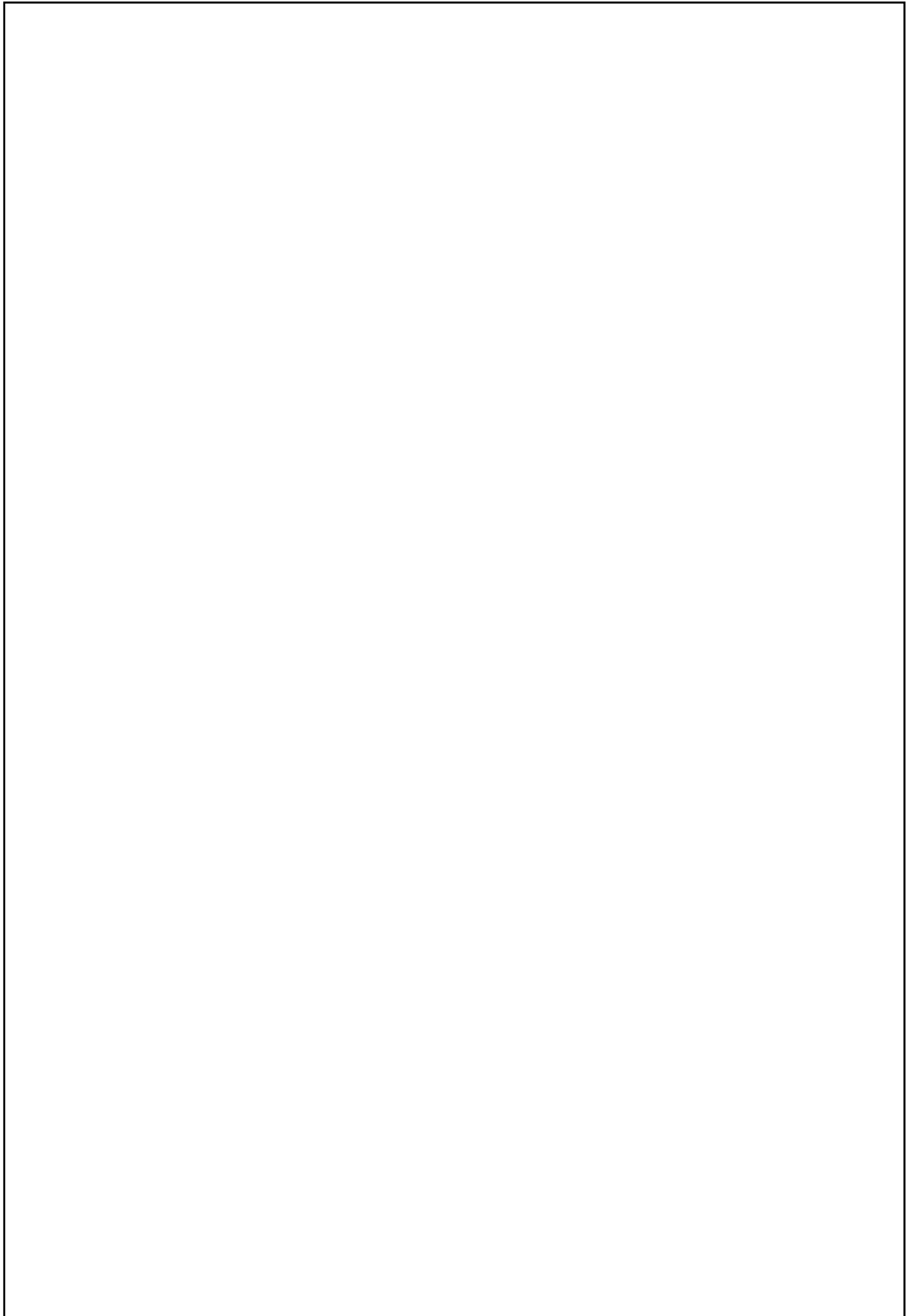
A wide expanse of grey-green marsh intersected with meandering shallow muddy channels and sluggish tidal streams. The influence of the sea is felt in the salty winds and smells, even when the tide recedes to the far horizon. Birds flock to the zone, their calls cutting through the silence.



Saltmarsh at Gedney

- 4.11 Whilst the extent of the marshland zone varies around the Wash, it is dominated by the sense of remoteness, openness and long views to the horizon. Colours tend to be muted although there are variations in species type and hue which change seasonally as well as spatially. There are few points of public access to the outmarsh although visually large swathes can be seen from the sea bank. The teeming birdlife and, in some places, grazing animals add interest to the scene, and their presence is a direct contrast to the total lack of human settlement. Only the wildfowlers' huts on Wootton and Wolferton Marshes and the military activity on Wainfleet Sand, Friskney Flats and Holbeach Marsh indicate a significant human presence in this area, and it is important to sustain this sense of isolation.

MAP C : KEY LANDSCAPE ZONES



- 4.12 The engineered structures of the sea banks represent the largest area of grassland near to the coast back from the intertidal marshes. The grassland on these banks is generally improved and kept close cropped either through grazing or cutting. There may be opportunities to vary the management of these grass embankments to improve their value for wildlife at the same time adding to the visual diversity.
- 4.13 The shifting channels and their marker buoys also form important landscape elements as does the intermittent passage of shipping down the main channels to King's Lynn, Wisbech/Sutton Bridge and Boston.

Key Characteristics

- * Remote, wild landscape
- * Openness with long views to the horizon
- * Birdlife
- * Simple landscape of salt marsh and tidal creeks

Objective L1.1	To ensure that the open remote marshland landscape is maintained.
Objective L1.2	To ensure the marshes are managed in harmony with the landscape to support a healthy population of waterfowl which is essential to the marshland scene.
Action L1.1	<i>The planting of trees or shrubs on or beyond the outer sea bank should continue to be discouraged, and the grass on the sea banks should be managed in the best interests of wildlife and visual interest and diversity, commensurate with the need to maintain the engineering integrity of the banks. Advice should be provided to encourage this to happen.</i>
Implementation:	<i>FLs, EA (NRA), CCs, DCs, EN, CoCo, NCP, private advisers.</i>
Action L1.2	<i>Permanent development in the marshland zone should be avoided according to planning policy.</i>
Implementation:	<i>CCs, DCs.</i>
Action L1.3	<i>Permanent fencing on the marshes should be kept to a minimum, particularly moving outwards toward the open sea.</i>
Implementation:	<i>FLs</i>
Action L1.4	<i>The digging of necessary borrow pits to raise the sea bank should be carefully designed to minimise intrusion into the remoteness of the landscape. The dispersal of mud and silt should be an integral part of the design of any channel dredging scheme. Similarly, the flattening or other disposal of cradge banks should be included in the design of any engineering works.</i>
Implementation:	<i>EA (NRA), PAs</i>

Reclaimed Unsettled Marsh

A flat reclaimed arable landscape, vast in scale and almost as remote as the marshland shore.

- 4.14 The reclaimed unsettled marsh lies between the current sea bank and at least the first previous sea bank, from Boathouse Creek Snettisham in Norfolk to Gibraltar Point in Lincolnshire. Whilst there are subtle variations in the area, particularly in the amount of tree cover, the area is essentially of an open



Open agricultural landscape at Holbeach

character, predominantly arable with ditches dividing the fields and running at the base of the sea banks. Field size is very large, and the area is windswept and has a simple highly unified visual quality. Birdlife is important in this area adding interest to the scene as are the occasional patches of grassland with grazing animals, and reed beds where these fringe the ditch lines. Access to this area is restricted to the minor roads and public rights of way but the openness of the landscape affords a wide visual scope of view.

- 4.15 Buildings are sparse and largely confined to agricultural stores and the occasional farmstead. There is little evidence of residential dwellings or industrial premises which are not attached to an agricultural use. The land on the west coast at Wainfleet Marsh is almost completely empty of trees with just sparse scrub on some of the banks and isolated groups of trees associated with farmsteads. Further south and eastwards there is more cover with lines of trees marching seaward from time to time but still the overall character is open.

Key Characteristics

- * Open character with long views
- * Unsettled countryside
- * Drains, ditches and banks
- * Birds

Objective L2	To maintain the open landscape of the reclaimed unsettled marsh.
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Action L2.1	<i>New planting should be undertaken with great care. It should not enclose the landscape and generally it will be most appropriate in association with existing buildings. Rectangular blocks of planting which disrupt the open character of the landscape should not be encouraged. Sporadic lines of planting of a scrubby open</i>
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	<i>nature may be appropriate in this landscape but the density of these should thin as they advance outward toward the sea. This action is intended to maintain the feeling of proximity to the coast and the 'newness' of this landscape, particularly important given that further reclamations are unlikely to provide new 'new landscapes'.</i>
Implementation:	<i>FLs, CCs, DCs, CoCo, FWAGs, FA, NCP, private advisers.</i>
Action L2.2	<i>Great care should be taken in the siting of necessary new farm buildings to ensure that the open character of the landscape is not compromised.</i>
Implementation:	<i>FLs, CCs, DCs, private advisers.</i>
Action L2.3	<i>Grass embankments should be managed to maximise their wildlife value, and thereby their landscape value, within the overall need to maintain the engineering integrity of the banks, and advice should be provided to encourage this to happen.</i>
Implementation:	<i>FLs, IDBs, CCs DCs, CoCo, EA (NRA), EN, NCP.</i>
Action L2.4	<i>Management should aim to increase the habitat diversity within this zone whilst at the same time maintaining its essentially open character.</i>
Implementation:	<i>FLs, CCs, DCs, CoCo, FWAGs, NCP, private advisers.</i>
Action L2.5	<i>Consideration should be given to raising the water levels in some areas and enhancing the wildlife value of the dykes, consistent with the efficient drainage of land.</i>
Implementation:	<i>FLs, IDBs, CCs, DCs, CoCo, FWAGs, NCP, private advisers.</i>
Action L2.6	<i>Consideration should be given to providing grassland/reed buffer strips along existing watercourses, which could add visual interest without enclosing the landscape.</i>
Implementation:	<i>EA (NRA), IDBs, FLs</i>
Action L2.7	<i>Where borrow pits have to be excavated at the foot of existing embankments, appropriate profiling, e.g. occasional shallows and gentle side slopes, should be incorporated into the works to maximise their wildlife value.</i>
Implementation:	<i>EA (NRA), FLs</i>

Settled Marsh

Linear settlements, nestling amongst trees, snake along the winding roads through open cultivated marshland.

- 4.16 The settled marshland further inland forms an important backdrop to marshes nearer the coast and the coast itself. Generally it reflects an older period of reclamation indicated by the winding banks and lanes. The area is most distinctive between Boston Haven and Skegness although pockets of a similar character can be seen around the Holbeaches and Gedney.
- 4.17 The landscape of this area is more diverse than that nearer the coast and for the first time buildings play an important part in the appearance of the scene. Many are of a brick-built vernacular type. Importantly it is their distribution which is most distinctive with the interspersed vegetation emphasising the linear form. Vegetation type is also characteristic; in many areas native trees and scrub still predominate, whilst in other places there has been a tendency to replant with conifers particularly leyland cypress, presumably as windbreaks. This planting tends to dominate and appear more solid than the traditional

species of alder and thorn and can in many cases detract from the main landscape pattern of the zone.

Key Characteristics

- * Linear settlements
- * Winding lanes
- * Interspersed scrubby vegetation
- * Open cultivated landscape with long views

Objective L3	To conserve the existing attractive landscape pattern of the settled marsh.
<i>Action L3.1</i>	<i>New planting may be appropriate in this area but it is important that it should be related to settlement. In the villages, consideration should be given to planting the spaces between buildings using native tree and shrub species. These plantings should aim to 'anchor' the settlement to the landscape rather than to encircle it and screen it. Away from buildings planting should be essentially linear in form, following existing roads, tracks and boundaries. Broad-leaved native tree and shrub species should be used in preference to conifers or exotic species as they have both a higher wildlife value and a less dense appearance in this open landscape.</i>
<i>Implementation:</i>	<i>FLs, CCs, DCs, CoCo, FA, FWAGs, NCP, private advisers.</i>
<i>Action L3.2</i>	<i>Consideration should be given to increasing the habitat diversity of this area.</i>
<i>Implementation:</i>	<i>FLs, CCs, DCs, CoCo, FWAGs, NCP, private advisers.</i>
<i>Action L3.3</i>	<i>New development should reflect the strong rural character and linear pattern of this zone.</i>
<i>Implementation:</i>	<i>CCs, DCs.</i>

Seaside Dunes

Large scale simple landscapes with the wide dramatic beachscape carried inland by undulating dunes.

- 4.18 Extensive areas of dune systems border the sea on either side of the mouth of the Wash. At Hunstanton the dunes roll down to the wide beach, containing the seascape and separating it from the golf course behind. Marram grass colonises the dune strip, the sandy hummocks shifting continuously between the grassy areas and beneath the row of beach huts sitting precariously along the edge of the dunes at the southern end. People stroll through this landscape, walking dogs, playing on the beach, but their presence never dominates the scene. Rather the eye is drawn toward the vanishing and reappearing seashore, the long views out to sea, the ripples on the sand, the shining pools and above all the ever changing pattern of the fulmars as they wheel around above the beach.
- 4.19 North of Gibraltar Point lies the most extensive area of dunes. Here the landscape is more intimate with a variety of features interrupting the long views. Landward the arable marsh is open merging into the distant farmland. Moving seaward the dunes begin, which are well vegetated with scrub, particularly sea buckthorn, and interspersed with pools and wetlands. Slowly the scrubby dunes swell upwards and then give way to a more sweeping wild landscape of beach, sea, dunes and sky. Birds are an important feature in this landscape, a fact reflected in its management as a nature reserve.

Key Characteristics

- * Wide beachscapes backed by rolling dunes
- * Birdlife
- * Long views out to sea

Objective L4	To conserve the open remote character of the seaside dunes area.
Action L4.1	The dunes should be protected from development which would both detract from their open character and add to the erosion pressure on this delicate system.
Implementation:	Os, CCs, DCs.
Action L4.2	The dunes should be managed to conserve the birdlife associated with the habitat.
Implementation:	Os, CCs, DCs.
Action L4.3	The appearance of visitor facilities associated with the nature reserves in these areas should be reviewed and enhanced as the opportunity arises.
Implementation:	Os

Seaside

Bustling beaches backed by a developed coastline.

- 4.20 The only lengths of the Wash coast which are developed within the estuary are on the east side: a four mile length from Old Hunstanton in the north to Heacham in the south, and at Snettisham. Here the beach is popular in the summer season, visitors dominating the shoreline scene. For much of the length a promenade runs behind the shore separating it from the town, caravan parks and beach houses.
- 4.21 Whilst the landscape is developed it still contains many attractive seaside features. The beach landscape is an important link to the rest of the Wash estuary with common features of long seaward views, the changing shoreline and birdlife. In addition the area to the north has a distinctive cliffline - the pink and white cliffs are unique to this part of the Wash and are both visually stunning and provide perches for

the fulmars. Below the cliffs the rocky boulders and pools give a sculptured effect to the shore.

Key Characteristics

- * Populated beaches
- * Developed hinterland
- * Long views out to sea

Objective L5	To conserve the seaside features which relate to the wider Wash landscape.
<i>Action L5.1</i>	<i>Attractive or interesting maritime features such as steps, groynes, seats etc. should be retained wherever possible when renovation and development works are undertaken along the sea wall.</i>
<i>Implementation:</i>	<i>EA (NRA), CCs, DCs.</i>
<i>Action L5.2</i>	<i>The appearance of the caravan sites which lie behind the sea wall between Hunstanton and Snettisham should be reviewed and enhanced as the opportunity arises.</i>
<i>Implementation:</i>	<i>Os, NCC, KLWNBC.</i>
<i>Action L5.3</i>	<i>The landscape implications of necessary coast protection and flood defence works should receive careful consideration, and any unavoidable impact should be minimised.</i>
<i>Implementation:</i>	<i>EA (NRA), CCs, DCs.</i>

Seascape

- 4.22 The seascapes of the Wash are of vast scale, and vary depending on the state of the tides and whether viewed from the land or from the water. They include the mud flats, sandbanks, channels and the water, together with the wildlife that uses these habitats, as well as any permanent structures such as navigation aids, training walls and military features. Further work is required on this visual aspect of the Wash.

Objective L.6	To evaluate the character and importance of the seascape.
<i>Action L6</i>	<i>An assessment of the seascape should be undertaken, and further objectives and actions identified as necessary.</i>
<i>Implementation:</i>	<i>CCs, DCs.</i>

Other landscape considerations

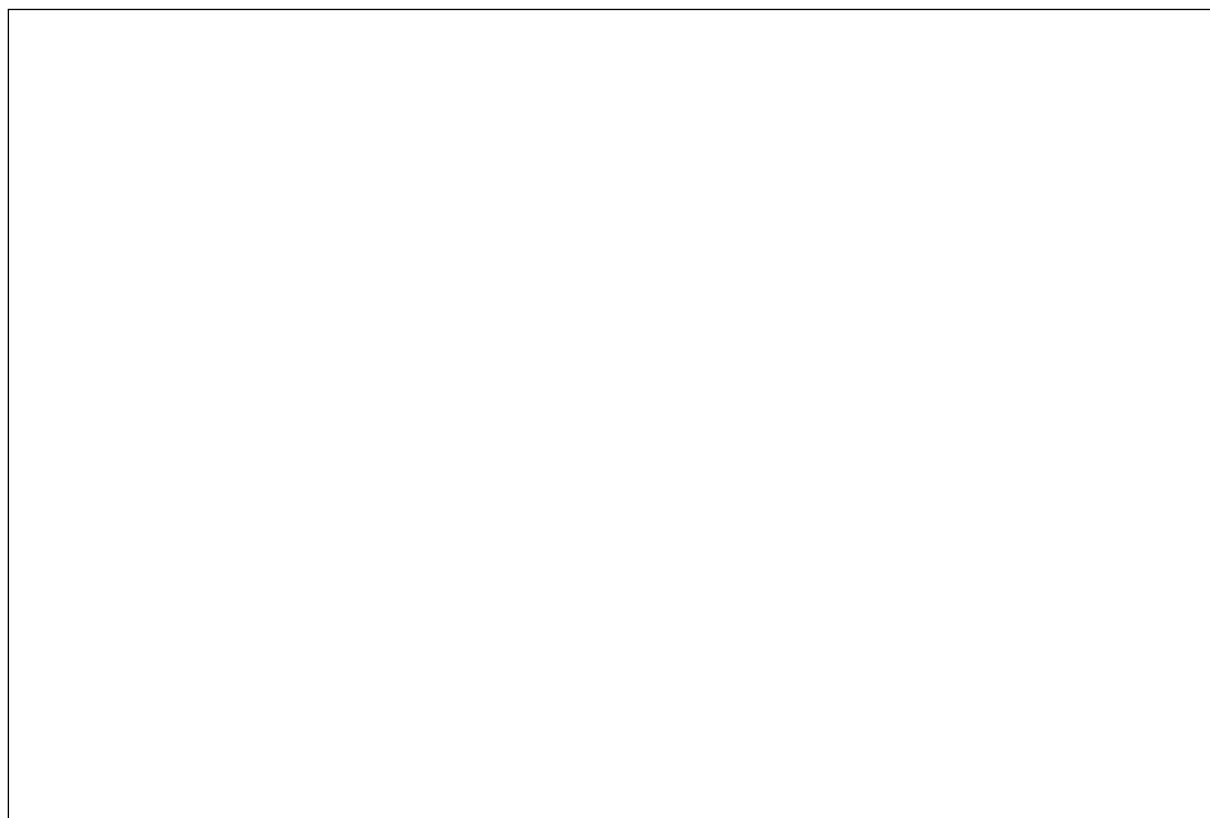
- 4.23 Most of the landscape elements that combine to make up the whole scene of the Wash have already been discussed in relation to the landscape zones in which they occur. However, there are some additional items that relate to the landscape generally which should also be considered:

i) Development issues

- 4.24 These could have a major effect on the character of the landscape. They are controlled under the statutory planning system described in the previous chapter and are therefore not considered further here.

ii) Hard development of 'furniture and signage'

- 4.25 Remoteness is a very important characteristic of much of the Wash landscape. It was apparent from the landscape assessment that in places a proliferation of signs, notices and fencing styles can in places bring an element of 'urban clutter' into the scene. Where possible it is important to rationalise the signage, reducing the number of posts and boards which occur at public access points. Fencing, whilst a necessity in some places, could perhaps be avoided in others particularly where it doubles up with the ditch system.



Intrusive and repetitive signs

- 4.26 Much of the existing development against the intertidal marshland zone relates to visitor centres and management. Sites such as Gibraltar Point and Snettisham Scalp are important bird reserves and receive a high number of visitors. Whilst it is accepted that these visitors must be catered for to a degree, features such as the large exposed car park and prominent visitor centre at Gibraltar Point detract from the special qualities of this landscape. Provision of hides and scrapes can also be an issue in the landscape. These can be appropriate where they are developed in a sensitive manner, but all too often the hides take on a semblance of a large suburban garden shed, and scrapes can be rectangular pits bounded by the excavated material which has been shaped up as an engineered embankment. The Norfolk Coast Project has prepared guidelines for the provision of birdwatching facilities in the Norfolk Coast AONB, and these are also appropriate to the Wash.

Objective L7	To minimise the visual intrusion of facilities necessary for visitors.
Action L7	<i>All facilities provided or planned for the benefit of visitors or for the purposes of managing visitors to any part of the Wash should be evaluated and action taken to rationalise such provision and minimise its visual intrusion.</i>
Implementation:	<i>Os, CCs, DCs, CBs, MoD, NCP</i>

iii) Archaeological and historical features

- 4.27 Little is known of this subject generally in this area, though it is likely to be of some importance. An inventory of features of archaeological and historical interest in the Wash should ideally be compiled, and this subject will need to be developed when further information is available.

Objective L8	To protect archaeological and historical features from damage, and to promote the investigation of finds made in the course of essential works, particularly dredging.
Action L8.1	An inventory of archaeological features in the Wash should be prepared.
Implementation:	CCs, DCs, EH, NLA, HL, RCHME
Action L8.2	Any finds of archaeological interest should be reported to the responsible authorities for investigation.
Implementation:	FLs, IDBs, EA (NRA), CCs, DCs, EH, NLA, HL, FI, RoW.

5

PORTS AND NAVIGATION

- 5.1 The port and harbour authorities of the Wash have statutory responsibilities for a range of marine related activities. However, in connection with conservation matters, they also have an obligation to maintain and/or improve the ecology of the area. The ports, namely Boston, Fosdyke, King's Lynn, Sutton Bridge and Wisbech, form an important part of both the local and regional economy insofar as other industries in the hinterland, particularly agriculture, rely on the trade throughput of the ports. They are also an essential link in the trade corridor between the Near Continent and the Midlands with materials and/or products passing either way. Oil rigs have additionally been handled in the Wash, but in non-drilling operations.
- 5.2 The ports currently handle about four million tonnes of cargo per annum resulting in about 7,000 ship movements per year. Although trade reduced during the recent recession the ports have returned to previous levels and have the capacity to increase well beyond this. The ports are commercially attractive for a variety of reasons, principally the type of vessels handled, both coastal and river class, the ease of access to the Midlands industrial area and improved communications generally, and the flexibility of labour including the incentive of surplus, previously agricultural, labour to industries requiring easy access to the sea.
- 5.3 The Wash is additionally an important fishery resource, and the resultant income provides an important revenue contribution to the local economy. The movement of fishing vessels comes under the ports' control. Similarly, pleasure craft use and transit the area, and at some stage come under the ports' jurisdiction for the control of movement, statutory regulations and environmental legislation.

PORTS AND NAVIGATION GOAL 1

* To contribute to the viability and efficiency of port and harbour operations.

- 5.4 In order to attract trade and improve efficiency, engineering harbour and quayside works may be necessary, particularly where old structures are failing. Also, as vessels are getting larger for economic purposes, navigable channels have to be monitored very closely, maintained, and of necessity moved from time to time. In such circumstances it is always the intention to carry out the necessary dredging operations without detriment to the environment. Disposal of spoil at sea is currently at two dumping grounds licensed annually by the Ministry of Agriculture, Fisheries and Food. Flood protection works carried out by the statutory authorities can also be detrimental to port operations unless the port takes remedial action. It is accepted that these various engineering works have to be carried out, but their environmental impact should always be evaluated and minimised and if necessary compensated for elsewhere (sometimes referred to as the 'Balance of Needs' principle).

Objective PN1	To ensure that necessary port-associated engineering works are carried out with the minimum environmental damage.
<i>Action PN1.1</i>	<i>The Port Authorities will liaise with all relevant organisations in relation to proposed engineering works in order that the environmental implications are known, evaluated and, if necessary, compensated for.</i>
<i>Implementation:</i>	<i>PAs, EN, EA (NRA), IDBs</i>
<i>Action PN1.2</i>	<i>Alternative uses for clean dredged spoil should be investigated and encouraged wherever economically and practicably possible.</i>
<i>Implementation:</i>	<i>PAs</i>

PORTS AND NAVIGATION GOAL 2

* To minimise the environmental impact of port or harbour operations.

- 5.5 By the commercial nature of their operations, ports have to expand or maintain their operations and handle a variety of goods, and sometimes these may be of a hazardous nature. These operations must however conform to various legislative and statutory requirements. This is a complex and detailed area of port operation beyond the scope of the Management Plan. Appendix 3 however provides a general list of the various requirements that Port and Harbour Authorities must adhere to in discharging their duties. Monitoring of such cargoes in relation to their actual or potential effect on the Wash already occurs. All the Wash Port Authorities are members of the Lincolnshire and Norfolk Committee for Oil Pollution and of the Wash Oil Pollution Action Committee (also discussed in paragraph 11.11). As such the ports respond to oil and chemical spills, along with the local authorities, on shoreline management. In the event of spillage below the low water line the ports co-operate with the Marine Pollution Control Unit on initial response from Coastguard. In accordance with Annex V of the International Convention for the Prevention of Pollution from Ships 1973 as modified by the Protocol 1978 (MARPOL 73/78), the North Sea, and therefore the Wash, is a Restricted Area. Hence dumping of any commodity is prohibited. Any breach of the Directive is liable to prosecution by the Department of Transport. Similarly the Port Authorities seek to prevent the illegal disposal of waste and general garbage in the Wash, and provide facilities for legal such disposal.

Objective PN2	To ensure that in relation to hazardous cargoes all the relevant legislative and statutory requirements are complied with.
<i>Action PN2</i>	<i>The Port Authorities should continue to monitor the handling of hazardous cargoes and summons or report to the appropriate authority anyone who fails to comply with the necessary legislative and statutory requirements.</i>
<i>Implementation:</i>	<i>PAs, MUs, DTp</i>
Objective PN3	To ensure that illegal dumping in the Wash is eliminated.
<i>Action PN3</i>	<i>The Port Authorities should continue to identify and prevent such activities from taking place in order that the above objective can be achieved.</i>
<i>Implementation:</i>	<i>PAs</i>
Objective PN4	To provide necessary assistance in the event of oil or chemical spill in the Wash.

Action PN4	Ports Authorities should maintain a small quantity of 'clean up' materials and harbour craft in order to provide 'First Strike' capability.
Implementation:	PAs

PORTS AND NAVIGATION GOAL 3

* To endeavour to enhance the natural environment should the opportunities arise.

- 5.6 Within the context of their overall activities, the ports can often have the opportunity, alongside other organisations, to enhance the natural environment. Examples of this include the refurbishment or recreation of saltmarshes where erosion has taken place, the repair and enhancement of any areas of major construction and, with financial assistance, the deposit of clean dredging spoil in areas where erosion has taken place.

Objective PN5	To ensure wherever possible that port activities enhance the natural environment.
Action PN5.1	<p>The Port Authorities should:-</p> <ul style="list-style-type: none"> - abide by environmental legislation and internationally agreed conventions, directives and resolutions intended to protect the environment which are supported by the UK Government; - act within the spirit of the law and other agreements, according to the ethic of environmental protection; - take voluntary steps to consider wherever possible and appropriate the improvement of environmental standards beyond those currently required under statute; - nominate a member of staff from a senior management position to take responsibility for co-ordinating policy and action on the environment; and - introduce environmental protection as an integral part of the business and management practice.
Implementation:	PAs.
Action PN5.2	Wherever feasible, the deposit of clean dredged spoil should be in areas where an environmental benefit would be achieved.
Implementation:	PAs, EN, RSPB, EA (NRA), MCS.

MARINE CONSERVATION AND FISHERIES

- 6.1 Estuaries consist of a productive complex of inter-dependent habitats, which together can form a highly productive ecosystem. The natural productivity of the Wash not only supports internationally important numbers of birds but also nationally important fisheries for pink and brown shrimp, cockles and mussels. The Wash is also an important nursery area for commercial fish species, e.g. plaice and sole. The importance of the Wash fisheries was recognised by the imposition of strict Fisheries Orders and Byelaws over the last century. The Wash fisheries are the most widespread economic activity in the Wash. The molluscan and crustacean shellfish and the fisheries they support are also integral parts of the Wash marine ecosystem. Careful management of the fisheries and maintenance of the marine habitat are needed to ensure their long-term future.

Marine Ecology

- 6.2 The Wash consists of three principal estuarine habitats of saltmarsh, tidal flats and sub-tidal areas, with approximately 55% of the total area sub-tidal and 38% inter-tidal. The 25,540 ha of inter-tidal flats is the second largest total area of flats in Britain, and they support sediment-living animal communities, which live at very high densities. The extent of the inter- and sub-tidal habitats and the abundance of the associated communities in the Wash makes them important for nature conservation. The Wash holds ten estuarine communities, which is very diverse for the east coast. The sand flats from Gibraltar Point south-westwards to the Witham Channel are the second longest continuous sandflats in Britain. The fine sands of the inner banks and foreshore support abundant and diverse sediment-living communities. Typically, predominant species are bivalve molluscs, e.g. cockles *Cerastoderma edule*, mussels *Mytilus edulis*, Baltic tellin *Macoma balthica*, and polychaete worms, e.g. lugworm *Arenicola marina*. The coarser sediments of the outer banks are less diverse.
- 6.3 Surveys of the Wash have found nationally and regionally important communities. In the southern Wash, there are high densities of brittlestars *Ophiura albida*, and at the mouth of the Wash muddy sand with shell gravel and pebbles provides an attachment point for hydroids and bryozoans (sea mats). Dense forests of the fan worm *Sabella pavonia* and its associated fauna are also found in muddier areas. A small, colonial, tube-dwelling worm *Sabellaria spinulosa* (ross) is found on coarser sand. It can build large reefs and occurs chiefly around the British North Sea coasts. *S. spinulosa* has declined dramatically, occurring only in larger aggregates in the Wash. In 1982 the Common, or Harbour seal *Phoca vitulina* population of the Wash was estimated at 7,000 individuals, forming 27% of the British population and one of the largest colonies in Europe. Despite a virus epidemic in 1988 which killed an estimated 60% of common seals in the Wash, the Wash colony remains internationally important. Grey seals *Halichoerus grypus* are also found in the Wash.

- 6.4 Given the diversity and importance of the estuarine communities and their role in supporting the waterfowl populations and the shell fisheries of the Wash, these habitats need to be conserved. Important communities which are fragile and known to have declined need to be enhanced where possible.

Wash Fisheries

- 6.5 The Wash fisheries were for centuries highly productive and an important part of the local economy. The fisheries were diverse, principally producing catches of eels, shrimps, oysters and mussels, but also included significant catches of smelt and anchovies.
- 6.6 The Wash fishery now relies upon natural cockle stocks, mussels and pink and brown shrimps. The cockle fishery has seen significant investment in fitting efficient hydraulic suction dredging gear to boats, with the majority of boats now using this new method. Cockle stocks are naturally erratic in their abundance, but have been especially poor in some recent years, giving cause for concern. The mussel fishery relies upon transferring natural mussel stock to inter-tidal areas or 'lays' where they are able to grow to commercially viable sizes. Mussel stocks are now at an all time low and remedial action, e.g. closure of the fishery, may be desirable. The shrimp fishery is of potentially high value, but its success depends upon market demand and stock availability.
- 6.7 The Wash fishery continues to support a traditional industry, of economic importance to the area. However the historical decline of the fishery and the current state of the shellfishery suggest that management based upon sustainable use will ensure the future of the fishery.

MARINE CONSERVATION AND FISHERIES GOAL 1

* To maintain and enhance the nature conservation importance of inter-tidal and sub-tidal areas.

- 6.8 The diversity of the estuarine communities of the Wash depends upon the continuing presence of their habitats. These habitats are vulnerable to changes which affect sediment types and distribution, e.g. engineering projects. Other communities are fragile and vulnerable to physical damage, e.g. *Sabellaria* reefs.
- 6.9 Non-commercial fish are not usually considered to be in need of conservation. However, a national survey of estuarine fish has concluded that comparatively little is known about them. A range of estuarine species has been described for the Wash. One species, Smelt *Osmerus eperlanus*, was once common and supported a fishery. The decline may have been due to poor water quality and new sluices preventing access to their breeding areas in rivers.

- 6.10 The *Sabellaria* community was once found widely around the east coast estuaries as reefs, but is not now found in the full natural form. These fragile reefs may have declined due to the development of the shrimp fishing industry. *Sabellaria* reefs provided an important marine habitat in the marine ecosystem, including providing a food source for shrimps. It may be possible to recreate the reefs by establishing non-disturbance refuges, where fishing or anchorage gear will not disturb the *Sabellaria*.
- 6.11 Monitoring of the marine environment in the Wash is currently being undertaken by a variety of organisations as part of their general work, e.g. the Environment Agency (the National Rivers Authority), the Ministry of Agriculture, Fisheries and Food and the Eastern Sea Fisheries Joint Committee. The collection of such information will be important to examine the effects of long-term changes in the Wash. The Wash has a number of estuarine species, e.g. Smelt, which are thought to be sensitive to water quality and could be an indicator species for future monitoring work.

Objective MCF1	To ensure that the full range of habitats, maritime communities and species is safeguarded against significant loss, damage or deterioration through human action, and to maintain or enhance the representation of nationally uncommon marine communities or species where possible.
<i>Action MCF1.1</i>	<i>Areas suitable for regenerating Sabellaria spinulosa reef communities should be identified and established, and the needs of other important marine communities or species assessed.</i>
<i>Implementation:</i>	<i>ESFJC, EN, FI</i>
<i>Action MCF1.2</i>	<i>Relevant parties should be encouraged to continue to monitor the marine environment.</i>
<i>Implementation:</i>	<i>SMRU, EA (NRA), ESFJC</i>

- 6.12 Disturbance to wildlife may be unintentional, e.g. recreational boat traffic, or inevitable due to the nature of the activity, e.g. bait digging, commercial fishing or channel dredging. However the effects of such activities could be minimised by promoting less disturbing behaviour or methods, through codes of practice and improved liaison.

Objective MCF2	To promote codes of good practice for potentially disturbing activities by working with all relevant parties.
<i>Action MCF2</i>	<i>Good working practice by those parties whose activities affect the marine environment should be established and promoted.</i>
<i>Implementation:</i>	<i>ESFJC, EN, FI, NCP</i>

- 6.13 The intertidal flats are a nationally important habitat and feature of the Wash. This habitat and the sediment-living communities are vulnerable to changes in sediment type or distribution, which could be produced by natural changes in sea levels. A variety of bodies currently hold data on the marine areas of the Wash, e.g. EN, EA (NRA), ITE. To assess changes in intertidal habitat would require information exchange and analysis by interested parties.

Objective MCF3	To monitor intertidal flats to determine the effects of accretion, erosion and the coastal processes upon their extent and sediment distribution.
<i>Action MCF3</i>	<i>Information currently held to assess changes in intertidal habitats should be shared and analysed.</i>
<i>Implementation:</i>	<i>EN, EA (NRA), ITE</i>

- 6.14 Common seal numbers are recovering only slowly following the viral epidemic of 1988. They are most sensitive to disturbance during their breeding season, June-Sept, which coincides with the tourist season. Pups are abandoned and die if suckling is interrupted for 6-9 consecutive low tides. Given the slow recovery of the Wash seals from the viral epidemic, it seems reasonable to suggest that they should have disturbance free areas.

Objective MCF4	To establish undisturbed breeding and moulting areas for Common Seals through consultation with all relevant parties.
<i>Action MCF4.1</i>	<i>Disturbance-free breeding and moulting refuge areas for Common Seals should be established in the Wash.</i>
<i>Action MCF4.2</i>	<i>Self-policing of such areas should be encouraged.</i>
<i>Implementation:</i>	<i>ESFJC, EN, RUGs, FI</i>

MARINE CONSERVATION AND FISHERIES GOAL 2

* To promote the wise and sustainable use of the Wash fishery resources as part of the maintenance and enhancement of the inter-tidal and sub-tidal areas.

- 6.15 The Wash fisheries, excluding private fishery, are regulated by the Eastern Sea Fisheries Joint Committee (ESFJC). In addition to policing fisheries activities, the ESFJC conducts surveys to establish stock levels of shellfish, e.g. cockles, and works with industry to develop techniques and gear. It also contributes to other work, e.g. by MAFF.
- 6.16 The current capacity of the fishing fleet is thought to exceed shellfish stocks. Under existing licensing arrangements, no new licences will be granted by the ESFJC, to limit fishing to current levels in order to ensure the sustainability of the shellfishery.
- 6.17 Comparatively little is known about the impact of fishing methods in the Wash upon its marine environment, e.g. the recovery time of sediment-living animals following suction dredging. Further research may also be needed to determine what limits there may be to shellfish cultivation in the Wash. Non-fishing areas for shellfish may be an appropriate stock conservation measure. Natural reserves of shellfish can provide future feeding stock to help increase the possibility of successful spatfall (the establishment of juveniles), or ensure future harvestable stock from an area.

Objective MCF5	To regulate and manage the Wash fisheries, and conduct research to further these aims, particularly to identify levels of sustainable utilisation of molluscan shellfish stocks and the carrying capacity for shellfish cultivation.
<i>Action MCF5.1</i>	<i>The Eastern Sea Fisheries Joint Committee should be supported in their undertaking of the above objective.</i>
<i>Implementation:</i>	<i>CCs, DCs.</i>
<i>Action MCF5.2</i>	<i>The molluscan shell fishery should not exceed current average levels, whilst investigating sustainable levels for the fishery and allowing a review of the impact of current practices on the fishery and marine environment.</i>
<i>Implementation:</i>	<i>ESFJC, EN, FI</i>
<i>Action MCF5.3</i>	<i>The impact of existing fishery activities upon the marine environment should be</i>

	<i>reviewed, the potential carrying capacity for shellfish cultivation investigated, and good practices for cultivating native species to reduce the risks from non-native species, predators and diseases established and promoted.</i>
<i>Implementation:</i>	<i>ESFJC, EN, FI</i>
<i>Action MCF5.4</i>	<i>Non-disturbance refuges for shellfisheries should be established through consultation with relevant parties.</i>
<i>Implementation:</i>	<i>ESFJC, EN, FI</i>

- 6.18 Fishing gear can affect estuarine communities, e.g. physical damage to the sediment, by suction dredges or the unintentional capture of non-target species (bye-catch) in shrimp trawls. Minimising such effects may be beneficial both for the fishery and the wider estuarine environment. The ESFJC working with the industry can reduce the impact of fishing, e.g. through modifying gear or practices.

Objective MCF6	To continue research and develop good practice to minimise the impact of fishing methods on benthic communities and reduce bye-catch.
<i>Action MCF6</i>	<i>Relevant parties should be encouraged to continue investigation into the design of fishing gear to minimise bye-catch and damage to benthic communities.</i>
<i>Implementation:</i>	<i>ESFJC, FI</i>

- 6.19 The molluscan shellfisheries are dependent upon natural stocks which vary widely in abundance and distribution between years. Shellfish cultivation could provide more reliable stocks for the industry. A variety of issues are raised by shellfish cultivation, e.g. introducing parasites or predators of shellfish; the siting of the cultivation may change the character of the sediment and smother important communities.

Objective MCF7	To promote the sustainable cultivation of native shellfish species to provide a reliable alternative to natural stocks.
<i>Action MCF7</i>	<i>New shellfish cultivations or expansion proposals should be subject to full consultations between relevant parties, in order to identify appropriate sites and practices that will minimise their impact, and to seek ways of reducing the risk of establishing free-living non-native species or of introducing predators and diseases to the Wash.</i>
<i>Implementation:</i>	<i>ESFJC, FI</i>

- 6.20 Under recent EC Directives, the shellfish beds of the Wash have been classified for the level of processing required prior to human consumption. The contamination of Wash shellfish by bacteria from sewage and faecal effluent means that, under EC Directives, shellfish must be processed prior to human consumption. This requires additional expenditure and effort, which could be reduced if water quality improved.

Objective MCF8	To seek ways to improve water quality standards in the Wash for shell fisheries.
<i>Action MCF8</i>	<i>Improvements in water quality should be sought.</i>
<i>Implementation:</i>	<i>ESFJC, EA (NRA), FI, AW.</i>

- 6.21 Digging for bait (lugworm) is widespread around the Wash, mainly by local anglers and longshoremen. However in some areas digging is intensive, threatening bait stocks. Bait digging can affect the sediment-living animals by smothering them as sediment is turned over. The recovery time can be several months or more. Bait diggers also cause disturbance to waterfowl displacing them from their normal feeding and roosting grounds. These problems are most acute when large groups arrive in an area to dig commercially. In the past this has led to conflict between wildfowlers and large groups of commercial bait diggers from outside the counties, working an area set aside by wildfowlers as disturbance-free areas for waterfowl.
- 6.22 These issues of bait stock conservation, conflict with other uses, and commercial digging by non-locals, may be addressed by local Bait-digging Associations which have been found to provide an effective means of managing and conserving bait stocks elsewhere in the country.
- 6.23 The direct effects of bait digging upon the sediment can be minimised by back-filling holes, and closing bait-beds in a rotational manner to allow recovery of stocks. Such measures could be identified and promoted through codes of conduct.

Objective MCF9	To manage bait stocks sustainably and to minimise the impact of bait digging and conflicts with other users.
<i>Action MCF9.1</i>	<i>The formation of Bait-digging Associations should be encouraged.</i>
<i>Action MCF9.2</i>	<i>Bait-digging Associations and other relevant parties should be encouraged to develop codes of good practice for the sustainable utilisation of bait stocks.</i>
<i>Implementation:</i>	<i>EN, ESFJC, FI, RUGs</i>

7

WATER QUALITY

The Wash

- 7.1 The Wash is an embayment of open coastal water and, with its four main tributary estuaries, forms the largest estuarine system in Britain. The surface area of the Wash is about 700 km² at high water on a spring tide, and about 350 km² at low water on a spring tide. The four main rivers that discharge into the Wash, the Witham, Welland, Nene and Great Ouse have a catchment of 15,650 km², about 12% of the area of England. Sewage treatment works and trade effluent discharges affect the tributary estuaries and the Wash itself.

The Four Estuaries

- 7.2 The Witham Estuary is 11 km long and runs from the Grand Sluice in Boston to Tabs Head in the Wash. The main effluent discharge to the Witham is from Boston Sewage Treatment Works. There is also a surface water discharge into the Witham from a timber treatment works.
- 7.3 The Welland Estuary is about 22 km long and runs from Spalding Sluice to Tabs Head, where it shares a common lower channel with the Witham. The main effluent discharge to the Welland is from Spalding sewage treatment works. An effluent discharge from a vegetable and food processing plant enters the Holbeach river a short distance upstream of its confluence with the Welland.
- 7.4 The Nene Estuary runs for about 40 km from the Dog-in-a-Doublet Sluice to Crab's Hole in the Wash. There are two major inputs of treated sewage effluent to the Estuary, one from Flag Fen in Peterborough and the other from Wisbech. There are two other major discharges to the Estuary from food processing factories at Peterborough and Sutton Bridge.
- 7.5 The Great Ouse Estuary is about 60 km in length and runs from Brownshill Stauch near Earith to Cork Hole in the Wash. The major input of treated sewage effluent to the Estuary is from King's Lynn. There are also two significant trade effluent discharges located at King's Lynn.
- 7.6 Work is currently on-going or is proposed by Anglian Water Services Ltd, in agreement with the EA (NRA), to improve discharges to rivers flowing into the Wash.

The Role of the NRA and Water Quality

- 7.7 The Environment Agency (formerly the National Rivers Authority)(EA (NRA)) is the regulatory body responsible for the environmental protection of natural waters in England and Wales. The EA (NRA) has a wide range of responsibilities including:

- control of pollution;
- conservation of the water environment;
- flood defence; and the
- maintenance and management of fisheries.

- 7.8 Water Quality Management is based on an Environmental Quality Objective (EQO) approach. The EQOs that are set for water bodies require the quality of that water body to be suitable for identified uses. In order to achieve an EQO, substances that have the potential to pollute are given a numerical Environmental Quality Standard (EQS). An EQS is the maximum amount of substance which can be present in the receiving water without its having an adverse effect on the defined uses.
- 7.9 The EC sets mandatory EQSs for all of the highly toxic or persistent substances that make up List I (also called black list) of the EC Dangerous Substances Directive (Directive 76/464/EEC). EQSs for other substances, including List II substances, are set by EC member states after taking into account all local considerations and other relevant EC Directives.
- 7.10 The EA (NRA) uses EQSs to set consent conditions for discharges to both freshwater and marine surface waters. Consent conditions are usually set in terms of maximum concentrations of substances and maximum effluent flow rate. The conditions are determined using mathematical models, which take into account the contribution from other discharges and the background concentrations within the receiving waters, to ensure that the EQS is not exceeded.
- 7.11 The EA (NRA) has a responsibility to monitor the quality of effluent discharges and their receiving waters to ensure that EQSs are met. The EA (NRA) fulfils its obligations by undertaking detailed, co-ordinated chemical and biological monitoring programmes in controlled waters. Within estuaries and coastal waters, monitoring covers statutory requirements, which include discharge testing as required under the Paris Commission Inputs Survey (PARCOM) and Annex 1a of the Final Declaration of the Third International Conference on the Protection of the North Sea.

Water Quality Issues

- 7.12 Continued work for improved water quality in the Wash is needed to support the activities and uses of the Wash and the wide range of natural communities.
- 7.13 There are two bathing waters recognised under the EC Bathing Waters Directive (76/160/EEC), at Old Hunstanton Beach and Heacham North Beach. There are six other bathing waters not identified under this Directive, which are all located in the eastern Wash. Although there is little recreational sailing in the main body of the Wash (due to adverse tidal conditions) areas within the mouths of the tributary estuaries and the area between Hunstanton and Snettisham are popular. Good standards of water quality are needed for these recreational interests and to continue to meet EC Bathing Water Directive standards.
- 7.14 There are several commercial shellfisheries for both mussels and cockles within the Wash, which have been classified under the Shellfish Hygiene Directive (91/492/EEC). One particular concern is that the quality of water influencing the shellfish beds in and around the outfall of the Great Ouse Estuary needs to be improved, so that standards set in this Directive to allow harvesting can be achieved.

Catchment Management Plans

- 7.15 Rivers, lakes, estuaries and coastal waters are subject to increasing demands from water users. Many different users interact or compete for water, and inevitably come into conflict with one another. The EA (NRA) has the responsibility to resolve conflicts between water users, operating on the following principles:

- protect and improve the water environment by the effective management of water resources and by substantial reduction in pollution;
- provide effective flood defence for people and property against flooding from rivers and the sea;
- discharge the EA (NRA)'s duties by operating openly and balance the interests of all who benefit and use rivers, groundwaters, estuaries and coastal waters.

The Ea (NRA) intends to implement these principles by producing Catchment Management Plans (CMPs).

- 7.16 Catchment management planning is a process through which the EA (NRA) sets out to identify all water-related problems and issues in a catchment through public and internal consultation, to identify possible courses of action to solve the issues and produce a plan of action to solve them. Actions will be subject to continued monitoring.
- 7.17 The EA (NRA) in consultation with all interested parties and users is to produce a series of CMPs for the river catchments feeding the Wash. These will provide a framework for management decisions relating to water quality, including setting targets for water quality, and where necessary will act as a vehicle to achieve improvements in the water environment. The CMPs should be integrated to provide a co-ordinated improvement of the Wash system.
- 7.18 Water in the tidal River Nene is of poor quality for most of its length. Improvements in water quality are to be brought about through implementation of the improvements identified in the Lower Nene CMP, which was published in June 1994 following public consultation.

WATER QUALITY GOALS

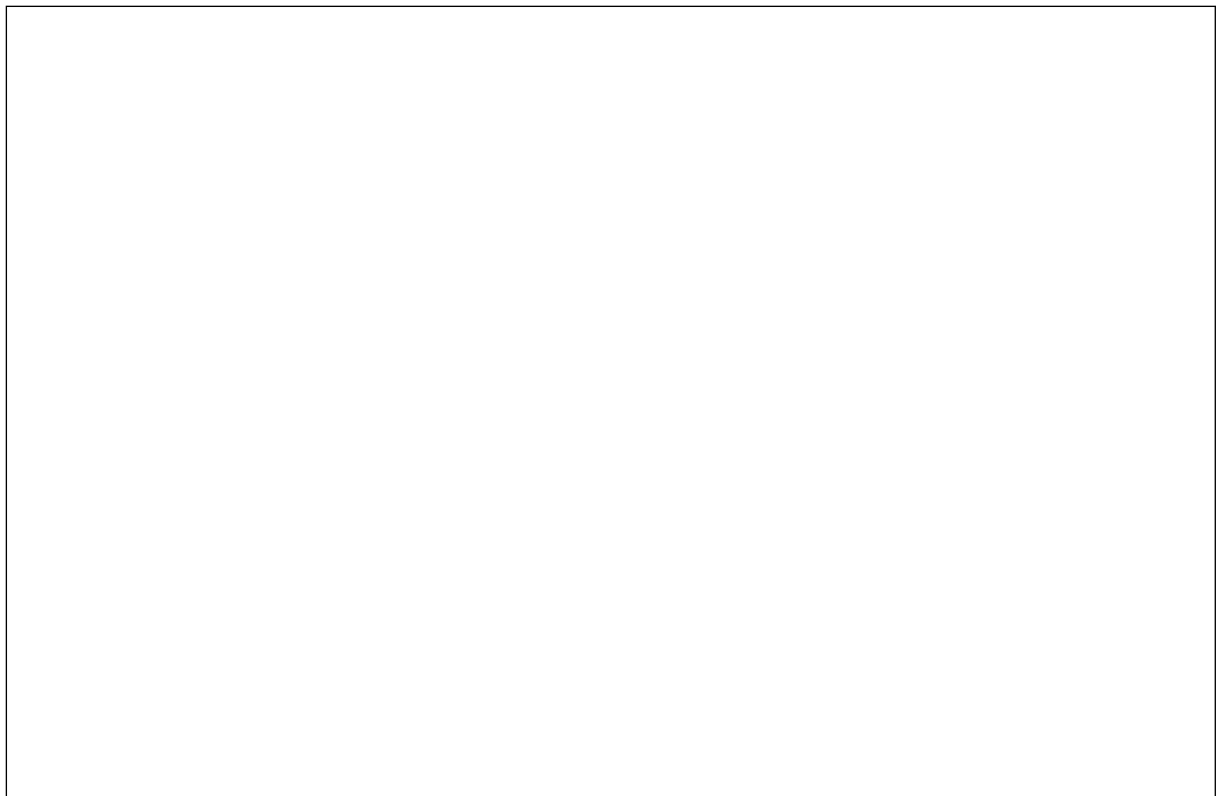
- * To maintain and improve, where necessary, the water quality of the Wash as a whole and to meet existing obligations under current EC Directives.
- * To improve water quality in areas where a higher quality is necessary to sustain recognised estuary uses.

Objective WQ1	To produce a series of Catchment Management Plans for the rivers feeding the Wash, and to integrate the CMPs to provide an improvement of the Wash system.
Action WQ1	The EA (NRA) will continue to produce CMPs for the rivers feeding into the Wash.
Implementation:	EA (NRA)

8

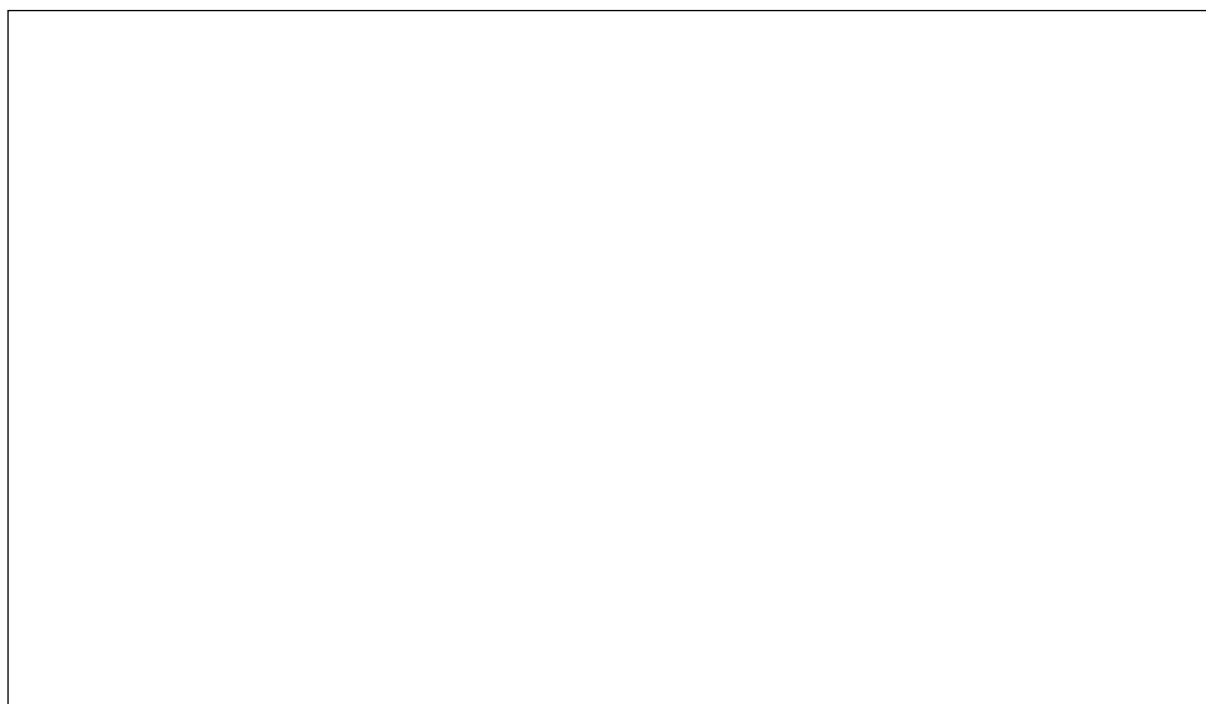
AGRICULTURE

- 8.1 Agriculture in the immediate vicinity of the Wash is primarily divided between the seaward and landward sides of the sea banks.
- 8.2 On the seaward side the land is of minor agricultural importance and is restricted to limited summer grazing of cattle on certain marshes. Soil from this side of the sea bank has been used to augment the sea defences, which has led to the creation of borrow pits along most of its length. In this way the marsh land below the sea bank has traditionally been an important source of materials for building and maintaining the sea defences that are so vital to the sustained presence and viability of farming on the landward side of the sea banks. The saltmarsh is also important in that it allows drainage at low tide, which is instrumental to the release of water from dykes on the landward side, thereby maintaining a free draining environment in which farming can operate.



Agricultural land, drainage sluice, floodbank and saltmarsh at Holbeach

- 8.3 On the landward side of the sea banks the agricultural land is some of the most productive in the country, classified as Grade I, II or IIIa, depending on the geographical location. The Grade 1 agricultural land is the highest single concentration of such quality land in the country, and the area is capable of producing a wide range of arable and horticultural crops, including potatoes, sugar beet, onions, flower bulbs, brassicas and other field scale vegetables. Lower quality land on the Norfolk side of the estuary is largely restricted to combinable cereal crops with some fresh water grazing marshes.
- 8.4 Some 90% of the agricultural land is devoted to arable cropping, with grassland and rough grazing accounting for only 6.5%. Winter wheat accounts for 90% of the cereal area, providing break crops between rotations of high value root and vegetable crops. Between the River Nene and Gibraltar Point, horticultural crops are an important commodity which can be grown right up to the sea bank. There has been increased specialisation in this sector, along with the associated development of private and co-operative grading and packing facilities which market directly to the major multiple retailers. This is a growth sector and has utmost importance to the future of the area. Agriculture provides an important source of local employment, with an average one person employed for every 13 hectares of land. Horticultural crops also provide employment where producers add value to that production.



Fresh water grazing marsh at Heacham

- 8.5 Livestock farming is now of minor significance. Cattle numbers on the salt marshes have declined, along with the practice of summer grazing.
- 8.6 After successive years of financial pressures, farmers and growers have reacted to the economic squeeze of the 1980s and 1990s by expanding their holdings, reducing their labour and adding value to their primary production. This pace of agricultural change will continue to accelerate, following CAP reform and implementation of the GATT agreement. Those agreements represent a change in the direction of EU agricultural policy that will maintain pressure on farm gate prices and incomes. The CAP reforms agreed in May 1992 dealt with the major commodities of combinable crops and livestock. Reforms in the sugar beet sector and changes to potato marketing are anticipated, and uncertainty about their future status exists. The high value root crops and field vegetables will maintain their pre-eminent position and importance to farm incomes and profitable agriculture.

- 8.7 As changes occur in agriculture, farmers and growers will examine ways of developing their businesses, and current options could be:
- expansion and restructuring into larger units,
 - diversification into new crops, e.g. energy or industrial usage,
 - adding value to production, thereby claiming a larger share of the consumer end price, and
 - integration and collaboration with others in marketing strategies to meet retailers' and consumers' needs.
- 8.8 There can be no doubt that, as custodians of the countryside, farmers will increasingly consider the agri-environmental schemes being developed to accompany the reform measures of the CAP. Farmers will evaluate the incentives being offered to farm in an environmentally beneficial way. Such schemes include the environmental management of voluntary set-aside, a habitat improvement scheme, an organic farming scheme, and a countryside access scheme. In addition, other incentives offered by the Countryside Stewardship scheme and grant aid for specific habitat creation and maintenance offered by other agencies may also be considered.
- 8.9 Agriculture plays a central role in the Wash area, underpinning the local economy, supporting the rural community and providing an important resource for wildlife. An illustration of the inter-relationship of agriculture and wildlife in the Wash is that land adjacent to the sea banks is beneficial to wader birds seeking refuge at high tide.

AGRICULTURE GOAL 1

* To support a viable farming economy and rural communities in the Wash.

- 8.10 The Wash sea defences are of strategic importance to safeguarding a viable farming economy and the rural communities.

Objective A1	To ensure that the sea defences and their maintenance remain of primary importance to all in the Wash.
<i>Action A1</i>	<i>Current or future reviews of flood defence should fully recognise the need to safeguard agricultural, nature conservation and landscape interests.</i>
<i>Implementation:</i>	<i>EA (NRA), IDBs, CCs, DCs.</i>

- 8.11 The high grade land surrounding the Wash is an important national resource.

Objective A2	To ensure protection of the best and most versatile land from irreversible development.
<i>Action A2</i>	<i>This objective should be reflected in all planning guidance.</i>
<i>Implementation:</i>	<i>CCs, DCs.</i>

- 8.12 As agricultural policies induce change, farmers will need to maximise potential opportunities in their land use and business practice. A healthy vibrant rural economy is in a better position to agree and implement measures to benefit conservation. In this context there are considerable opportunities for support at national and EC level, for example Objective 5b status in Lincolnshire.

Objective A3	To ensure that the various economic opportunities and options are thoroughly explored and promoted.
<i>Action A3</i>	<i>Opportunities to overcome future economic difficulties and support agriculture should</i>

	<i>be explored, and opportunities for farm diversification, preferably associated with countryside and landscape management, should be investigated.</i>
<i>Implementation:</i>	<i>CCs, DCs, TECs, FLs</i>

- 8.13 Whilst many agricultural practices are compatible with waterfowl, there are problems of geese grazing in cereal crops which can threaten the profitability of those crops grown adjacent to the sea banks.

Objective A4	To seek to ensure that the impact of geese grazing is mitigated on agricultural land adjacent to the Wash.
<i>Action A4</i>	<i>A study should be initiated to assess the impact of geese and to suggest ways in which this can be reduced, for example through pilot site trials.</i>
<i>Implementation:</i>	<i>EN, RSPB, NFU, CLA, FLs</i>

- 8.14 Many of the proposals contained in this Management Plan have implications for those farmers adjacent to the sea banks and on the saltmarsh. Full consultation on all proposals where farmers and landowners are affected will be necessary if co-operation and agreement are to be successfully achieved.

Objective A5	To ensure that all farmers and landowners are consulted on and involved in proposals that affect their land and businesses.
<i>Action A5.1</i>	<i>An agricultural sub-group should be established to develop further and to implement actions contained in this Plan that are relevant to agriculture.</i>
<i>Action A5.2</i>	<i>A complete consultation list of farmers and landowners adjacent to the Wash should be drawn up for future use.</i>
<i>Implementation:</i>	<i>NFU, CLA, LFs, WESG</i>

AGRICULTURE GOAL 2

* To promote agricultural practices which maintain and enhance the nature and landscape values of the area.

- 8.15 The Ministry of Agriculture, Fisheries and Food (MAFF)'s Codes of Practice for water, air and soil outline agricultural husbandry techniques which are designed to minimise environmental impact.

Objective A6	To ensure that farmers are aware of MAFF's Codes of Practice.
<i>Action A6</i>	<i>Copies of the three codes should be distributed to all farmers adjacent to the Wash.</i>
<i>Implementation:</i>	<i>FWAGs, NFU, EA (NRA), FLs.</i>

- 8.16 The custodial role that farmers and landowners have in the Wash is widely acknowledged. Farmers' and landowners' awareness of the impact of agricultural practices on the landscape and wildlife is increasing, but it is considered that there is scope for further action that would complement farmers' decision making and help promote the implementation of environmental schemes in the Wash. One way of achieving this could be to make available an adviser who would act as a focal point for farmers to seek advice, support and access to schemes and incentives that are available.

Objective A7.1	To enhance and foster awareness of sustainable farming practices based on sound scientific evidence and research which maintain and enhance nature conservation and landscape considerations.
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Objective A7.2	To encourage the promotion of sustainable farming through a voluntary approach.
<i>Action A7</i>	<i>Ways of assisting in raising awareness, including the establishment of an adviser or advisory network, should be investigated.</i>
<i>Implementation:</i>	<i>WESG, NFU, CLA, FWAGs</i>

- 8.17 There are numerous schemes and incentives available to farmers that can create, enhance and maintain landscape and wildlife habitats.

Objective A8	To ensure that farmers are aware of schemes and incentives which benefit landscape and wildlife through agriculture.
<i>Action A8</i>	<i>Information on all national and local schemes and incentives that are available for landscape and wildlife initiatives on farmland around the Wash should be collated and published.</i>
<i>Implementation:</i>	<i>FWAGs, WESG</i>

- 8.18 There are often difficulties in identifying the many schemes and incentives that could offer opportunities to promote farming which is beneficial to nature conservation and also in assimilating them within the business planning of the farm. In this context they are not a priority where there is economic uncertainty and the need for business survival. Suitable opportunities also need to be considered in relation to their economic viability in terms of the farm business.

Objective A9	To evaluate the economic implications of the range of schemes and incentives available to encourage environmentally beneficial farming.
<i>Action A9</i>	<i>The economic implications of currently available environmentally beneficial farming schemes and incentives should be investigated. New potential funding mechanisms to provide an economic option that takes greater account of landscape and nature conservation should be investigated.</i>
<i>Implementation:</i>	<i>NFU, CLA, FWAGs, WESG</i>

- 8.19 The decline of grazing as a land use on the saltmarshes has been due primarily to the associated capital costs. Proposals to reintroduce such grazing recognise this (see paragraph 10.12), and, for such reintroduced saltmarsh grazing to be an economic proposition, an appropriate financial package needs to be drawn up which provides remuneration that accounts for the provision of fresh drinking water, stock-proof fencing, high tide refuge sites and protection from vandalism.

Objective A10	To seek appropriate financial packages that meet the various costs of setting up saltmarsh grazing.
<i>Action A10</i>	<i>Appropriate schemes should be identified, evaluated and promoted.</i>
<i>Implementation:</i>	<i>NFU, CLA, CoCo, EN, CCs, DCs, RSPB.</i>

9

MILITARY USE

- 9.1 The Wash has been used by the military since the 1890s with flying commencing in 1926, and now supports two weapons ranges at Holbeach and Wainfleet which serve the RAF and NATO Air Forces. Routine training on RAF Air Weapons Ranges is essential in order to keep a minimum number of aircrew and aircraft at the peak of their performance using the most up-to-date technology. The Wash ranges, being arguably the best in the country in terms of efficiency and safety, contribute markedly towards this end. They are thus of national and international importance to the Ministry of Defence (MoD) and their military use is considered a matter of priority.
- 9.2 The MoD is equally aware of the national and international importance of the Wash in ecological terms and is committed, under the terms of the Declaration of Intent nationally agreed between itself and English Nature, to protecting wherever possible the nature conservation assets of the area and identifying areas where the military use and positive conservation practice can be mutually supportive.
- 9.3 As part of the management strategy for the Wash ranges, the RAF operates a Conservation Committee for the Holbeach range comprised of members of local, national and statutory bodies, service personnel and their support staff. Meetings are held at 6-monthly intervals to discuss matters of operational, geographical and ecological concern and interest and to plan appropriate action within the contexts of the overriding military requirement and of a draft management plan for the Holbeach range. Similar objectives are pursued in respect of the Wainfleet range, through a Site Management Statement agreed between the MoD and English Nature. Through the Conservation Committee, the MoD actively encourages and co-operates with appropriate surveys of wildlife, vegetation, water movements, sea defences etc. wherever possible, although these and any subsequent site management recommendations have to be considered in the light of the primary military use and the fact that the MoD has no specific conservation budget.

DEFENCE GOAL 1

* To ensure the safe and efficient management of the weapons ranges.

- 9.4 Where public rights exist within the ranges, they are respected and, from an overall MoD policy view point, wildfowling, bait digging and other field sports are considered an integral part of the rural management of the area. However, public safety is a major consideration and therefore activities are controlled as necessary for operational, safety and ecological reasons and, in certain circumstances, are restricted, e.g. the general public is discouraged from using the foreshore for safety reasons, by signs, flags and lookouts when the range is active.

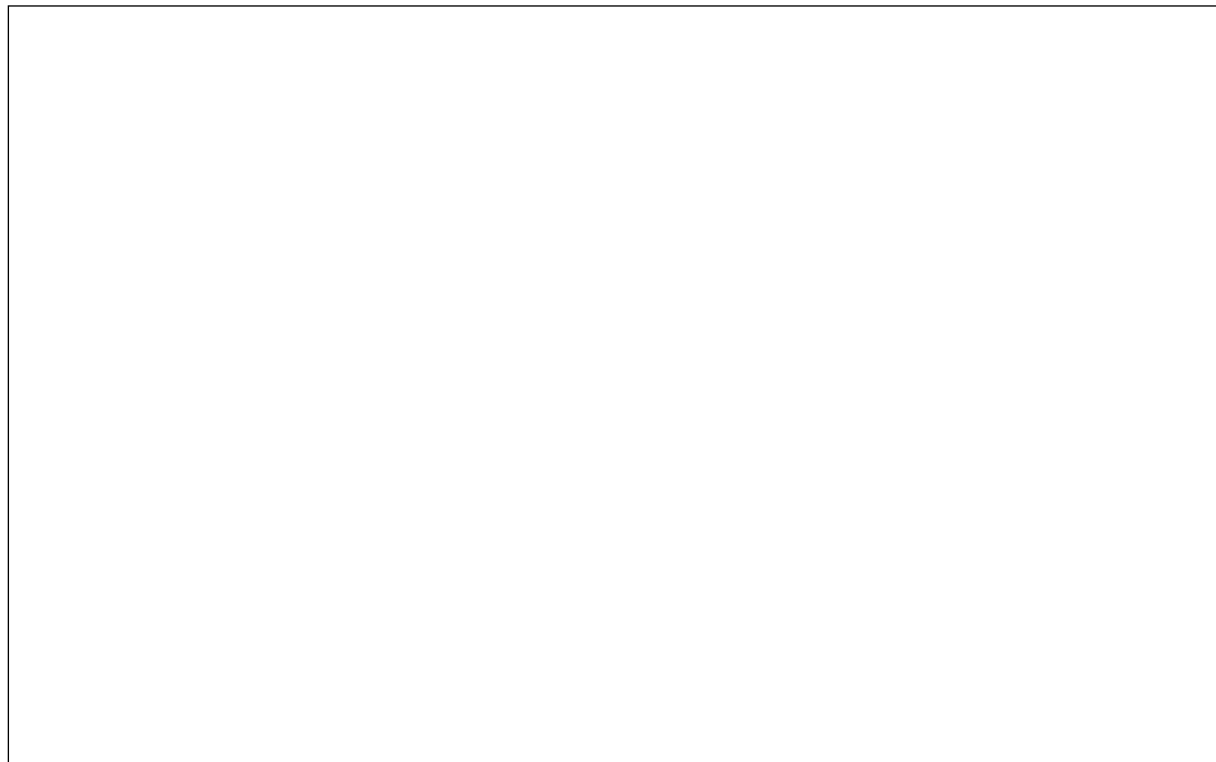
Objective D1	The MoD will continue to ensure that the public are made aware of range danger areas.
Action D1	Range officers will review safety provision, procedures and information on a regular basis.
Implementation:	MoD

DEFENCE GOAL 2

* To minimise the environmental impact of range operations.

- 9.5 The MoD recognises that the operations of weapons ranges may well have some detrimental effect on the natural environment, e.g. clearance of ordnance from sandflat and saltmarshes, but any adverse effects are minimised. Range buildings, structures and activities associated with the Defence presence can also have an impact on the landscape of the Wash.

Objective D2	Within the operating constraints of the ranges, range authorities shall seek to ensure that adverse effects upon the natural environment are minimised.
Action D2	Range authorities will consider possible means of limiting impacts through the adoption of best working practices consistent with the priority military use.
Implementation:	RAs



The Holbeach Range

DEFENCE GOAL 3

* To maintain and enhance the nature conservation interest of the ranges within the context of the Strategy.

- 9.6 The ranges contain considerable nature conservation interest including some of the oldest saltmarshes around the Wash. Additionally, within the Holbeach range an area is open for bait digging by anglers. There has been concern expressed that the intensity of digging may affect bait stocks. The adoption of good practice, e.g. rotational use of the area and backfilling holes, can help ensure that this area is used sustainably.

Objective D3	The range authorities will seek to ensure that the ranges are managed appropriately in the interests of nature conservation within financial constraints, in so far as this is compatible with the overriding military requirement.
Action D3	<i>Range authorities and their conservation committees shall produce and seek to implement an agreed management plan for the ranges.</i>
Implementation:	RAs
Objective D4	Range authorities will seek to co-operate with the promotion of the sustainable use of natural resources on the range in so far as this is compatible with the overriding military requirement.
Action D4	<i>Range authorities shall seek to support the promotion of codes of good practice for activities affecting nature conservation on the range, including the sustainable use of bait digging areas.</i>
Implementation:	RAs

10

SALTMARSH CONSERVATION

- 10.1 Saltmarshes are an important habitat for nature conservation for a variety of reasons. They are a rare, specialised habitat, and one of the most natural ecosystems remaining in Britain. There are 44,370 ha of saltmarsh in Britain, compared to 1.3 million ha of peatland and 350,000 ha of semi-natural ancient woodland, habitats which are themselves nationally rare. The 4,228 ha of saltmarsh in the Wash is one of the largest areas remaining in Britain, representing 10% of the total area. The relative conservation importance of the Wash saltmarsh is increasing as other saltmarshes in south-east England are eroding rapidly due to rising sea levels. Studies have shown that, between 1973 and 1988, 20% of the saltmarshes in the Thames and Essex estuaries were eroded.
- 10.2 The saltmarsh communities are specially adapted to cope with the difficult conditions produced by immersion at high tide, and many species are only found in saltmarshes. Specialised invertebrates (e.g. spiders, moths, beetles and flies) are dependent upon the saltmarsh plants, which also provide grazing for large numbers of wintering duck and geese, seed-eating birds (e.g. Twite) and shelter for breeding birds such as Redshank. Saltmarshes also play a vital role in the estuary ecosystem as a whole, as highly productive habitat which provides nutrients for the intertidal and marine habitats and so ultimately supports the abundant animal populations of shellfish, worms, fish and birds found here.
- 10.3 As in other estuaries the Wash saltmarsh has been extremely modified by man, through agricultural land-claim and stock grazing. The enclosure of saltmarsh has resulted in the loss of upper marsh plant communities, with the saltmarsh now dominated by mid-marsh and pioneer communities. The Wash saltmarshes were extensively grazed by livestock until the 1960s, when approximately 50% of Wash saltmarsh was known to be grazed, but this declined to 30% in the late 1980s because of reduced profitability of livestock rearing, resulting in a decline in the conservation interest. Grazing can have a beneficial effect on saltmarsh by maintaining the diversity of plant and animal communities. Removing grazing results in the dominance of a few species with lower conservation interest. It is important, however, that areas of saltmarsh which have not previously been grazed remain ungrazed. The picking of samphire is a traditional activity around the Wash which at current levels is not thought to present particular issues for saltmarsh conservation.
- 10.4 Saltmarsh is an important natural component of sea defences, lowering the force of waves striking sea walls.
- 10.5 The open nature of the Wash landscape is enhanced by the saltmarsh which provides a contrast between the hard engineering of the sea walls and the intertidal flats. The larger areas of saltmarsh are also valued by local communities for informal recreation, especially in summer.

- 10.6 In view of the national scarcity of saltmarsh, its continuing loss due to sea level rise in south-east England, and its role in sea defence, every effort should be made to seek alternatives to using or damaging saltmarsh which could result in significant losses of this habitat.

SALTMARSH CONSERVATION GOAL 1

* To conserve this nationally important resource.

- 10.7 Saltmarsh around the Wash has traditionally been used to supply material for sea defence works by digging borrow pits close to walls. This has resulted in a significant loss of diversity from the saltmarsh by removing those areas where the naturally rarer higher marsh communities would otherwise grow. As standards of sea defences have risen the size of borrow pits has increased, with subsequently longer recovery times for the pits to achieve their previous height and vegetation cover. At present there are few areas where the higher marsh communities are represented on the Wash. This loss of diversity has affected the conservation value of the Wash saltmarshes. A number of statutory authorities such as the EA (NRA), Internal Drainage Boards and Ports and Harbour Authorities conduct routine engineering works within the Wash, e.g. disposal of channel dredgings and similar works, which can affect the saltmarsh. Other operations may be necessary for safety reasons, e.g. the construction of a bridge across a creek. Codes of good working practices and improved liaison between all relevant parties could help minimise the impact of these types of operation.

Objective S1

To consider alternatives to the taking or using of saltmarsh for engineering or other works, which significantly affect the resource, and in so doing to ensure that the potential impact on communities and the wider local environment is fully taken into account.

<i>Action S1</i>	<i>Good working practices and liaison should be established and promoted between those bodies working on coastal protection or other engineering works and flood defence in order to minimise the impact on communities and the environment, including the wider local environment, and prevent significant habitat loss.</i>
<i>Implementation:</i>	<i>EA (NRA), IDBs, PAs, EN, CWTs, MoD.</i>

- 10.8 The sea level around the Wash is rising as land in south-east England sinks. Although areas of saltmarsh continue to expand around the Wash, particularly where saltmarsh enclosure is most recent, in other areas this has not happened. There is also evidence of erosion in some areas.
- 10.9 The previous status of saltmarsh communities of the Wash is known from scientific studies, and information is still being collected by research institutes and statutory bodies. In order to place the monitoring information in context and to assess current changes, a comparison of current and past information is required, which will allow an examination of the effect of rising sea levels upon patterns of accretion and erosion and on the saltmarsh communities of the Wash. Data from a variety of current available sources will need to be examined and reviewed. There is a continuing need to monitor the extent of saltmarsh, in order to identify future trends of accretion and erosion around the Wash.

Objective S2	To continue to monitor the Wash in order to determine areas of accretion or erosion and the development or loss of saltmarsh communities in such areas.
<i>Action S2.1</i>	<i>Relevant bodies should share and analyse information held, in order to identify the current resource status and to assess changes in the extent of saltmarsh.</i>
<i>Action S2.2</i>	<i>Those bodies currently monitoring saltmarsh should continue to do so as part of the Management Plan, and, if unacceptable changes are identified, work together to consider potential remedial action, including habitat re-creation.</i>
<i>Implementation:</i>	<i>EA (NRA), ITE, RSPB, EN</i>

SALTMARSH CONSERVATION GOAL 2

*** To maintain and enhance the nature conservation interest for plants, invertebrates and wintering, migratory and breeding birds found there, by promoting appropriate grazing régimes.**

- 10.10 The diversity of saltmarsh communities declines with the removal of stock grazing but this process can be reversed by recommencing grazing. The time since grazing was abandoned on areas of saltmarsh is known from a variety of sources. Saltmarsh responds rapidly to grazing, so the fastest recovery should be in those areas where grazing most recently ceased.
- 10.11 The effect of grazing on saltmarsh communities varies with its intensity. Light grazing pressure maintains a diversity of plants and structure which provides food and shelter for invertebrates, birds and mammals whilst plants sensitive to grazing can persist. Heavy grazing by stock produces open grassy swards suitable for grazing by geese and duck. Grazing at different intensities can therefore be used as a tool to manage saltmarsh for a particular purpose. However, as grazing can have a rapid impact on saltmarsh communities, it is important that the current conservation interest and management of each area of saltmarsh is known in order to ensure that grazing is introduced both to the appropriate areas and to the appropriate intensity.

- 10.12 In seeking the re-introduction of grazing the advice and co-operation of local land managers, farmers, graziers, and agricultural advisers will be essential. Such re-introduction will require expenditure, e.g. to install fences and water for the stock. Currently financial packages such as Countryside Stewardship are available to fund saltmarsh grazing, and considerable interest is being shown in this scheme. The ability of such schemes to deliver sufficient incentives to implement a grazing strategy will need to be reviewed, and if they are inadequate then additional financial packages may need to be sought.
- 10.13 Ungrazed saltmarsh vegetation develops and changes over time, and natural saltmarsh communities, unaffected by grazing or enclosure, are now starting to develop around the Wash. An important principle of saltmarsh conservation is allowing such natural processes to occur, without grazing affecting their natural development. Available evidence suggests that about 50% of saltmarsh was used for grazing in the 1960s, before the practice declined. This should set an upper limit to the extent of grazing in order to allow natural development to occur.

Objective S3	To encourage the reintroduction of grazing to those saltmarsh areas which are known to have been previously grazed, with priority given to areas where conservation interest is known to be declining; to seek to ensure that grazing is up to a maximum of 50% of the total area of saltmarsh; to seek to ensure that grazing is set at a level appropriate to the saltmarsh communities or other conservation interest; and to seek to ensure that in general grazing is not introduced to previously ungrazed communities.
<i>Action S3.1</i>	<i>The saltmarsh communities throughout the Wash should be identified for each grazing compartment. Their conservation interest, current management and appropriate future management régime should be identified in an implementation plan.</i>
<i>Implementation:</i>	<i>EN</i>
<i>Action S3.2</i>	<i>Compartments where it is practical to re-introduce grazing should be identified by seeking the advice of all relevant parties.</i>
<i>Implementation:</i>	<i>NFU, LMs, CoCo, EN, PCs.</i>
<i>Action S3.3</i>	<i>Relevant parties should promote appropriate sources of funding to aid the re-establishment of grazing.</i>
<i>Implementation:</i>	<i>NFU, CLA, CoCo, EN, CCs, DCs, PCs.</i>

- 10.14 The effects of grazing can be rapid, changing one saltmarsh community to another and affecting plants particularly sensitive to grazing. Grazing levels need to be monitored to determine whether they are having the desired effect or need to be adjusted.

Objective S4	To monitor the effects of grazing levels to assess the impact upon natural communities and populations.
<i>Action S4</i>	<i>The programmes of monitoring grazed saltmarsh should continue and if necessary be adjusted to accommodate new grazing areas.</i>
<i>Implementation:</i>	<i>EN, RSPB</i>

11

WATERFOWL CONSERVATION

Conservation Importance

- 11.1 The Wash is internationally important for the conservation of waterfowl (wading birds and wildfowl). In winter the Wash holds over 300,000 waterfowl, more than any other British estuary. By international agreement, any site holding more than 1% of a population or sub-species of waterfowl is classed as internationally important, and nationally important if it holds 1% of the British total. The Wash supports internationally important numbers of waterfowl in every month except June. The Wash is nationally important for 15 species, 13 of which are internationally important. These large numbers of birds rely upon the highly productive and extensive mud and sandflats, saltmarshes and hinterland to feed and shelter them through the winter months. The Wash also forms an important part of a network of estuaries used by waterfowl around Britain and Europe in winter and during migration.
- 11.2 The waterfowl of the Wash are relatively well-understood due to a long-standing programme of monthly bird counts and scientific studies, particularly of the distribution and feeding ecology of shorebirds by the Institute of Terrestrial Ecology.
- 11.3 In spring the wintering waterfowl use the abundant food of the Wash to build up the energy reserves needed to fly thousands of miles to the High Arctic to breed before returning in autumn. The Wash is also used by many other waterfowl as a refuelling stop on their migration between their wintering grounds in southern Europe and Africa and their Arctic breeding grounds. In summer the Wash is used by large numbers of immature and non-breeding migrant birds which remain here to rest, feed and moult. In summer the Wash has nationally important breeding populations of Redshank and Ringed Plover.
- 11.4 Since Saxon times saltmarsh around the Wash has been progressively enclosed and used for agriculture. In recent times a generally static low tide line has meant that saltmarshes and the sand and mud flats have been squeezed between the low tide line and the advancing sea wall, resulting in habitat losses. The successful conservation of the waterfowl of the Wash depends upon the continuing presence and productivity of the habitats of the Wash.

Conservation Designations

- 11.5 The international conservation importance of the Wash is recognised by national and international conservation designations, i.e. SSSI, Ramsar site, proposed Special Area of Conservation under the EC Habitats Directive, and Special Protection Area (SPA) under the EC Bird Directive. Under this Directive the Government has obligations to take appropriate steps to avoid any disturbances affecting birds within the SPA and to prevent significant loss or deterioration of habitats.

Managing Waterfowl and Recreation

- 11.6 A number of studies have shown that waterfowl are disturbed by a wide variety of activities. They react in a number of ways, for example by moving from preferred feeding or roosting sites, being more wary and changing their local or regional distributions.
- 11.7 During their migrations between the breeding grounds of the High Arctic, and the wintering grounds of Europe and Africa, waterfowl need undisturbed feeding as they spend only a few days on the Wash, in which time they have rapidly to replace their energy reserves before flying on to their destination. Undisturbed feeding and resting areas are especially important for waterfowl in winter when meeting their daily energy requirements becomes more difficult as food gets scarcer. In severe weather small waterfowl, e.g. Dunlin, Grey Plover and especially Redshank, are prone to die from starvation and cold. Disturbance during such weather causes birds to spend their limited reserves moving to avoid disturbance. For these reasons wildfowling clubs may institute voluntary shooting bans during severe weather and in advance of national statutory bans which are called after 14 days of such conditions nationally. In summer disturbance to breeding Redshank and Ringed Plover lowers their breeding success.

Grey Plover

- 11.8 The Government's obligation under the Birds Directive to take appropriate steps to avoid any disturbances affecting birds in Special Protection Areas can be met by establishing disturbance-free refuges within SPAs. Refuges play an important role in helping waterfowl tolerate disturbance to their feeding, breeding or roosting behaviour, and in maintaining or enhancing local distributions and numbers. Disturbance if severe or persistent at waterfowl roosts can cause changes in their number and distribution. Refuges are also an important element in managing wildfowling to help ensure the sustainable harvesting of quarry species. In the Wash, Wildfowling Clubs and Associations have designated substantial areas of intertidal flats as non-shooting refuges. Conservation organisations also manage areas where disturbance is minimised. Refuges can provide undisturbed areas for research to enable comparative studies with waterfowl elsewhere in the site.

Wildfowling

- 11.9 The waterfowl populations of the Wash have traditionally been used as a resource, providing food, sport and income. Wildfowling is part of the cultural heritage of the communities of the Wash. Wildfowling, provided it is organised, will continue to contribute to the conservation of waterfowl by ensuring that harvesting is sustainable. Wildfowling Clubs and Associations hold the shooting rights around the Wash under lease or licence, regulating shooting activity and promoting good wildfowling practice.

WATERFOWL CONSERVATION GOAL 1

* To provide and maintain suitable wintering, migration and breeding habitats for the benefit of all internationally and nationally important waterfowl populations.

- 11.10 Waterfowl use the full range of habitats of the Wash, e.g. the productive sand and mud flats provide feeding grounds and roosting sites, saltmarshes provide feeding, shelter and rest areas, and the agricultural hinterland provides safe roosting areas during high tide and shelter and feeding during periods of severe weather. The conservation of all habitats is needed to ensure that the Wash continues to support internationally important numbers of waterfowl.
- 11.11 Development and other engineering projects may have profound effects upon waterfowl habitats in the Wash. To determine their potential effects and whether they should be permitted, an environmental impact assessment is needed. A range of work is undertaken by the statutory authorities around the Wash, which can affect the waterfowl habitats. The disturbance or disruption to these habitats can be minimised through good working practice. A major threat to the waterfowl of the Wash and their habitat is oil and chemical pollution. The Wash Oil Pollution Action Committee is responsible for contingency planning for oil and chemical pollution and for operating an agreed action plan in an emergency, and supporting its work is an important safeguard for Wash waterfowl.

Objective W1	To seek to ensure that existing or proposed activities or developments having or likely to have a significant impact upon the Wash and its waterfowl populations are discouraged or suitably modified.
<i>Action W1.1</i>	<i>Relevant parties should ensure that proposals for developments likely to have a significant impact on the Wash are subject to an environmental impact assessment.</i>
<i>Implementation:</i>	<i>CCs, DCs, EA (NRA), EN, PAs, IDBs, ESFJC</i>
<i>Action W1.2</i>	<i>Statutory authorities should establish and promote codes of good working practice for their existing activities that may affect the waterfowl habitats of the Wash.</i>
<i>Implementation:</i>	<i>EA (NRA), IDB, PAs, EN</i>
<i>Action W1.3</i>	<i>The work of the Wash Oil Pollution Action Committee should continue to be supported.</i>
<i>Implementation:</i>	<i>CCs, DCs, EA (NRA), PAs, CG, EN, ESFJC, MPCU, EN</i>

- 11.12 Since the mid 1960s the limited livestock production around the Wash has declined. This has resulted in the loss of grazing on saltmarshes, and of inland pasture which is an important habitat for feeding and roosting waterfowl. However, the hinterland of the Wash remains an important habitat for waterfowl, especially for roosting during high tides. Some crops are more suitable than others for waterfowl, e.g. pea stubbles are especially good in late summer and short grass is good throughout the year. Wheat and horticultural production provides limited areas of suitable habitat for roosts. Trends in agricultural

practice, e.g. toward arable in the 1980s, resulted in significant changes in habitat available for waterfowl around large areas of the Wash. Land management can affect how valuable cultivated land is for waterfowl, and new agricultural packages, e.g. long term set-aside and sympathetic practices, can offer opportunities for waterfowl conservation and help create and enhance habitats.

Objective W2	To encourage all relevant parties, especially land managers, to consider ways in which changes in current agricultural methods might be managed to benefit waterfowl.
<i>Action W2</i>	<i>Advice should be provided to land managers on how to incorporate benefits to waterfowl in the management of agricultural land.</i>
<i>Implementation:</i>	<i>EN, NFU, CLA, FWAG, LMs, CWTs, RSPB, IDBs, private advisers.</i>

- 11.13 Permanent pasture is now confined to two areas near Snettisham and one near Boston. Such areas, together with their associated drainage channels, are important for waterfowl as well as providing more diverse habitats for invertebrates and plant communities. The existing freshwater marsh around Snettisham is valuable particularly for waterfowl, and is a scarce habitat in the Wash. The value of existing freshwater grazing marshes for waterfowl needs to be maintained and enhanced if necessary, through appropriate management of grazing levels and water levels.

Objective W3	To seek to retain and manage all existing freshwater marsh for the benefit of waterfowl populations by maintaining appropriate grazing and water management.
<i>Action W3</i>	<i>All relevant parties should be encouraged to work together to manage existing freshwater grazing marshes for the benefit of waterfowl populations.</i>
<i>Implementation:</i>	<i>EN, NFU, CLA, FWAG, LMs, CWTs, RSPB, IDBs, private advisers.</i>

- 11.14 As freshwater grazing marsh is a valuable habitat for waterfowl, which was once more widespread around the Wash, every effort should be made to redress these losses and increase the amount of this habitat. To create freshwater grazing marshes will require the participation and co-operation of local land managers and statutory bodies to identify suitable sites and explore opportunities for funding such proposals.

Objective W4	To encourage all relevant parties to work together to examine the potential for creating freshwater grazing marsh, in the light of past habitat losses around the Wash.
<i>Action W4</i>	<i>Suitable viable opportunities for creating freshwater marshes should be identified.</i>
<i>Implementation:</i>	<i>EN, NFU, CLA, FWAG, LMs, CWTs, RSPB, IDBs, private advisers.</i>

- 11.15 The waterfowl of the Wash have been the subject of scientific research, surveys and monitoring of species numbers for many years. Research has provided valuable information regarding the feeding ecology of waders and the migration routes of waterfowl. Monitoring of bird populations through monthly counting schemes has identified the international standing of the waterfowl of the Wash. The Wetlands Birds Survey jointly co-ordinated by the British Trust for Ornithology and the Wildfowl and Wetlands Trust provides detailed monthly information on the numbers and distribution of waterfowl around the Wash at high tide, and places the area in a national and international context. Continuing such work is important. Existing programmes of research and monitoring may provide general information relevant for the Management Plan, but a review of existing and projected work could determine which

work was of specific value for achieving strategic goals for waterfowl and might benefit from the support of the Wash Estuary Strategy Group.

Objective W5	To review current research, survey and monitoring projects in relation to the Goals and Objectives for Wash Waterfowl and their habitats, and support if necessary those projects which further these Goals and Objectives.
<i>Action W5</i>	<i>Existing research programmes should be reviewed.</i>
<i>Implementation:</i>	<i>EN, EA (NRA), ESFJC</i>

- 11.16 There has been comparatively little monitoring of the habitats used by waterfowl in the Wash. Such monitoring may be needed to determine the potential effects of changes in these habitats due to natural or man-induced effects upon waterfowl populations. Information relevant to the waterfowl of the Wash is collected by a variety of organisations and bodies, e.g. EN, EA(NRA), BTO, RSPB, ITE, and may be useful to the future management of the Wash for waterfowl. A review of such information is needed to identify gaps in knowledge. Monitoring should be conducted to assess natural changes in the environment and the effectiveness of any new or altered management practices upon habitats or waterfowl, and where necessary to establish baseline data prior to management.
- 11.17 To determine whether research surveys or monitoring projects should receive support from the Wash Estuary Strategy Group, the project should be assessed in relation to the Goals of this Plan.

Objective W6	To seek to ensure that the necessary research, survey and monitoring of the waterfowl populations and the quality and extent of their habitats is undertaken or maintained.
<i>Action W6.1</i>	<i>The existing Wetland Bird Survey programme of monitoring should continue.</i>
<i>Implementation:</i>	<i>WeBS organisers</i>
<i>Action W6.2</i>	<i>Parties currently surveying or monitoring the Wash should share and exchange data, and collaborate to identify gaps in knowledge.</i>
<i>Implementation:</i>	<i>EN, EA (NRA), BTO, RSPB, ITE, WWRG</i>
<i>Action W6.3</i>	<i>Monitoring programmes should be established to assess the effectiveness of any new or altered management practices.</i>
<i>Action W6.4</i>	<i>Proposals seeking support for research, survey or monitoring projects should be forwarded to the Wash Estuary Strategy Group for consideration in relation to the priorities of the Goals and Objectives of the Management Plan.</i>
<i>Implementation:</i>	<i>WESG</i>

WATERFOWL CONSERVATION GOAL 2

* To ensure that there are sufficient recognised undisturbed feeding and roosting areas to maintain current waterfowl populations at all stages of the tidal cycle.

- 11.18 The Wash traditionally provides local communities and user groups with highly valued opportunities for informal recreational pursuits, e.g. walking and samphire picking. Around much of the Wash such activities occur at such low intensity or in locations or times of year which produce minimal disturbance.

- 11.19 When seeking to establish refuges in areas known to be important for waterfowl, all existing uses will need to be considered. Where disturbance is likely to be minimal, then no action should be needed and existing activities can continue. However, identifying such areas as refuges helps target the provision of facilities and recreational development to less sensitive areas. In areas where existing use is intense, it may be impractical to establish refuges. Non-disturbance areas can only be effective if they are established in suitable areas with the voluntary agreement and co-operation of the local communities and user groups. Disturbance from recreation may be unintentional, and providing information may help avoid or discourage unreasonable behaviour and reduce disturbance. Information may also help reduce conflict between users.
- 11.20 A recent study of the movements of waders between roost sites on the Wash has shown that waders are relatively sedentary. To cater for such behaviour by waders will require a network of sites distributed around the Wash.
- 11.21 A small group of nature conservation and wildfowling representatives has worked together to prepare parts of this Management Plan, and is continuing to work together to agree criteria for both refuges and the provision of wildfowling opportunities, using an objective assessment of waterfowl requirements.
- 11.22 There is considerable information available from research studies describing the feeding and roosting distributions of Wash waterfowl. Such information provides a good level of understanding of Wash waterfowl distributions and can be used to determine if current refuge provision is adequate or if further refuges are required.
- 11.23 Refuge areas need to be monitored to see if they are succeeding in relation to the agreed criteria for their establishment. Monitoring may also be required to provide baseline data prior to their establishment. A suitable period of years is needed to evaluate the success of refuges, five years being suggested as a minimum period for a proper assessment of new refuges.

Objective W7	To seek to ensure that a network of undisturbed nesting, feeding and roosting areas exists to meet the needs of wintering, migrating and nesting waterfowl, through consultation and co-operation with relevant parties.
<i>Action W7.1</i>	<i>A set of criteria should be established for refuges for further consultation with relevant parties.</i>
<i>Action W7.2</i>	<i>Agreed criteria should be used to review existing refuges and other mechanisms for reducing disturbance in relation to known distributions of waterfowl and if necessary identifying possible locations for refuges for further consultation with relevant parties.</i>
<i>Implementation:</i>	<i>EN, CWTs, BASC, WCAs, RSPB.</i>
<i>Action W7.3</i>	<i>To seek to establish any necessary refuges through consultation with all relevant parties.</i>
<i>Implementation:</i>	<i>EN, RSPB, BASC, WCAs, CWTs, RUGs, PCs and local representatives</i>
<i>Action W7.4</i>	<i>Refuge performance in relation to criteria for establishment should be monitored.</i>
<i>Implementation:</i>	<i>EN, RSPB, BASC, WCAs, RUGs and local representatives</i>
<i>Action W7.5</i>	<i>Refuges should be evaluated over a 5 year period and refuge provision reviewed accordingly.</i>
<i>Implementation:</i>	<i>EN, RSPB, BASC, WCAs, CWTs, RUGs and local representatives</i>

- 11.24 Disturbance to waterfowl can be caused by a wide variety of activities. Such disturbance is often unintentional, and the effects of such activities can be reduced by sensitive behaviour. Simple precautions can be identified and promoted through codes of conduct to minimise disturbance effects. Such codes can best be developed by working with local communities and user groups.
- 11.25 Liaison between recreational users and other relevant parties may be most effective through user groups. In some cases these groups do not exist and may need to be formed. A number of user groups, such as Wildfowling Clubs and Associations and Ramblers' Associations, share a common interest in the Wash but can be affected by each others' activities, or by the activities of the statutory authorities.

Objective W8	To seek to establish and promote codes of good conduct for potentially disturbing activities.
<i>Action W8.1</i>	<i>All relevant parties and interest groups should be encouraged to work together to establish and promote codes of conduct for potentially disturbing activities.</i>
<i>Implementation:</i>	<i>EN, RSPB, BASC, WCAs, RUGs, NCP and local representatives</i>
<i>Action W8.2</i>	<i>The formation of a user group should be encouraged where an interest related to an issue is not currently represented.</i>
<i>Implementation:</i>	<i>Wash Estuary Strategy Group</i>
<i>Action W8.3</i>	<i>All parties active in the Plan Area should be encouraged to seek common solutions to problems through user groups or similar mechanisms.</i>
<i>Implementation:</i>	<i>CCs, DCs, EN, NRA, IDBs, NFU, CLA, FWAG, LMs, CWTs, RSPB, PCs.</i>

- 11.26 Undisturbed areas are also needed for comparative study in order to examine the potential effects of disturbance on waterfowl populations around the Wash.

Objective W9	To seek to provide control areas suitable for research, including comparative assessment of the effects of activities upon waterfowl elsewhere in the site.
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WATERFOWL CONSERVATION GOAL 3

* To continue organised and responsible wildfowling through the auspices of wildfowling clubs.

- 11.27 Wildfowling is regulated through eight Wildfowling Clubs and Associations that hold sporting leases and licences, and is limited to the period between 1 September and 20 February on the foreshore. Clubs and Associations manage their members' activities through restricted membership, permit systems, bag limits and establishing wildfowling refuges. They also monitor the activity of their members and other activities on their holdings by appointing voluntary wardens to oversee restrictions and regulations. A full-time wildfowling warden could help co-ordinate management and act as a link between Clubs and Associations and other agencies.

Objective W10	To continue to operate sustainable wildfowling through Clubs and Associations.
<i>Action W10.1</i>	<i>A recognised wardening system should continue to be operated.</i>
<i>Action W10.2</i>	<i>A mechanism for appointing a full-time wildfowling warden for the Wash should be considered.</i>

- 11.28 Codes of practice for wildfowling currently exist and club regulations and restrictions are designed for good wildfowling practice. Such codes are an important means of ensuring wildfowling is conducted in a safe and acceptable manner. Self management of Clubs and Associations by their members supports and promotes good practice. Clubs and Associations have a responsibility to promote codes and educate new members.

Objective W11 To continue to promote good practice through self management.

Action W11 The promotion of Codes of Practice and education of new members should be continued.

- 11.29 Eight Wildfowling Clubs and Associations currently control wildfowling around the Wash. A co-ordinated approach to wildfowling by clubs and associations has been achieved by establishing a management group.

Objective W12 To continue to co-ordinate wildfowling management around the Wash.

Action W12 The management group for the Wash and its co-ordinating role should be continued.

- 11.30 Most clubs have management plans, which are an effective means of targeting resources appropriately. However a plan for each, produced to a standard format, would help wildfowling management and help towards the co-ordinated management of the Wash as a whole.

Objective W13 To seek to ensure that all clubs produce and review management plans.

Action W13 Activities should continue to be managed in accordance with a comprehensive plan to a common format for the Wash.

- 11.31 A variety of monitoring programmes are conducted by clubs and associations to assess the activity of their members. This information would be more useful if monitoring were conducted in a standardised format to allow collation of data. By using standard systems, a comprehensive database could be constructed to aid wildfowling management.

Objective W14 To standardise existing programmes of monitoring.

Action W14 The review of the current system of data collation should be continued and standardised around the Wash.

Implementation for Actions W10-W14: BASC, WCAs

Chapter 12

RECREATION

- 12.1 A wide variety of recreational activity occurs in the Wash ranging from quiet informal pursuits such as walking to the more active sporting activities such as power boats, personal watercraft and water skiing. Within this diverse range of recreational use, the levels of activity also vary greatly from the remoteness of the marshes where few people are seen to the popular and busy seaside holiday resorts along the Norfolk coast. More research is required into sport and recreation in the Wash and in particular on how these interact with each other and with landscape and nature conservation interests. Two limited surveys however have been conducted (Nature Conservancy Council 1990, Sports Council 1994) and these revealed the information summarised below. The Norfolk Coast Project has prepared a Visitor Management Strategy for the AONB which contains information, policies and actions relevant to this part of the Wash.

Land Based Recreation

- 12.2 Walking, with dog walking from the public access 'pulovers', appeared to be the most widespread activity along the sea banks, occurring all the year round, but not unnaturally being more popular in summer. The majority of these 'pulovers' are in Lincolnshire, although the most popular walk, the Peter Scott Walk opened in 1989, traverses both counties running from the Eastbank Lighthouse to West Lynn Ferry. Other well used sites identified were Boston Haven to Cut End, on the Witham, the Plummers at Freiston and Shep Whites at Holbeach. Although minor improvements have been made to specific sites, such as at Butterwick Pullover and Eastbank Lighthouse, and certain walks have been promoted, e.g. through Lincolnshire County Council's leaflet 'Wash Bank Access Points', the general policy has been to limit improvements and publicity to ensure that the unique character of the coastline is maintained. In Norfolk, the Coastal Park at Snettisham manned by a part-time warden is particularly popular with visitors, as are the nature reserves at Gibraltar Point and Snettisham.
- 12.3 As regards other land based forms of recreation, bird watching was popular and found in most areas. Largely due to the lack of facilities, horse riding and cycling were only occasional activities in most areas. In contrast, motorbiking, particularly on the saltmarshes at Wrangle, Frampton Marsh and Duck Points was noted as an increasing and intrusive activity, damaging both the seabanks and the saltmarsh. In an attempt to deter motorcyclists, fencing has now been erected in certain areas and the NRA has placed notices on the bank warning that the use of motorised vehicles on the sea bank will attract prosecution and a £2000 fine.

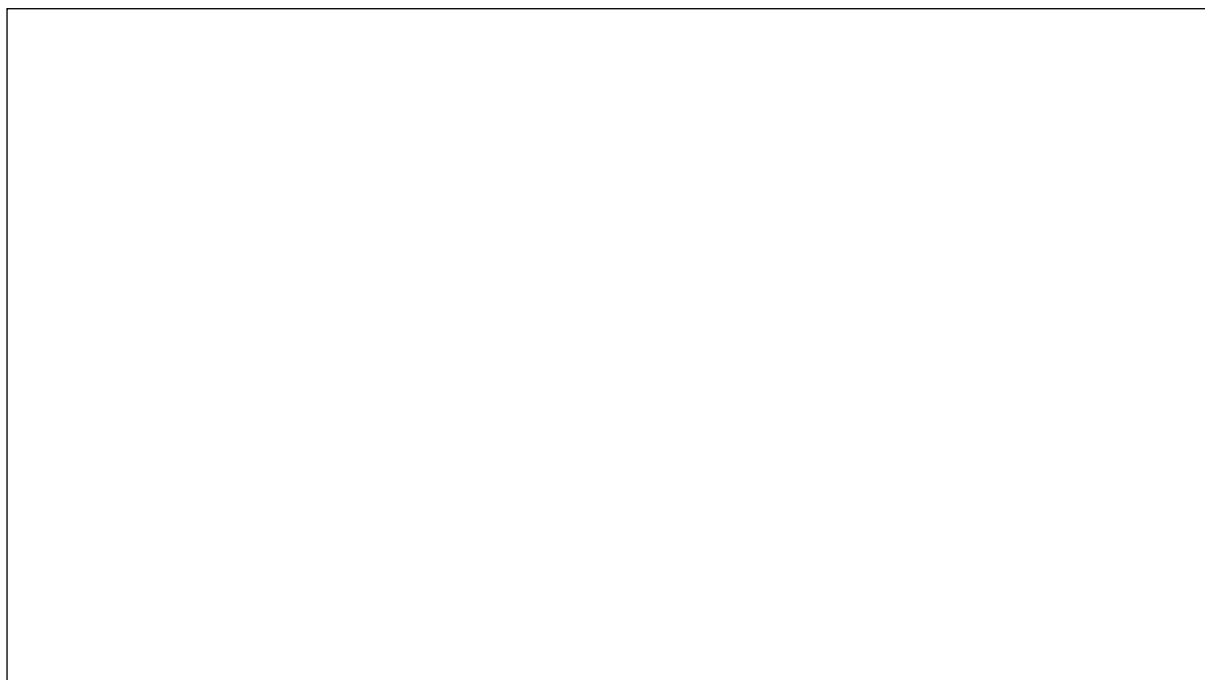
- 12.4 Three golf courses were identified adjacent to the Wash, at Hunstanton, Sutton Bridge and at Seacroft (Skegness) which abuts the Gibraltar Point Nature Reserve. No particular problems are known regarding these activities.
- 12.5 Traditional pursuits such as wildfowling, bait digging and the seasonal collection of samphire were also identified as important land based recreational activities (and these have already been covered in previous chapters). Others, however, such as cockling and the catching of dabs and eels, now seem increasingly uncommon.

Beach Recreation

- 12.6 Generally, beach recreation was found to have no major impact on the Wash, the main activities taking place at Skegness, Snettisham, Heacham and Hunstanton. Elsewhere, dangerous tides and the mud and salt marsh nature of the majority of coastline effectively hinder this activity. However, beach recreation along the Norfolk coast has been identified as a cause for concern in some areas due to the impact of recreational uses, largely through trampling, digging and other disturbance, upon the ecology of the local shell fisheries and upon breeding shorebirds.

Water Based Recreation

- 12.7 The Wash, traditionally a sailing area, is gradually becoming more popular for an increasingly wide variety of water based recreational activity. At the most basic level, the clean water and beaches associated with the Norfolk holiday coast are popular for sea bathing. At times this can be dangerous and in conflict with the more modern motorised water activities such as personalised water craft.
- 12.8 The total number of pleasure cruisers using the Wash is not known but mooring facilities are found in several locations. Boston Grand Sluice is available for the passage of boats between the Wash and the inland waterway system, and during a peak season weekend with good weather and suitable tides some 40-50 boats may pass through the lock. The majority of these boats return by the next tide, after 4-5 hours. Some may moor near or in the channel between Long and Roger Sands until the tide permits passage. Parties occasionally land on Roger Sands during low tide. Other cruiser moorings in Lincolnshire



Moorings at Gibraltar Point

are located above Fosdyke Bridge and increasingly on the River Glen at Surfleet. Numbers using King's Lynn harbour are estimated to average 40-50 in summer with about 100 boats in and out of the harbour during the peak period of a weekend during the summer holiday. Commercial pleasure cruisers also sail from Hunstanton taking trippers out into the Wash to view the seals and cliffs.

- 12.9 The principal locations for sailing and yachting are at Gibraltar Point and Wainfleet Harbour, the non-tidal stretch of the River Witham, and at Snettisham and Hunstanton. Activities are generally associated with official clubs and few problems are encountered. The Skegness Yacht Club based within the Gibraltar Point Nature Reserve represents a peaceful co-existence between conservation and sailing interests as does the Snettisham Beach Sailing Club's use of former gravel pits for beginners in agreement with the RSPB. In recent years windsurfing has become increasingly popular at Hunstanton with people travelling considerable distances to participate.
- 12.10 Motorised water sports, which tend to be more intrusive, are similarly becoming ever more popular as new activities such as jet skiing combine with the more established ones such as power boats and water skiing. The two main centres for power boats and water skiing are at Hunstanton and Heacham, the former being of national importance and hosting major championships. Activities at these locations are generally well regulated by the Hunstanton and District Water Sports Club and the Heacham Boat Owners' Association although other unassociated users do occasionally stray into sensitive wildlife areas. On a smaller scale, water skiing also takes place from the Nene Outfall Lighthouse (Guy's Head) and below Fosdyke Bridge. Neither of these groups is affiliated to the British Water Ski Federation. Personal watercraft activity also occurs at these locations and also more extensively at King's Lynn, Hunstanton, Heacham and Snettisham. Problems have already been encountered, not only with other water activities, but also with disturbance to waterfowl and wildfowling interests. Overall, the level of water based recreation on the Norfolk side of the Wash has necessitated the Borough Council to consider introducing zoning as a means of reducing conflict.

Aerial Recreation

- 12.11 The coastal area around the Wash is popular with recreational flyers as one of the few places in Britain where they can fly around without radio contact. Small, slow flying single engine aircraft are only able to fly around the Wash at weekends and public holidays when the RAF weapons ranges are inactive. Low flying aircraft and microlights, which are particularly disturbing to roosting waterfowl, are regularly noted over the Nature Reserves at Gibraltar Point and Snettisham. Parascending has also occurred above the Wash based at Hunstanton.

RECREATION GOAL 1

* To enable and encourage the local communities and visitors to understand and enjoy their natural heritage.

- 12.12 The Wash estuary is important for its wildlife and landscape, and for the opportunities for recreation it provides. In order to ensure that these qualities are recognised by those wishing to enjoy the Wash it is important that clear messages are given as to why the area's outstanding qualities from time to time require particular conservation measures. The overwhelming majority of people enjoying the countryside are tolerant of one another and considerate of the rights and desires for privacy among landowners and residents. When people follow the country code, visitor-generated problems seldom occur. Promoting a sense of consideration for others is at the core of the country code and this can be reinforced by the attitudes of countryside staff and landowners towards people enjoying the countryside. Similarly, the involvement of volunteers and the local community can not only bring practical benefits but also create a better understanding of the issues facing the Wash.

Objective R1	To ensure that the country code and other messages of considerate behaviour are promoted, portrayed positively, and made readily available to their intended audience.
<i>Action R1</i>	<i>Relevant organisations should promote the country code and other messages of considerate behaviour.</i>
<i>Implementation:</i>	<i>CoCo, CCs, DCs, NCP, PAs</i>
Objective R2	To encourage positive practical local action in order to obtain the additional benefit of improving the natural environment of the Wash.
<i>Action R2</i>	<i>Relevant organisations should consider practical schemes for volunteers and, if necessary, assist in their organisation and implementation.</i>
<i>Implementation:</i>	<i>CoCo, CCs, DCs, NCP</i>

12.13 An integral part of the understanding and enjoyment of the natural heritage of the Wash is education. In this respect the Management Plan itself has an important role to play, but other initiatives should also be supported, in particular the Fens Interpretation Strategy being drawn up by the Fens Tourism Group. The principal themes of this concentrate on:

- the history and creation of the Fens landscape, environment and ecology;
- the social and economic development of the Fens to the present day; and
- the Fens culture and way of life.

Utilising the 'drainage story' as a common thread the intention is to:

- assist in developing a unique sustainable tourism product embracing a range of sites and attractions;
- improve the understanding and appreciation of the Fens landscape, development and culture amongst visitors and residents alike; and
- add value to the existing 'Fens product' by presenting a coherent interpretation of the Fens landscape and social and economic development under a single promotional and marketing umbrella.

12.14 At the more localised level, on-site education facilities such as the Interpretation Centres at Gibraltar Point and Snettisham are of considerable value as are the smaller scale interpretation and information boards at specific locations. Two additional centres with considerable potential for education are the Lincolnshire County Council education centre at the Freiston Hall Field Centre and the commercially operated Sea-Life Centre at Hunstanton. The latter is a popular attraction with large numbers of holiday-makers, and its partial use, perhaps as a venue for a display on the nature conservation interest of the Wash, would reach and inform a wide audience.

Objective R3	To encourage a wider knowledge and understanding of the Wash.
<i>Action R3.1</i>	<i>The Fens Interpretation Strategy should be adopted where appropriate to the Wash area.</i>
<i>Action R3.2</i>	<i>A review of existing on-site education facilities in the Wash should be undertaken, existing deficiencies recognised, and proposals for improvement identified.</i>
<i>Action R3.3</i>	<i>The potential use of the Freiston Hall Field Centre, the Sea-Life Centre at Hunstanton and interpretation centres for developing a wider knowledge and understanding of</i>

	<i>the Wash should be investigated.</i>
<i>Implementation:</i>	<i>CCs, DCs, CoCo, NCP, EN, CSRs.</i>

RECREATION GOAL 2

* To ensure that recreational activities are compatible with nature conservation interests and with each other.

- 12.15 Where there is pressure for use, evidence already exists to show that recreational activities can conflict with each other and/or with nature conservation interests. Existing examples in the Wash include jet skiing intruding on other water based activities and on wildfowling, beach activity damaging the ecology of shellfisheries and disturbing breeding birds, and, on occasions at Gibraltar Point, the volume of birdwatchers disturbing the birds. Experience elsewhere has shown that in such circumstances the use of negotiated voluntary agreements and the zoning of activities have reduced problems and brought about considerable improvements. The affiliation of all clubs to the governing bodies of sport can assist considerably in this respect. However, care needs to be taken to ensure that zoning in one area does not merely deflect any problem to elsewhere. In relation to the Wash further work is required in monitoring the effects and interactions of existing uses, although encouragingly King's Lynn and West Norfolk Borough Council is already doing this in relation to water based recreation, and the zoning of users at Hunstanton, Heacham and Snettisham is under active consideration.

Objective R4	To promote the use of codes of conduct, and to encourage responsible and safe behaviour.
<i>Action R4</i>	<i>Relevant organisations should promote codes of conduct and in particular encourage clubs to affiliate to the governing bodies of sport.</i>
<i>Implementation:</i>	<i>DCs, CCs, NCP, CSRs, RUGs</i>
Objective R5	To encourage negotiated voluntary agreements to reduce areas of conflict and, where appropriate, the zoning of recreational and sporting activity to reduce areas of conflict.
<i>Action R5.1</i>	<i>King's Lynn and West Norfolk Borough Council should be supported in their efforts to introduce zoning at Hunstanton, Heacham and Snettisham, as part of a review of managing watersports in the Wash as a whole and in adjacent areas.</i>
<i>Action R5.2</i>	<i>Surveys should be undertaken to identify areas and levels of recreational use and any conflicts with other users by both formal and informal recreation.</i>
<i>Implementation:</i>	<i>CCs, DCs, CoCo, NCP, EN, CSRs, RUGs.</i>

RECREATION GOAL 3

* To maintain traditional pursuits in harmony with other activities.

- 12.16 Traditional pursuits such as wildfowling, seasonal samphire gathering and bait digging are important local activities, and it is not the intention of this Management Plan to constrain them unnecessarily. However, the principles of sustainable use should apply and the use of zoning should operate where conflicts arise with wildlife or other recreational uses. Objectives and actions related to these activities have already been set out in earlier chapters of the Management Plan.

Objectives and actions MCF2, MCF4, MCF9 (Chapter 6)

Objectives and actions D1, D4 (Chapter 9)

Objectives and actions W7, W8, W10 - 14 (Chapter 11)

RECREATION GOAL 4

* To ensure that facilities for public access and recreation are maintained and enhanced in order to enable the area to be enjoyed.

- 12.17 Of particular importance to enjoying the Wash countryside and seascape is the extensive network of public rights of way which by and large follow the coast around the Wash. This network of footpaths and to a lesser extent bridleways is enjoyed by local residents and visitors alike, and it is important that it is fully useable, well maintained and promoted and operates in harmony with other uses such as the farming community and those responsible for sea defence. Local people also traditionally enjoy the benefit of access on to the marshes. In most cases, the quiet enjoyment of the countryside by people on foot is compatible with conservation objectives. Responsibility for maintaining and managing the public rights of way network rests with the County Councils, but others, such as the Parish Councils, can also play an important contributory role. It is also important that the opportunities of usage are available to all sections of the community. Other forms of informal recreation such as horse riding and cycling also occur around the Wash, although due to the lack of public bridleways and permissive routes they are not such frequent activities. The creation of a public right of way along the eastern coast, under consideration for some time, needs to be completed.

Objective R6.1	To ensure that all public rights of way are legally defined, properly maintained and well publicised, and that access on foot to the marshes is maintained.
Objective R6.2	To ensure that Parish Councils and local people are aware of their involvement in the management of the rights of way network and in the creation of local walks and parish maps.
Objective R6.3	To encourage wherever possible and desirable the principle of 'barrier free access' on footpaths and at recreation sites to facilitate use by the disabled, elderly and those with young children.
Action R6.1	<p>A strategic review of access opportunities in the Wash should be undertaken which identifies:</p> <ul style="list-style-type: none">* the scope and use of existing public rights of way, promoted walks and trails;* additional opportunities for quiet, informal recreation such as through the creation of bridleways and permissive routes which are not detrimental to wildlife or land management interests.
Action R6.2	Landowners and managers should be encouraged to carry out an access audit on their properties where the public have access to see where improvements to access can be made which would benefit all users.
Action R6.3	Legal right of access should be provided along the eastern coast between King's Lynn and Snettisham.
Implementation:	CCs, CoCo, NCP, LMs

- 12.18 Access to the Wash is generally gained from a variety of access points ranging in size from the public car parks at Hunstanton, Heacham and Snettisham which cater for large numbers of visitors down to the numerous small rough parking areas or ‘pullovers’ in Lincolnshire which are capable of accommodating only a few cars. Clearly, each has a different function related to different levels of activity and this approach should be continued. It is particularly important that the mass of visitors continue to be directed towards the larger sites which are capable of accommodating them. In this context, it is important that any increase in the number of visitors should be managed in such a way that it does not have a detrimental impact on the pervading atmosphere of peace and tranquility in the Wash.
- 12.19 In Norfolk, an increasingly popular attraction for visitors is the Coastal Park at Snettisham, manned by a part-time warden. The visitors have so far generally managed to co-exist amicably with other uses such as wildfowling, camping and the activities of the Wash Wader Ringing Group. In some areas, however, pressure is beginning to be experienced, and it is encouraging that it is currently the intention to prepare a Management Plan for the potentially vulnerable water and reed bed areas of the Park in conjunction with the wildfowling associations and conservation organisations.

Objective R7	To ensure that access points to the Wash continue to cater only for the level of use appropriate to their size and function.
<i>Action R7.1</i>	<i>The use and condition of access points should be monitored to ensure that the above objective is achieved.</i>
<i>Action R7.2</i>	<i>The intention to prepare a Management Plan for the water and reed bed areas of the Snettisham Coastal Park should be supported.</i>
<i>Implementation:</i>	<i>CCs, DCs, CoCo, NCP, EN, WCAs, LMs.</i>
RECREATION GOAL 5	
* To encourage the tourist industry, recreational interests and local communities to maintain and enhance the environmental quality of the area.	

- 12.20 On the Norfolk side of the Wash the tourist industry is heavily developed, for example over a million day visitors a year are estimated at Hunstanton, and there are large commercial caravan sites at both Snettisham and Heacham. At the other end of the scale, much smaller numbers of people visit the Wash for its wildlife interest, quietness and solitude. The planning system provides the general framework for controlling these tourism activities. Below this level considerable opportunities exist, specifically within the tourism field, to promote and enhance understanding of the environmental qualities of the Wash by appropriate marketing and publicity. There may also be opportunities to invite visitors and elements of the tourist industry voluntarily to contribute to the costs of promoting conservation of the environment they come to enjoy. The Principles of Sustainable Tourism developed by the English Tourist Board and the Countryside Commission should be widely advocated, and promotional leaflets and brochures prepared by the local authorities and the tourist industry are capable of stimulating a greater sense of care and understanding among visitors about the places they visit.

Objective R8	To encourage the Principles of Sustainable Tourism, and, in a tourism context, to promote a greater understanding and awareness of the environmental qualities of the Wash.
<i>Action R8</i>	<i>Relevant organisations should assess their current marketing and publicity initiatives to ensure that the above objective is achieved.</i>
<i>Implementation:</i>	<i>DCs, CCs, CoCo, NCP, TBs, TI</i>

Chapter 13

IMPLEMENTATION

- 13.1 Implementation is the development of the action points by parties identified in each chapter of the Plan, and it is fundamental to the success of the plan. Existing groups that have been established to prepare this Plan and suggestions for additional groups to help implement it are set out below together with some considerations about timescales and resources.

Existing structures

- i) Wash Estuary Strategy Group
- 13.2 This Group has been responsible for preparing the Management Plan and consists of officers of those statutory organisations with a remit for the area. These are the two County and four District or Borough Councils, National Rivers Authority, English Nature, Eastern Sea Fisheries Joint Committee, Countryside Commission, Port and Harbour Authorities and Internal Drainage Boards. There will be a continuing need for this Group during implementation whose role will be not only to use their own sanctioned powers and resources as appropriate, but also to ensure cross-agency co-ordination of effort and additionally to be responsible for the monitoring and ultimate review of the plan.
- ii) Secretariat
- 13.3 Currently an officer of each of the County Councils and a Project Officer from English Nature service the Strategy Group, including the organising of meetings and the preparation and collation of documents for the Plan. There will be a continuing need for this service. Additionally the Secretariat will also co-ordinate the overall implementation of the Plan and ensure that other groups and sub-groups can function within its remit.
- iii) Sub-Groups
- 13.4 Sub-groups are led by a member of the Wash Estuary Strategy Group, who together with other key partners in that group work to develop particular aspects of the Management Plan. Currently only one Sub-group exists, for nature conservation, but it is a good example of the principle, involving wildfowling club representatives working closely together with the two County Wildlife Trusts, RSPB and English Nature in preparing the Management Plan. Sub-groups have a particularly important role in the implementation of individual topics in the Plan by bringing together landowners, user group representatives and others especially in areas such as recreation, where a wide variety of interests need to be represented. Successful implementation of the plan will require the establishment and development of further sub-groups.

iv) Local Authority Members' Group

- 13.5 The overall Wash project is led by Local Authorities, and the role of this Group to date has been to approve the preparation of the Strategy, to agree the circulation for public comment of the draft Management Plan and to agree amendments to this. This Group will need to continue in order to allow Local Authority Members to oversee the development and implementation of the Management Plan as it affects Local Authority and wider community interests and in particular any implications for their resource allocation.

New structures

i) General Forum

- 13.6 It is vital that the views of those with legitimate interest in the Wash are represented in such a Forum in order to influence the content of the Plan and participate in its implementation. The role of the Forum would be essentially to raise, discuss and where possible resolve cross-topic issues, and make recommendations to the Strategy Group for action as necessary. This Forum may also be an appropriate venue for presentations reviewing the progress of the Plan. The Forum should effectively be open to any party with a substantive interest wishing to attend, but should initially include representatives of all statutory authorities and user groups involved in consultations, e.g. parish councils, land owners, internal drainage boards, fishermen's associations, nature conservation organisations and sports club representatives including wildfowling clubs and associations.

- 13.7 The first meeting of such a Forum took place during the consultation period of the Management Plan.

ii) Ad hoc issues groups

- 13.8 Cross-topic issues may not all be capable of being resolved within the Forum. In such cases an Ad hoc Group consisting of those relevant parties may need to be formed for the period required to resolve the issue. The Group would report the outcome to the Forum with any necessary action to be recommended to the Strategy Group.

- 13.9 The above structures are summarised in Figure 2, overleaf.

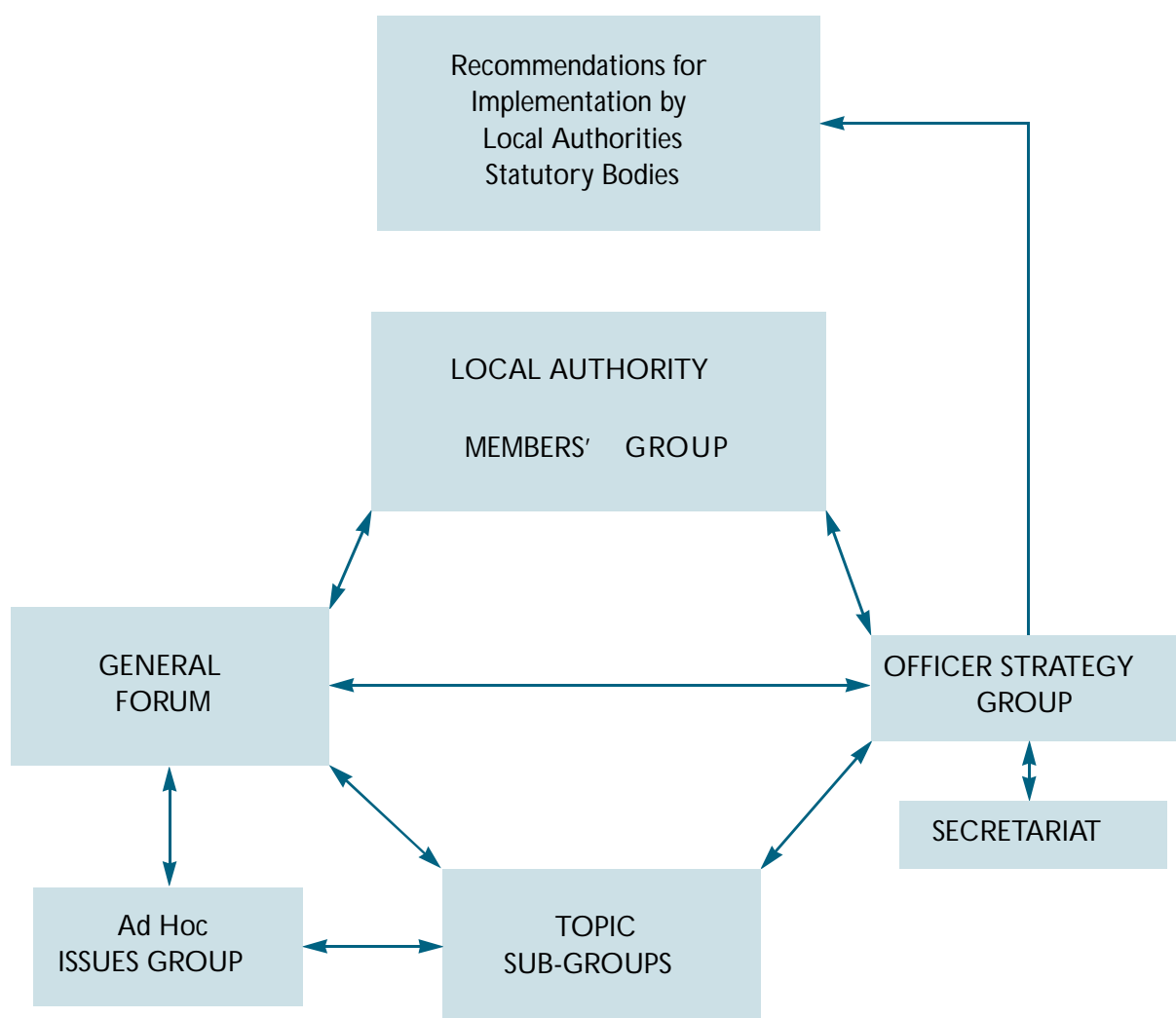
Timetable

- 13.10 The Management Plan should run for a fixed period during which topic related implementation will necessarily be at different rates. However, those topics which require further development for details of action to be agreed should aim for an agreed action plan within one year of implementation. The Management Plan period should be sufficiently long to allow such action plans for individual topics to be finalised, management action taken and a period of monitoring to determine the effectiveness of action. A suggested Plan duration would be 5 years, which should be long enough for the effects of management to be assessed.

Review

- 13.11 It is important that the progress of implementation is monitored and reviewed regularly to identify any problems and seek solutions. A formal annual progress report of the Management Plan should be made to the Forum, with biannual reports considered by both Strategy Group and the Local Authorities' Members group. In the last quarter of the Management Plan period a comprehensive review should be conducted by the secretariat, working together with sub-groups to identify those chapters needing modification before drafting the next Plan for approval by all groups.

FIGURE 2 :
STRUCTURES FOR IMPLEMENTING
THE MANAGEMENT PLAN



Resources

- 13.12 This Management Plan contains many actions and requires the involvement of numerous authorities, organisations and individuals if it is to be successfully implemented. Now that the Management Plan is approved it is hoped that all those involved will formally adopt it as both the general framework and detailed guide for the sustainable management of the Wash.
- 13.13 The preparation of the Strategy and of the Management Plan has principally required the Strategy Group authorities and organisations to allocate staff time to its production and to provide facilities for meetings. English Nature has also funded a Project Officer to assist with drafting documents, and generally assist this Group. The additional allocation of officer time to the Secretariat Group has been essential to the production of the Management Plan.
- 13.14 Implementation, with the Forum and additional sub-groups to service and co-ordinate, is likely to require more dedicated staff time than is available from existing Local Authority officers. In this context there

must be a danger that the production of the Management Plan becomes the end of the process, rather than the beginning. Ideally, therefore, it is considered that an Implementation Officer is required, not only to assist in these matters, but also for more general monitoring and review procedures. Early consideration should therefore be given by the authorities and organisations represented on the Strategy Group as to whether such an appointment, perhaps for a fixed term, is financially feasible.

Objective I1	To implement the Management Plan effectively.
<i>Action I1.1</i>	<i>All authorities identified in the Management Plan with a potential role in helping to implement it should adopt its goals, objectives and actions as their own.</i>
<i>Implementation:</i>	<i>All</i>
<i>Action I1.2</i>	<i>The statutory authorities involved in managing the Wash should consider jointly the feasibility of appointing a Wash Implementation Officer.</i>
<i>Implementation:</i>	<i>Authorities represented on the Wash Estuary Strategy Group</i>

Chapter 14

MONITORING, SURVEY AND RESEARCH

- 14.1 Environmental monitoring of a number of physical and biological types is routinely conducted by a variety of organisations, as part of their duties. Such monitoring is needed to help identify any long term changes which may require action in the Management Plan.
- 14.2 A second type of monitoring is needed to implement the Management Plan. When any management is implemented, it must be monitored to ensure that the action is having the expected effect. Such monitoring can identify whether there is a need to modify the action. This is particularly true where the action may be expected to produce rapid effects, such as the grazing of saltmarshes, or when the effectiveness of the action is unknown.
- 14.3 The ecology and physical environment of the Wash are relatively well-understood due to the wide range of scientific studies conducted over many years. This information provides a background against which proposals which may affect the Wash can be estimated, or the effects of management or natural changes assessed. However in some topics there may be insufficient information available from the Wash upon which to base judgements of long term environmental change or the effects of management. In such cases further information may need to be collected through reviewing the available literature, or conducting new surveys or research. The range of information that is available from the Wash is summarised below.

Ornithology

- 14.4 The ecology of waterfowl using the Wash has been studied by the Institute of Terrestrial Ecology (ITE) since the early 1970s. The waterfowl have been counted monthly by volunteers as part of a national scheme since 1970. The importance of the Wash for migrant birds is based upon work conducted by the Wash Wader Ringing Group since 1959.

Marine Ecology

- 14.5 As part of the ITE's waterfowl ecology study, the invertebrates living in the inter-tidal flats were also sampled. Sub-tidal surveys have been conducted by the Nature Conservancy Council (NCC - now English Nature) between 1982-86 and the NRA conducted a systematic survey in 1992. The seal populations of the Wash are counted annually by the Sea Mammal Research Unit. This work began in 1968. Stocks of shellfish are monitored annually by the Eastern Sea Fisheries Joint Committee (ESFJC) and MAFF.

Saltmarsh Vegetation

- 14.6 The saltmarshes were described and mapped in the 1970s and 1980s in studies commissioned by NCC, and ITE repeated this work in 1994.

Physical Environment

- 14.7 The sediment types and distribution, processes of accretion, erosion, tides and currents have been studied since the early 1970s by a variety of universities and institutes, including ITE. The EA (NRA) is also involved in routine monitoring of the shoreline.

Water Quality

- 14.8 Water quality is routinely monitored by the EA (NRA) as part of its statutory duties, and a joint study by them and MAFF of water quality in the Wash has just been completed. The former NRA has published a Wash Zone report which summarises the results of the water quality and biological monitoring programmes for the four river estuaries (Witham, Welland, Nene, Great Ouse) and the Wash.

Other Information - Commercial and Recreational

- 14.9 Whilst a wide range of environmental information is available for the Wash, other information related to how the estuary is used may be needed to implement the Management Plan. Some information on the commercial uses of the Wash is held by, for example, the ESFJC for fishery landings and by the individual ports for shipping information. Local Authorities hold some information on tourism. Information on informal recreation is more limited. NCC conducted a postal survey in 1990 and the Sports Council extended this work in 1993-4. The results of these surveys have been collated and produced as reports for the Wash Estuary Strategy Group.

OBJECTIVES

- 14.10 Monitoring is an essential part of implementing the Management Plan; when management is undertaken the effects need to be monitored to determine if it is effective or needs refining.

Objective M1	To ensure that where management or other activities are undertaken or proposed such action is monitored.
<i>Action M1</i>	<i>Relevant parties should produce specific programmes to monitor the effects of management and agree procedures and timescale for review.</i>
<i>Implementation:</i>	<i>All</i>

- 14.11 Although the physical and ecological environment of the Wash is relatively well understood, there may be specific areas where there is incomplete information for implementing actions in the management plan. In such circumstances information from other sites or studies should be reviewed and assessed in order to determine whether further work is necessary, as new surveys or research may be costly or time-consuming to commission. It is often possible to proceed on the basis of best available information, and this approach should be adopted wherever possible. Experimental management régimes may also be useful in assessing the effectiveness of proposed measures, if properly supervised and monitored.

Objective M2	To ensure that proposals or decisions for management are in the first case based upon the best available information.
<i>Action M2</i>	<i>When sufficient information is not available then consideration should be given to trial management schemes, rather than new surveys or research.</i>
<i>Implementation:</i>	<i>All</i>

- 14.12 Environmental monitoring is needed to determine long-term trends of patterns of accretion and erosion, storm surges, saltmarsh development etc. in the Wash, which may require management actions in the future. Some monitoring is being conducted by statutory agencies as part of their function. However, no long-term overview of the environmental status of the Wash exists, or whether key features of the ecosystem are being monitored.

Objective M3	To encourage bodies conducting environmental monitoring schemes in the Wash to review existing monitoring programmes and identify gaps in knowledge.
<i>Action M3</i>	<i>Monitoring agencies should review existing programmes and consider future needs.</i>
<i>Implementation:</i>	<i>All</i>
Objective M4	To encourage agencies to promote wherever possible the free exchange of information to obtain a broad overview of the environmental status of the Wash.
<i>Action M4</i>	<i>Agencies should explore data exchange methods including Geographical Information Systems as a means of promoting better understanding of the ecosystem and helping inform management options.</i>
<i>Implementation:</i>	<i>All</i>

- 14.13 When proposals are made for monitoring, survey or research projects which may require resources from more than one body or agency, they should be considered by the Wash Estuary Strategy Group to determine if they are a priority for implementing the Management Plan, and if they are financially feasible.

Objective M5	To consider monitoring, survey or research proposals which require significant resources in relation to an agreed set of criteria in order to determine their priority and feasibility.
<i>Action M5</i>	<i>A set of criteria to achieve this objective should be produced.</i>
<i>Implementation:</i>	<i>WESG</i>

APPENDICES

Appendix 1: Wash Estuary Strategy, with Glossary

Appendix 2: Planning Policies

Appendix 3: Ports Legislation

wash

estuary



strategy for sustainable management

September 1994

THE WASH ESTUARY STRATEGY FOR SUSTAINABLE MANAGEMENT

Preface

The Wash, shared between Lincolnshire and Norfolk, is one of the country's most important estuaries for its nature conservation value. Huge numbers of migratory birds stop off here, some to breed or overwinter, others on their way to more distant places. The vast landscapes of The Wash are some of the most remote and wild countryside in this part of England. The Wash is also very important to local people who rely on it for many of their economic and recreational activities, for fishing, navigation, port uses, sailing, wildfowling, and many other purposes besides.

Many of Britain's estuaries have changed very greatly in recent years through pressures of development, and their value as habitat, countryside and a place to enjoy has been much diminished. Although this has happened to a lesser degree in the Wash, the area still faces many pressures. The Government is encouraging local interests to collaborate in managing stretches of coast where interests cross local authority boundaries and straddle the divide between land and sea. This is very much the case with The Wash.

Accordingly the Wash Estuary Strategy Group, made up of representatives of the local authorities and a number of other authorities with responsibilities for the area, has prepared this Strategy for Sustainable Management of The Wash, following public consultation on a draft version in the earlier part of 1994. (Please note that there is a Glossary at the back of the Strategy which explains some of the terms used in the document.) This is intentionally a 'broad brush' statement of general intent, and provides the framework within which a more detailed Management Plan is being prepared during 1994. This will be a non-statutory plan which will be prepared in collaboration with many authorities, voluntary bodies and private individuals involved within the area. It will contain specific suggestions for action by all of these interests and encourage them to work in partnership for the overall benefit of The Wash and local communities dependent on this estuary.

Wash Estuary Strategy Group

c/o Norfolk County Council

Department of Planning and Transportation

Norwich NR1 2SG

or c/o Lincolnshire County Council

Department of Highways and Planning

Lincoln LN1 1DN

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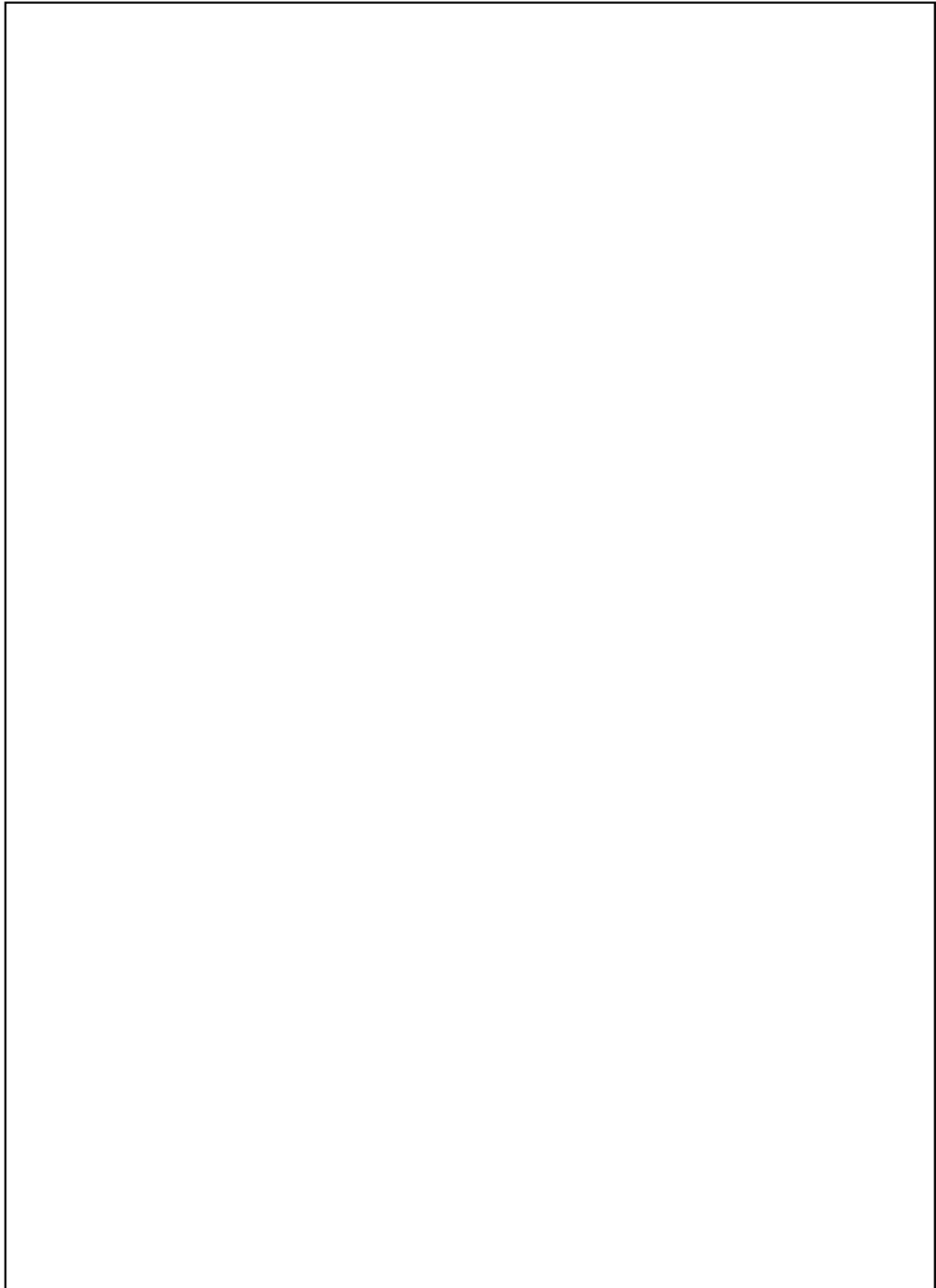
The Wash Estuary Strategy Group is made up of representatives of:

Boston Borough Council, Countryside Commission, Eastern Sea Fisheries Joint Committee, East Lindsey District Council, English Nature, King's Lynn and West Norfolk Borough Council, Lincolnshire County Council, National Rivers Authority, Norfolk County Council, South Holland District Council, the Wash Internal Drainage Boards and the Wash Ports Authorities.

1 INTRODUCTION

- 1.1 The importance of Britain's estuaries for nature conservation has been highlighted by a number of recent initiatives, most notably of English Nature, the Royal Society for the Protection of Birds and the Marine Conservation Society. Estuaries have long been used for many purposes - ports, industrial and other built development, land reclamation for agricultural or built uses, fishing, recreation, development for marinas, and barrages, to name but a few - and in many estuaries there are now conflicts between the various demands for estuarine uses, especially for nature conservation. The interconnections between different estuaries in this country and further afield as they are used by migratory species are an important nature conservation consideration.
- 1.2 Recent government publications state the need for mechanisms to be developed for the strategic management of coastal issues where these cross local authority boundaries or straddle the divide between land and sea, as is the case with the Wash. They recognise that estuaries need to be considered as a whole, given the interdependence of different parts. Co-operation between local planning authorities and other agencies to prepare estuary management plans is encouraged.
- 1.3 The Wash, divided between Lincolnshire and Norfolk, is the largest estuary in England and Wales and is one of Britain's internationally important estuaries for its nature conservation value. It has national recognition as a Site of Special Scientific Interest, international recognition as a Special Protection Area (EC Conservation of Wild Birds Directive 79/409) and as a Ramsar Convention Site (Wetland of International Importance). It has important connections with the Wadden Sea (Netherlands-Germany-Denmark) and with Morecambe Bay as well as with areas further afield as birds move between them. Parts are managed as National Nature Reserve, other parts are managed as nature reserves by voluntary conservation bodies, and parts of the south-eastern coast, including the saltmarsh, mud flats and hinterland, have been designated an Area of Outstanding Natural Beauty, indicating the national importance of the area's landscape. The Wash supports a nationally important shellfish industry for both molluscan and crustacean shellfish which has significant socio-economic implications for the area. It is a very wild and unique stretch of almost entirely undeveloped lowland coast.
- 1.4 There are a number of other important activities on or near to the coast: port and associated industrial uses; flood protection; major agricultural uses behind the coast on land reclaimed from the estuary, but which also provides important areas used by birds from the estuary; fisheries; Ministry of Defence uses; tourist and recreational uses; water abstraction from inflowing rivers; and other issues. Any of these could have an impact on the continuing importance of the area's wildlife, and responsibility for them rests with a wide variety of local authorities, other statutory bodies, voluntary agencies and private individuals. These have tended to operate in isolation. This resulted in a short-term and piecemeal view of the estuary, which is a shared resource and a single physical and biological system.
- 1.5 To provide a long-term, shared view of how an estuary should be used requires an Estuary Management Strategy, based on the principle of sustainable use. Such a Strategy should seek to ensure that the natural resources of an estuary can continue to meet both the varied needs and aspirations of future generations and the obligations of government to conserve wildlife for the nation and the international community. A strategy should provide guidelines for the wise use of the natural resources of the area for the benefit of all, and provide a mechanism to aid discussion and understanding regarding any conflicts of interest. It should also provide the framework for a management plan, which sets policies and describes what action is needed to meet the Strategy's aims.
- 1.6 This Strategy for the Wash sets out to achieve these purposes for this area. In order to be effective it must rely upon the goodwill and co-operation of the local communities and user groups, and of those who have various statutory responsibilities to operate in the area. All of these were invited to comment

THE WASH SITES OF SPECIAL SCIENTIFIC INTEREST
AND SPECIAL PROTECTION AREAS
(UNDER THE EC'S WILD BIRDS DIRECTIVE)



on the draft version of the Strategy and its strategic guidelines, and will be fully involved through further consultations to help develop the Strategy into a management plan. Observations received on the draft Strategy were carefully considered and reflected in this final Strategy. Interested parties are invited to adopt as their own the guidelines it contains.

2 STRATEGIC GOALS

- 2.1 The resources of estuaries need to be used 'sustainably' now, in such a way that they can continue to meet the needs of future generations. Where the effect on the environment of current actions or new proposals is not fully known but is potentially damaging, decisions should err on the side of caution, i.e. the so-called 'precautionary approach' should be pursued. By adopting this approach not only should the nature conservation interest of the Wash be safeguarded, as the government is committed to do through national and international obligations, but so too should the natural character and productivity of the estuary be maintained, upon which the local industries and communities depend.

The strategic goals of the Management Strategy, which have equal importance, are to provide a framework for the wise and sustainable use of the Wash within which:

- * the Wash as a natural resource of international nature conservation value is recognised, maintained and enhanced;
- * economic activities, including flood protection, that need to operate in the area are able to do so in harmony with the previous goal and with other uses;
- * distinctive landscapes and archaeological and historic features are safeguarded;
- * recreational activities are managed in such a way that the natural beauty of the area can be enjoyed without conflict with the first goal and other uses; and
- * all parties active in the Wash are encouraged to co-operate in the future in using the various powers and rights under which they operate to further these goals.

- 2.2 These goals will apply to the whole area covered by the Strategy. This principally relates to the statutorily designated areas of the Wash, for example the SSSI, but on occasions could include the wider adjoining areas in relation to specific issues, for example landscape, water quality, development inland but affecting the Wash, and individual actions and initiatives.

3 ISSUES

3.1 Planning and Development

The Wash and Gibraltar Point are Sites of Special Scientific Interest under national legislation, Ramsar sites under international convention, Special Protection Areas under the EC's Birds Directive, and part of the Wash is an Area of Outstanding Natural Beauty under national legislation. These all place a degree of constraint upon development in the area for reasons of its nature and landscape conservation importance, and this is recognised in the current County Structure Plans and the emerging District-wide Local Plans.

There are important port, industrial, agricultural, tourist, potential marine aggregate extraction and other economic activities based near or off the Wash coast.

Planning Policy Guidance (PPG) produced by the Department of the Environment offers guidance to local authorities and others on Coastal Planning (PPG 20) and on implementing sustainable development through the planning system (PPG12). PPG 20 states that the key policy issues for coastal planning are:

- conservation of the natural environment,
- development, particularly that which requires a coastal location,
- risks, including flooding, erosion and land instability; and
- improving the environment, particularly of urbanised or despoiled coastlines.

PPG 12 concerns the preparation of development plans and regional planning guidance. It restates the government's intention to work towards ensuring that development and growth are sustainable and to continue to develop policies consistent with the concept of sustainable development.

The goals for planning and development are:

- * To ensure that all aspects of the planning system fully recognise the need to safeguard statutorily designated areas, e.g. the Area of Outstanding Natural Beauty, the Sites of Special Scientific Interest, the Special Protection Areas etc. in considering development proposals
- * To ensure that land and sea-based development is compatible with the aim of sustainable use.

3.2 Landscape

The Wash is the largest estuary in England and has some of the remotest countryside in this part of the country. The vastness and scale of the estuary with its relatively undeveloped coast highlight the scenic qualities and unique character.

A stretch of coast on the eastern side is designated an Area of Outstanding Natural Beauty and is part of the Norfolk Coast AONB. For such a designation to be given, the landscape must have a range of unusual, unique or outstanding qualities before it can be considered a part of the national landscape resource.

The estuary has been used for navigation for centuries, and there is likely to be some marine archaeological interest.

The goals for landscape are:

- * To promote policies that conserve the landscape qualities and local distinctiveness of the area.
- * To ensure that the estuary and adjoining areas are managed in ways which reflect the unique character of the Wash.
- * To maximise opportunities for landscape improvement and enhancement.
- * To investigate the extent of marine archaeological interest, and safeguard important remains.

3.3 Flood Defence and Coast Protection

The natural environment of the Wash is ultimately dependent upon the physical environment. Land claim for agriculture around the Wash has led to the squeezing of the intertidal area between the advancing sea wall and a relatively static low tide line, resulting in the loss of higher saltmarsh communities and areas of sand and mudflats. Rising sea levels around the coast of southern England mean that saltmarshes and intertidal areas are increasingly threatened. The Strategy aims to conserve the physical environment of the Wash as this sustains its biological productivity. Where possible it also considers balancing the losses of intertidal habitat occurring elsewhere, taking full account of current and likely

future geomorphological processes and changes.

The goals for flood defence and coast protection are:

- * To maintain adequate standards of strategically planned flood defence to protect people and property.
- * To consider appropriate alternatives to the further taking of saltmarsh habitat for engineering works or other purposes.
- * To examine the suitability of set-back or foreshore recharge schemes in order to balance the increasing loss of inter-tidal habitats in south-eastern England.
- * To monitor the effects of sea level rise and the strengthening of sea defences on the physical environment of the Wash.

3.4 Ports and Navigation

The port and harbour authorities of King's Lynn, Boston and Wisbech, together with the King's Lynn Conservancy Board, have statutory responsibilities for a range of matters, such as maintenance of safe navigation channels through, for example, dredging, buoy marking and the control of dangerous cargoes. The ports of Boston, Fosdyke, King's Lynn, Sutton Bridge and Wisbech are an important part of the regional economy.

The goals for Ports and Navigation are:

- * To contribute to the viability and efficiency of port and harbour operations.
- * To minimise the environmental impact of port or harbour operations.
- * To endeavour to enhance the natural environment should the opportunities arise.

3.5 Marine Conservation and Fisheries

The Wash supports a relatively diverse marine community, including a relatively rare example of a colonially living marine worm and an internationally important colony of Common Seals. The Wash also supports a nationally important shell fishery for cockles and mussels, and fisheries for brown and pink shrimps. It is an important fish nursery area for the North Sea. As the major industry in the Wash the Strategy aims to promote the sustainable use of its fisheries in order to maintain the marine ecosystem so as to continue to support the productivity of the Wash, which in turn supports its nature conservation interest.

The goals for marine conservation and fisheries are:

- * To maintain and enhance the nature conservation importance of the inter-tidal and sub-tidal areas.
- * To promote the wise and sustainable use of the Wash fishery resources as part of that maintenance and enhancement.

3.6 Water Quality

Good water quality, including freshwater flow into the estuary, is important for the Wash in several ways. It is needed to continue to support the wide range of natural communities found in the Wash, and for the commercial shrimp and shell fisheries to meet standards set by EC Directives. The tourist industry also needs good water quality to meet standards set by EC Directives on bathing waters. Water quality in

some areas of the Wash may not meet the highest standards set for shell fisheries.

The goals for water quality and conservation are:

- * To maintain and improve the water quality of the Wash as a whole and meet existing obligations under current EC Directives.
- * To enhance water quality in those areas where it is known to be poorer, or is of concern for estuary users.

3.7 Agriculture

The area adjoining the Wash is mainly agricultural land of the best and most versatile kind in the country, supporting rural communities and their economy. Agricultural land is also important for the wildlife of the Wash, providing feeding and roosting areas for waterfowl around the Wash, especially during adverse weather conditions in winter.

The goals for agriculture are:

- * To support a viable farming economy and rural communities in the Wash.
- * To promote agricultural practices which maintain and enhance the nature and landscape values of the area.

3.8 Defence

The Wash has been used by the military since the 1890s and now supports two weapons ranges at RAF Holbeach and Wainfleet. They serve the NATO Air Forces and are of national and international importance for defence.

The goals for defence are:

- * To ensure the safe and efficient management of the weapons ranges.
- * To minimise the environmental impact of range operations.
- * To maintain and enhance the nature conservation interest of the ranges within the context of the Strategy.

3.9 Saltmarsh Conservation

Saltmarshes are one of Britain's rarest habitats and landscapes, supporting highly specialised plants and animals. In the south-east of England where the largest areas of saltmarshes are found, they are eroding rapidly due to rising sea levels, so increasing the importance of those remaining. The Wash contains 10% of all Britain's saltmarsh and is one of the largest single areas remaining, with new saltmarsh accreting in places. Grazing is a long-standing agricultural use of parts of these marshes, which can maintain and enhance their nature conservation value.

The goals for saltmarsh conservation are:

- * To conserve this nationally important natural resource.
- * To maintain and enhance the nature conservation interest for plants, invertebrates, and wintering, migratory and breeding birds found there, by promoting appropriate grazing régimes.

3.10 Waterfowl Conservation

The Wash supports the highest numbers of wintering waterfowl of any British estuary, holding internationally important numbers of 13 species. The area is also important at other seasons. Its importance for bird populations is recognised by its national and international conservation designations. Wildfowling is a long-standing traditional local activity in the area. The Government has obligations under the EC Birds Directive to provide undisturbed areas for waterfowl.

The goals for waterfowl conservation are:

- * To provide and maintain suitable wintering, migration and breeding habitats for the benefit of all internationally and nationally important waterfowl populations.
- * To ensure that there are sufficient recognised undisturbed feeding and roosting areas to maintain current waterfowl populations at all stages of the tidal cycle.
- * To continue organised and responsible wildfowling through the auspices of wildfowling clubs.

3.11 Recreation

Local communities use and value the Wash as an area for traditional pursuits and quiet recreation such as walking and sailing. The beaches of the Hunstanton area support a tourist and leisure industry with important economic implications for the area. There are indications that recreational use of the Wash is on the increase and that some disturbance to wildlife is resulting. Different types of recreation may also affect other users.

The goals for recreation are:

- * To enable and encourage the local communities and visitors to understand and enjoy their natural heritage.
- * To ensure that recreational activities are compatible with the nature conservation interests and with each other.
- * To maintain traditional pursuits in harmony with other activities.
- * To ensure that facilities for public access and recreation are maintained and enhanced in order to enable the area to be enjoyed.
- * To encourage the tourist industry, recreational interests and local communities to maintain and enhance the environmental quality of the area.

4 NEXT STEPS

The Strategy sets out a framework of long-term goals for the wide variety of activities which take place on the Wash and affect nature conservation. It has been prepared as a contribution towards the production of an overall Management Plan for the area, which will provide more specific guidance on the action needed to achieve the goals contained in the Strategy. The Management Plan will contain detailed policies and prescriptions for the action needed to fulfil them over a period of time. Full consultations with all user groups and local communities will take place during preparation of the Management Plan to engender the support and involvement of all interested parties.

The Strategy and Management Plan will need to be reviewed periodically and their performance monitored.

GLOSSARY

1. DESIGNATIONS

Area of Outstanding Natural Beauty

The countryside of England and Wales contains wide areas that are outstandingly beautiful and richly diverse scenery of great value to the nation. Accordingly, the Government decided in 1949 to protect these areas as something precious to be passed on to future generations.

The idea of AONBs found form in the National Parks and Access to the Countryside Act, 1949 (s. 87), from which a particular set of objectives developed:

1. the primary purpose of AONB designation is to conserve natural beauty;
2. recreation is not an objective of designation, but AONBs should be used to meet the demands of recreation as this is consistent with the conservation of natural beauty and the needs of agriculture, forestry and other uses; and
3. in pursuing the primary objective of designation account should be taken of the need to safeguard agriculture, forestry and other rural industries, and of the economic and social needs of the local communities.

Although these are national objectives, the day to day administration of AONBs rests with the local authorities. Responsibilities are split between County and District Authorities, ideally with joint working arrangements.

National Nature Reserve

Any area of land which is held by or managed under an agreement with English Nature, or which is held and managed by an approved body, for the purpose of:

1. providing, under suitable conditions and control, special opportunities for the study of, and research into, matters relating to the fauna and flora of Great Britain and the physical conditions in which they live, and for the study of geological and physiographical features of special interest in the area; and/or
2. preserving fauna, flora or geological or physiographical features of special interest in the area;

and is an area which, being satisfied that it is of national importance, English Nature has declared to be a National Nature Reserve. Such declarations are made under powers contained in the National Parks and Access to the Countryside Act, 1949, Part III.

Ramsar Site

The Convention on Wetlands of International Importance especially as Wildfowl Habitat was adopted at a meeting of countries held at Ramsar, Iran in 1971. The UK Government signed the Convention in 1973 and became a contracting party in 1976 and in doing so accepted a commitment to promote both the conservation of particular sites and the wise use of wetlands within its territory. Each country which becomes a Contracting Party to the Convention is required to designate wetlands, in accordance with agreed criteria, as "Wetlands of International Importance". A wetland is regarded as internationally important if it regularly supports 20,000 waterfowl or 1% of a species, or sub-species, of waterfowl.

Site of Special Scientific Interest

Any area of land which, in the opinion of English Nature, is of special interest by reason of its flora, fauna or geological or physiographical features and details of which EN has notified to owners, occupiers, local planning

authorities and the Secretary of State under the provision of Section 28 of the Wildlife and Countryside Act, 1981, as amended 1985.

Special Protection Area

The Government of the United Kingdom is bound by the European Community's Directive of April 1979 on the Conservation of Wild Birds (79/409/EEC). Member states are required to take special conservation measures concerning the habitat of species of wild birds listed in Annex 1 of the Directive (certain rare and vulnerable species) and of regularly occurring migratory species where particular attention needs to be paid to wetlands, especially those of international importance. These measures shall include classifying the most suitable localities as Special Protection Areas and, in respect of these, taking appropriate steps to avoid pollution or deterioration of the habitat or disturbance affecting the birds.

2. DEFINITIONS

'The Precautionary Principle'

Under this principle action can be taken to anticipate and avoid damaging the environment before there is clear scientific evidence of a causal link between an activity and the damage.

This principle was accepted by the UK Government in the Ministerial Declaration of the Second International Conference on Protection of the North Sea, 1989, regarding marine pollutants. The principle is now accepted more generally by Government, as one of the principles of stewardship, outlined in the Government's White Paper "This Common Inheritance", 1990, and in a guide for government departments entitled "Policy Appraisal and the Environment" (Department of the Environment, 1991).

'Wise Use' (Article 3, Ramsar Convention)

"The wise use of wetlands is their sustainable utilisation for the benefit of humankind in a way compatible with the maintenance of the natural properties of the ecosystem."

'Sustainable utilisation' is defined as "human use of a wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations".

'Natural properties' of the ecosystem are defined as "those physical, biological, or chemical components, such as soil, water, plants, animals, and nutrients, and the interactions between them".

'Wise use' includes the promotion of the following wetland policies:

1. Proper assessment of environmental impact before development projects are approved, continuing evaluation during the execution of the projects, and full implementation of environmental conservation measures which take full account of the recommendations of this process of environmental assessment and evaluation;
2. Use of development funds for projects which permit conservation and sustainable utilisation of wetland resources;
3. Regulated utilisation of wild fauna and flora, such that these components of the wetland system are not overexploited.

APPENDIX 2

PLANNING POLICIES RELATING TO THE WASH

The policies listed below are those considered potentially most relevant to the Wash. They are contained in the most up-to-date plans available at the time of preparing this appendix. However, all of these plans are subject to revision, and it is recommended that the relevant planning authority be contacted for the current wording.

LINCOLNSHIRE STRUCTURE PLAN REVIEW (CONSULTATION DRAFT)

57	International Sites of Nature Conservation Importance
58	National Sites of Nature Conservation Importance
59	Regional or Local Sites of Nature Conservation Importance
68	Protection of the Waterside Environment
80	Archaeological Heritage
89	Informal Recreation in the Countryside
92	Water Based Recreation
93	Coastal Conservation Areas
94	Coastal Management

NORFOLK STRUCTURE PLAN (1993)

Policy C.1	General protection of the Norfolk countryside.
Policy C.2	Protection of the rural landscape and undeveloped coast.
Policy C.7	Protection of sites of nature conservation value.
Policy C.9	Land reclamation along the Wash coast.
Policy HT.1	Overall strategy for tourism.
Policy HT.2	New holiday accommodation.
Policy SR.2	Countryside recreation.
Policy FR.2	Development at risk from tidal flooding.

BOSTON LOCAL PLAN (DEPOSIT DRAFT)

- C.12 Development affecting archaeological deposits
- C.16 The Wash SSSI
- C.18 Coastal zone

SOUTH HOLLAND DISTRICT LOCAL PLAN (DEPOSIT DRAFT)

- E.6 Sites of archaeological interest
- E.10 Nature conservation
- L.T.1 Leisure, recreation, tourist facilities.

EAST LINDSEY LOCAL PLAN (ADOPTED)

- C.6 Archaeology
- ENV.15 Protection of Important Sites of Natural History Significance
- C.17 Coastal Conservation Area 4

KING'S LYNN AND WEST NORFOLK LOCAL PLAN (DEPOSIT DRAFT JUNE 1994 & PROPOSED CHANGES JULY 1995)

- Policy 4/1 Designated Areas for Conservation (SSSIs, NNRs, Ramsar Sites, SPAs, SACs)
- Policy 4/3 River Corridors
- Policy 4/4 Local Habitats and Wildlife Sites
- Policy 4/5 Area of Outstanding Natural Beauty
- Policy 4/6 Areas of Important Landscape Quality
- Policy 4/7 Landscape Features
- Policy 4/8 Historic Landscape Features (Historic Parks and Gardens, Marshland Drovers, etc)
- Policy 4/21 Surface Water Disposal and Groundwater/Aquifer Protection
- Policy 7/5 Holiday Development Expansion Zone
- Policy 7/6 Holiday Development Consolidation Zones
- Policy 8/10 Development in the Coastal Zone (Outside Hunstanton)
- Policy 9/13 Caravans, Chalets and Camping Sites
- Policy 9/14 Development Affecting Flood Defences
- Policy 9/15 Development and Sea Defences
- Policy 9/20 Renewable Energy Development

APPENDIX 3

PORTS LEGISLATION

The Dangerous Substances in Harbour Areas Regulations 1987.

Environmental Protection Act 1990.

Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

The Transfrontier Shipment of Hazardous Waste Regulations 1988.

The Control of Pollution (Special Waste) Regulations 1988.

The Planning (Hazardous Substances) Regulations 1992.

The Merchant Shipping Act 1964.

Oil Pollution Act 1971.

Dangerous Vessels Act 1985.

The Control of Pollution (Amendment) Act 1989.

The Control of Pollution (Landed Ships' Waste) Regulations 1987.

The Control of Pollution (Landed Ships' Waste) (Amendment) Regulations 1989.

Annexes I, II and V of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol 1978 (MARPOL 73/78).

Water Resources Act 1991.

Harbour Works (Assessment of Environmental Effects) Regulations 1988.

Harbour Works (Assessment of Environmental Effects) (No 2) Regulations 1989.

Wildlife and Countryside Act 1981.

Transport and Works Act 1992.

Merchant Shipping Act 1894.

Harbours, Docks and Piers Clauses Act 1847.

Pilotage Act 1987.

Food and Environment Protection Act 1985 (As Amended).

Paris Commission