

## SECTION 5: IMPLEMENTATION

### 5.1 Introduction

5.1.1 Section 3 demonstrates that it is technically viable to restore or create many types of coastal habitats, albeit that there remain a number of uncertainties. Section 4 outlines the options for evaluating such initiatives. If assessment and evaluation are to be followed by implementation, however, the roles and responsibilities of the various agencies with an interest in the coastal zone must be clearly defined in respect of the retreat option. The circumstances under which compensation might be paid to the landowner must also be determined and possible sources of funding to meet the capital, maintenance and/or management costs of habitat creation or restoration must be investigated.

5.1.2 A large number of organisations have an interest in the management of the coastal zone in England and Wales. The National Rivers Authority (NRA) is arguably one of the most important of these agencies, having powers and duties in respect of both Flood Defence and Conservation (see Section 5.2). The Nature Conservancy Council (now English Nature and the Countryside Council for Wales; also the Joint Nature Conservation Committee); Ministry of Agriculture, Fisheries and Food; Countryside Commission; and the local planning authorities are among the other statutory authorities with powers and duties to conserve or enhance environmental resources through designation and enforcement policies. Their various responsibilities of interest to this study are outlined in Section 5.3, along with the agencies' policies relating to the retreat option and any funding mechanisms which are, or may be, appropriate to habitat creation/restoration. Voluntary organisations such as the National Trust and the Royal Society for the Protection of Birds could also play a key role in implementing managed retreat. The scope of their activities, their priorities in respect of habitat creation/restoration, and their funding abilities are therefore discussed in Section 5.4. The situation in the United States is reviewed in Section 5.5 and potentially valuable lessons for Great Britain are highlighted. Finally, some possible sources of new funding for coastal habitat creation or restoration are highlighted in Section 5.6.

### 5.1.3 **Need for Compensation**

"Strategic retreat, whether on the beach or in war, has often been the key to ultimate self-preservation and victory. The greatest resistance comes from a misplaced sense of pride and from the very real possibility of short term but large private economic setbacks.... the interests of private property owners are important and politically powerful. The wisdom of strategic retreat will not be accepted, emotionally or legally, unless the needs of property owners are adequately addressed".

Second Skidaway Institute of Oceanography Conference on America's Eroding Shoreline, 1985.

As will be discussed in detail in Section 5.2.2, the NRA have permissive powers which, in many circumstances, enable them to allow a flood defence to fail without becoming liable to pay compensation. In cases where feasibility studies indicate that the habitat which would develop naturally (i.e. without any intervention) following such failure would be of significant nature conservation value, the abandoning of defences may provide an effective means of meeting nature conservation objectives at no cost. The politics of the retreat option, however, cannot be ignored. History has demonstrated that British landowning interests are a politically powerful lobby, being both vociferous and effective in achieving their aims. Support for the principle and objectives of the retreat option from groups such as the Country Landowners Association (CLA) and National Farmers Union (NFU) would obviously be desirable. Such support is unlikely to be forthcoming in the absence of an adequate compensation provision.

In many cases successful habitat creation initiatives will depend heavily on the cooperation of individual landowners. Some projects may even require engineering works in advance of the failure of the flood defence. Works might include, for example, the placing and grading of material to raise the elevation of the land and/or the digging of watercourses to ensure good tidal circulation when the structures do fail. Notwithstanding the legal requirements outlined in the following sections, it is therefore likely, and quite reasonable, that the landowner will expect to be compensated if the residual (productive) life of his land is deliberately terminated in order to develop an environmentally desirable resource. **In the long-term if the creation of environmentally desirable coastal habitats is to become widely accepted, the issue of paying compensation to the landowner must be both addressed and resolved.**

#### 5.1.4 Compensation Payment Options

There are two primary mechanisms for the payment of compensation. The first involves the purchase of the land in question; the second the negotiation of some form of on-going payment to the landowner. In some circumstances purchase will be made at full market value, in others the price paid for the land will reflect its residual value (e.g. if a decision has already been taken to abandon the defence when it fails).

The National Rivers Authority have compulsory purchase powers under S.151 of the 1989 Water Act which can be used if land is required by the Authority for the purposes of, or in connection with, the carrying out of its functions. Other agencies also have compulsory purchase abilities in respect of nature conservation: local authorities under the Town and County Planning Act (1990) S.226 and the NCC under S.17 of the National Parks and Access to the Countryside Act (1949). Compulsory purchase is, however, generally regarded by these agencies as a last resort and this study does not advocate any change in that presumption. Irrespective of whether or not land is compulsorily purchased, someone has to pay. The various options for meeting both the short-term capital costs including possible land purchase and the longer term management and maintenance costs of a habitat creation/restoration project are therefore discussed in detail in Sections 5.2 to 5.5 inclusive.

5.1.5 There are many circumstances when land purchase may not be viewed either by the landowner or by the agency promoting a particular scheme as being desirable. As discussed in Section 1.7, the creation of a saline or brackish habitat means that land will quickly become unsuitable for agricultural production. The extent of land claim in areas around the Wash, however, demonstrates that it is possible to return such land to agriculture, albeit in the long term. Some landowners may therefore wish to retain overall control of their land in case there is a future move towards Dutch style enclosure for the purpose of creating or re-creating agricultural land. Farmers might also perceive potential spin-offs in the form of financial gain from managing a site for nature conservation as a form of diversification. Wildfowling may be prepared to pay the farmer to pursue their interests (see Section 5.4.7); reeds might be grown commercially if there is an adequate supply of freshwater; reedbeds might be set up to treat sewage or waste water; and some landowners may even be interested in opening a nature reserve to the public. Working within the constraints suggested by the Countryside Commission in terms of retaining or improving landscape quality and amenity provision (see Table 4.1.2), and taking account of the ability of different types of ecosystem to tolerate disturbance, there are still a number of ways in which a landowner may be able to utilise his land "productively".

5.1.6 In any of the above cases, it may be possible to negotiate a management agreement with the landowner to ensure that environmental objectives are achieved. Alternatively, an agency may assume the control of a site in return for the payment of an agreed "rent" or lease. Some options for such annual payments are outlined in Sections 5.2 to 5.5 along with a general discussion of how it might be possible to meet any maintenance costs associated with a particular site once the habitat has been established.

## 5.2 The Role of the NRA

5.2.1 The National Rivers Authority (NRA) was set up following the fundamental restructuring of the British water industry which took place under the Water Act 1989. The principal aims of the NRA, as stated by the Chairman, Lord Crickhowell at the time of its launch on September 1st 1989, are set out below:-

- i. To achieve a continuing improvement in the quality of rivers, estuaries and coastal waters, through the control of water pollution.
- ii. To assess, manage, plan and conserve water resources and to maintain and improve the quality of water for all those who use it.
- iii. To provide effective defence for people and property against flooding from rivers and sea.
- iv. To provide adequate arrangements for flood forecasting and warning.
- v. To maintain, improve and develop fisheries.
- vi. To develop the amenity and recreational potential of waters and lands under NRA control.

- vii. To conserve and enhance wildlife, landscape and archaeological features associated with waters under NRA control.
- viii. To improve and maintain inland waterways and their facilities for use by the public where the NRA is the navigation authority.
- ix. To ensure that dischargers pay the costs of the consequences of their discharges; and as far as possible to recover the costs of water environment improvements from those who benefit.
- x. To improve public understanding of the water environment and the NRA's work.
- xi. To improve efficiency in the exercise of the NRA's functions, and to provide challenge and opportunity for employees and show concern for their welfare.

Aims iii, vi, and vii are clearly of most relevance to this report. The NRA's Flood Defence responsibilities are among those briefly summarised below. The NRA's specific powers and duties in respect of Conservation are set out in Section 5.2.2, while associated powers and duties of direct relevance to this report are discussed in Sections 5.2.3 to 5.2.7.

"The NRA, through its Regional Flood Defence Committees has a statutory obligation to exercise general supervision over all matters relating to land drainage in England and Wales. In particular it has sole powers to improve and maintain designated "main rivers". It is also empowered to undertake sea defence work and to act in default of Local Authorities and IDBs. Water courses other than main rivers and those in Internal Drainage Districts are the responsibility of the riparian owners, but District Councils have powers to carry out works on them to prevent or alleviate flooding. District Councils are also empowered to undertake sea defence work in their area. County Councils may act in agreement with or in default of District Councils to carry out flood defence work. They also have powers to undertake drainage work on behalf of riparian owners to benefit small areas of agricultural land. Internal Drainage Boards have powers to carry out works in their districts other than on "main rivers". These works are mostly to alleviate the flooding of agricultural land but they also offer protection to urban land in many cases. Maritime District Councils are empowered to protect land against erosion and encroachment by the sea" (MAFF, 1989).

**NRA's Legal Responsibilities in Respect of Conservation**

Pursuant to Section 8 (1)(a) of the Water Act 1989 (hereafter known as the Act), the National Rivers Authority (NRA) have a duty,

"so far as may be consistent with the purposes of any enactment relating to the functions of that body and, in the case of the Secretary of State and the Director, with their duties under section 7 above, so to exercise any power conferred on him or it with respect to the proposals as to further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological or physiographical features of special interest;"

Section 8 (4) is also of importance to this study, stating that:

"without prejudice to its other duties under this section, it shall be the duty of the Authority, to such extent as it considers desirable, generally to promote -

- a. the conservation and enhancement of the natural beauty and amenity of inland and coastal waters and of land associated with such waters;
- b. the conservation of flora and fauna which are dependent on an aquatic environment; and
- c. the use of such waters and land for recreational purposes".

It therefore appears that the definition of conservation is important to the issue of habitat creation/restoration in respect of NRA's ability to undertake managed retreat: does "conservation" relate only to a resource which already exists at a particular site, or is it more general? There is no statutory definition or legally recognised definition for conservation. The World Conservation Strategy (IUCN; UNEP; WWF; FAO; UNESCO) (1980) define conservation as:-

"The management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generation while maintaining its potential to meet the needs and aspirations of future generations. Thus conservation is positive, embracing preservation, maintenance, sustainable utilisation, restoration, and enhancement of the natural environment. This living resource conservation has three specific objectives:-

1. to maintain essential ecological processes and life support systems
2. to preserve genetic diversity
3. to ensure the sustainable utilisation of species and ecosystems".

For the purposes of this report, conservation has therefore been interpreted as the general furthering of landscape, flora and fauna, and physiographic features on a national basis, as well as the more local site specific protection of what is already present. This interpretation, which is in line with both the S.8 requirements and the third objective of the WCS definition, clearly encompasses habitat creation, restoration and enhancement initiatives.

To date, retreat has generally been considered only if the economic benefit of maintaining a flood defence could not be demonstrated. NRA's Counsel's Opinion in defining the S.8 (1)(a) duty for NRA, however, appears to offer rather more positive support for the retreat option, where that retreat is planned and/or controlled to ensure nature conservation benefits (see Appendix A5.2.1). Counsel's Opinion, states that "Attention needs to be given to its positive expression: the duty is concerned not merely with the assessment of harm but also the achievement of a better environmental result by the use of one alternative [e.g. retreat] even if the other, or others, [e.g. flood defence] are not in themselves particularly harmful to ecology or amenity" [authors' parentheses].

IUCN: International Union for the Conservation of Nature  
UNEP: United Nations Environment Programme  
WWF: Worldwide Fund for Nature  
FAO: Food and Agriculture Organisation  
UNESCO: United Nations Educational, Scientific and Cultural Organisation

### The Abandonment Issue

Under S.17 of the 1976 Land Drainage Act, the drainage authorities (including the NRA) have a permissive power to maintain and improve existing works and construct new works. This power is discretionary and the reasonable exercise of the power confers no additional rights on any third party. If a defence falls below the standard to which it was designed, no compensation is payable unless conditioned otherwise by grant regulations which might, for example, make the grant conditional on maintenance. In the same way, the NRA are also able to abandon one line of defence and retreat either to the upland boundary or to a secondary flood defence line (e.g. a new embankment) without becoming eligible to pay compensation.

There are, however, some exceptions to this general rule, notably where the NRA (or others) have a commuted liability. This exists where defences were taken over from private frontagers and these frontagers made payments to the NRA's predecessors in order that they would take on the liability. Where appropriate, the status of such commuted liabilities should therefore be investigated before it is assumed that the permissive powers apply. The situation in respect of defences protecting Internal Drainage Board areas may also require special consideration and this matter is discussed further in Section 5.2.5 below.

Pursuant to S.136 of the Act, all executive decisions and powers in respect of the Authority's flood defence functions except the raising of revenues, are delegated to the Regional Flood Defence Committee (RFDC). The NRA may, however, give the RFDCs directions of a general or specific nature (Howarth, 1990). In its forward planning role, the NRA/RFDC can therefore make a pro-active decision to do nothing and abandon a flood defence, knowing that the defence will fail at some stage in the future, if it is reasonable to do so. In order to implement any form of managed retreat option to achieve nature conservation benefits, it will usually be necessary to make this decision. NRA would be subject to a judicial review of such a decision only if they were behaving in a way no reasonable NRA could be expected to behave, and in this case the courts would decide whether or not the decision was reasonable.

The timing of the decision to abandon a flood defence is important in relation to the residual life of the defence if a managed retreat option is being considered. If engineering works are required to "create" a habitat, such works (e.g. the placing of fill and possibly the planting of vegetation) may need to take place **before** the defence fails to ensure that the new habitat is "ready" to become subject to inundation.

The courts will interpret the word "abandonment" as a matter of fact. That is to say the time at which the NRA ceased to carry out maintenance works. This equates to the time of the decision to do nothing. If, subsequent to making such a decision, the NRA then wish to undertake other works, for example habitat creation under S.8 of the Water Act, they must seek access to the land (assuming that they do not own the land in question) either by agreement with the landowner or by service of notice under S.147 of the Act. The latter entitles the Authority to enter land in order to exercise a duty. The former course of action would obviously be desirable. The concept of retreat for nature conservation benefit is unlikely to attract widespread support if it is achieved by Order. The entering of land to undertake such works, even by agreement must, however, raise the issue of compensation. The circumstances under which the NRA might be obliged to pay compensation are outlined below.

#### **5.2.4 NRA's Compensation Payment Abilities**

As discussed in the previous section, the NRA can, in certain circumstances, make a decision to abandon a defence when it reaches the end of its residual life without becoming liable to pay compensation. However, if the NRA intervenes and does something (e.g. undertaking habitat creation works in line with their S.8 duties) which actively reduces that residual life and hence the value of private land, there may be a requirement for compensation. Consider, for example, a case where a decision is made to do nothing at a site where the defence is believed to have a residual life of two years. In order to ensure that a particular type of habitat will develop when the breach occurs, engineering works taking, say, 18 months are required to raise the elevation of the site, grade the land, create channels, and plant vegetation. The effective residual agricultural life of this land has therefore been reduced, and the landowner may claim for compensation. NRA might apply for a Compulsory Purchase Order under S.151 of the Act, but this would almost certainly be considered undesirable. There are, however, a number of alternative mechanisms by which the landowner might be compensated and/or encouraged to accept nature conservation as a productive use of his land.

NRA might, for example, consider negotiating a management agreement and maybe setting up a nature reserve. There is no precedent for the NRA setting up nature reserves, but they would be able to do so under S8(4) discussed above or under S.145 (1)(A) of the Water Act 1989 which states that the NRA "shall have power to do anything which, in the opinion of the Authority is calculated to facilitate, or is conducive or incidental to the carrying out of the Authority's functions". The NRA may also charge any visitors to such a reserve, for example under S.145 (1)(C) which states that the Authority "shall have power to fix and recover charges for services provided in the course of carrying out its functions".

#### **5.2.5 NRA's Duties in Respect of Internal Drainage Boards**

An Internal Drainage Board has similar powers to those of the NRA in respect of carrying out drainage works, but the IDB's statutory powers relate only to non-main river watercourses. The NRA may levy a precept or general drainage charge on an IDB to provide services, including flood defence on adjacent main rivers, under the 1976 Land Drainage Act.

Many of the sites at which retreat for nature conservation benefits might be considered are within IDBs. Where the NRA levies a charge, as for example in Anglian Region, there may be a general duty on the Authority to provide an appropriate service. Forward planning on the part of the NRA so that they cease to levy a charge may represent one option which would subsequently enable retreat, but legal opinion suggests that cases should be examined individually.

#### 5.2.6 **Construction of Private Flood Defences**

Experience in the United States (see Section 5.5) raises the question of whether or not the NRA have any powers to prevent a landowner from building his own flood defence structures. Sea defences involving engineering works constitute development as defined in S.55(1) of the Town and County Planning Act 1990 and therefore require planning permission. NRA are exempt from needing planning permission on certain developments under GDO 1988 Part 15 Class A (Development by Water Authorities). The GDO does not, however, exempt private parties. An individual wishing to undertake such works requires planning permission from the local planning authority (LPA). The National Rivers Authority will, in most cases, be consulted by the LPA before permission is granted, even on non-main river, and the Authority will therefore have the chance to object on the grounds of their S.8 duties if they so wish. NRA will not, however, make the final decision in such cases.

#### 5.2.7 **NRA Decision-Making in Respect of the Retreat Option**

Section 5.2.3 indicates that an important part of the decision making process in respect of the feasibility of the retreat option will rest with the Regional Flood Defence Committee. The legal support for the retreat option is, however, provided by S.8 of the 1989 Water Act - the section relating specifically to Conservation, Environmental, and Recreation duties. In making any decision, the RFDC should consider options in the context of all the Authority's duties, balancing interests and assessing possible conservation betterment as discussed in Section 5.2.2. However, it is important that the retreat option and, in particular, any interest which the Authority may wish to retain in a site once a decision to do-nothing in terms of flood defence has been taken, should be the subject of advice from staff from the Conservation Function (see Section 5.2.4). The existing pattern of dialogue between the RFDC and other Committees should provide a mechanism for ensuring that any environmental benefits associated with the retreat option are properly identified and considered, but the overall decision-making approach may require some development in view of the findings of this report.

5.3 **Role of Statutory Bodies**

5.3.1 In addition to the Flood Defence and Conservation functions of the NRA outlined above, a number of other bodies also have statutory responsibilities in respect of flood defence and/or nature conservation in the coastal zone in England and Wales. These bodies have various powers and duties to conserve or enhance the existing environmental resource, to promote the sympathetic use of the countryside, to designate sites of special value and to enforce protection policies. Section 5.3 therefore sets out the relevant responsibilities of each statutory body. It also explores the options for public sector funding of the managed retreat option, and reviews each agency's land acquisition policies. Table 5.3.1 summarises the attitudes of the main conservation bodies to the idea of managed retreat for the benefit of nature conservation and landscape, and also assesses their willingness to fund or part fund projects using either existing or new monies.

5.3.2 **Nature Conservancy Council (English Nature/Countryside Council for Wales)**

The Environmental Protection Act (1990), which came into force on 1st April 1991, disbanded the NCC and created instead three independent agencies for England, Wales, and Scotland with British coordination being provided by a new Joint Committee. In Wales, the NCC and Countryside Commission have been merged to create the Countryside Council for Wales. The functions of the Joint Nature Conservation Committee, English Nature and the Countryside Council for Wales are, however, predominantly the same as those provisioned under the 1981 Wildlife and Countryside Act and previous Acts (see below).

The majority of the research carried out for this report, including the production of the draft report, took place prior to February 1991. Given that most of the functions of the new organisations set up under the 1990 Act will be the same as existed previously, and that many of the results of this report will apply to Wales as well as England, references to NCC throughout the text remain generally unchanged.

**Table 5.3.1 Summary of Support for the Retreat Option from the Major British Nature Conservation Organisations**

<b>Organisation</b>	<b>Supportive of Retreat in Principle</b>	<b>Able to Fund with Existing Monies</b>	<b>Able to Fund with New Monies</b>
Nature Conservancy Council	Yes	Yes, but limited extent because core funding goes to protecting nature reserves with existing conservation value. Contributions would therefore come from research budget.	Yes. The Environmental Protection Act (1990) enables funding of management agreements outside but adjacent to Sites of Special Scientific Interest.

<b>Organisation</b>	<b>Supportive of Retreat in Principle</b>	<b>Able to Fund with Existing Monies</b>	<b>Keen to Fund with New Monies</b>
Countryside Commission	Yes, but each site must be judged on its own merits.		Yes. The new Countryside Stewardship Scheme aims to enhance and recreate valued English landscapes and wildlife habitats.
National Trust	Yes, but only in areas with existing conservation interest in landscapes of national importance and quality.	Yes	Yes
Worldwide Fund for Nature	Yes	Yes, for land acquisition or management costs.	Yes
Royal Society for the Protection of Birds	Yes	Yes	Yes
Wildfowl and Wetlands Trust	Yes	Yes in principle, but unlikely because funds are committed primarily to management of existing reserves.	Possible.
Royal Society for Nature Conservation (County Trusts)	Yes	Yes. RSNC will assist with fund raising for land purchase although priority for land purchase is protection of existing sites of conservation interest under threat.	Yes, primarily in response to threats from development.

The Nature Conservancy Council Act (1973) conferred upon the NCC the following functions and duties:-

- to establish, maintain and manage nature reserves;
- to advise Ministers on policies for or affecting nature conservation in Great Britain;
- to provide advice and disseminate knowledge about nature conservation;
- to commission and support or, if necessary, carry out relevant research;
- to notify Sites of Special Scientific Interest (SSSI) and take such steps as are open to it to protect them - for example by advice and/or by agreements under S.15 of the Countryside Act 1968;
- to issue, or advise Ministers on the issue of, licenses affecting particular species;
- to take account as appropriate in the discharge of its functions of actual or possible ecological changes.

The Wildlife and Countryside Act (1981) substantially extended the NCC's powers and obligations, notably in respect of agricultural and forestry operations affecting SSSI's. This Act also gave the Council new powers to declare Marine Nature Reserves and increased the number of protected species.

#### ■ **Funding Abilities**

The NCC is financed by annual grants-in-aid on the Central Environmental Services Vote of the Department of the Environment (DoE), and from income generated by its own activities. It is also empowered to accept gifts and contributions for the purposes of its functions (NCC, 1989/90).

NCC's powers to fund site protection outside statutory conservation sites has, to date, been limited. In pursuit of its objectives under the Nature Conservancy Act (1973) it has concentrated a large proportion of its grant-in-aid resources on establishing, maintaining, and managing statutory conservation sites. In 1988/89 for example, the combined budget for maintenance of National Nature Reserves (NNRs) and management agreements on SSSIs accounted for 26.1 per cent of NCC's government grant (NCC, 1989/90).

By definition, SSSIs, NNRs, Marine Nature Reserves, and Local Nature Reserves must already have existing conservation interest to be candidates for designation. As a result, funding allocated for reserve establishment and management is unlikely to be available for the managed retreat option from existing budgets.

New provisions under the Environmental Protection Act (1990), however, gave the NCC powers outside designated areas from April 1st 1991. Schedule 9 of the Environmental Protection Act, amending Section 15 of the Countryside Act (1968), enables the NCC to enter into management agreements with owners or occupiers on land adjacent to sites of conservation interest. Adjacent land does not have to be of established conservation interest. The purpose of any management on adjacent land must, however, be to support the established conservation interest of the neighbouring SSSI and such management agreements could therefore encompass managed retreat.

As well as site management funding, the NCC has a project-related budget within its overall grant-in-aid. This is spent primarily on sites of existing nature conservation interest. It is not, however, restricted to SSSI's or any other protected areas, and may therefore be a further option enabling NCC to contribute to individual habitat restoration or creation projects, particularly in early applications of the managed retreat approach where experimentation is required.

#### ■ Land Acquisition

The involvement of the NCC in land acquisitions is governed by three sets of powers. These are:

- i. Powers under Section 1(4)(c) of the Nature Conservancy Act (1973) to purchase land for nature conservation benefit;
- ii. Powers under Section 38 of the Wildlife and Countryside Act (1981) to give financial assistance, by way of grant or loan, to any person in respect of expenditure incurred or to be incurred by him/her in doing anything which in the NCC's opinion, is conducive to nature conservation or fostering the understanding of nature conservation. These powers have been carried over into Section 134 of the Environmental Protection Act (1990);
- iii. Powers of compulsory purchase to acquire land for the establishment of a nature reserve, where it is in the national interest, under Section 17 of the National Parks and Access to the Countryside Act (1949). Section 18 of the same Act gives the NCC compulsory purchase powers to obtain nature reserve land where a management agreement relating to it is being breached. The relevant definition of nature reserve is given under Section 15 of that Act.

A major objective of the original Nature Conservancy was to identify and acquire sites of national importance for nature conservation. Reserves were meant to be for research as well as preservation purposes, as outlined in Section 15 of the National Parks and Access to the Countryside Act (1949). Threats to habitats have increased since 1949, however, and the emphasis of site acquisition has consequently become the protection of the conservation resource, rather than ecological experimentation (Moore, 1987).

The NCC has, in the past, acquired some sites for research or experimental purposes, and on rare occasions other sites have also been bought adjacent to existing land holdings for their habitat creation potential. NCC's current focus for land acquisition under its Section 1(4)(c) powers remains sites of existing high nature conservation interest as identified by the Nature Conservation Review (NCR) (Ratcliffe 1977), or subsequently acknowledged as being of NCR quality.

In the period since 1949, funding for land purchase has not been available at the rate originally envisaged. In addition, the recent political framework in which government bodies have been operating is such that public ownership of land has not been encouraged.

NCC's compulsory purchase powers are generally regarded as a last resort, only employed where other safeguard mechanisms have proved unsuccessful. These powers have only been used twice since they were established in the 1949 Act.

Overall, land acquisition by the NCC is regarded as a last resort to protect threatened sites for which no other safeguard mechanisms are felt to be appropriate. Implicit in this acquisition mechanism is the protection of sites of high existing nature conservation interest. As shown in Table 5.3.1, however, NCC's policy on land acquisition per se does not diminish their interest in or support for the managed retreat option.

### 5.3.3 Ministry of Agriculture, Fisheries and Food (MAFF)

MAFF has a wide range of powers and duties of direct relevance to this report, notably under the following Acts:-

- i. Land Drainage Act 1976
- ii. Coast Protection Act 1949
- iii. Agriculture Act 1986
- iv. Food and Environment Protection Act 1985

The Ministry's various responsibilities under these Acts are reviewed in the following sections:-

#### ■ Flood Defence and Coast Protection

"Under Sections 90 and 91 of the Land Drainage Act 1976, as amended by the Water Act 1989, provision is made for Ministers to make grants to the National Rivers Authority, Local Authorities and Internal Drainage Boards towards capital expenditure incurred by those bodies in the improvement, or the construction, of flood and sea defences. Similarly, under Section 21 of the Coast Protection Act 1949, Ministers may provide grants towards capital expenditure incurred by Maritime District Councils on coast protection works. Flood defence works (sea defence on the coast) are designed to prevent inundation whereas coast protection works aim to protect against the permanent destruction of the coast by erosion or encroachment by the sea.

Under both Acts it is normally for the appropriate drainage or coast protection authority to determine the need for works and to decide which schemes it wishes to promote. Ministers have no authority to direct that a particular scheme be constructed in preference to another.

All schemes are initially prepared by the relevant drainage or coast protection authority. The Ministry's Regional Engineer will often be consulted in the early stages of scheme preparation and, once a scheme has been submitted, he is responsible for the initial consideration of the scheme. This will include consideration of the technical merit of the proposals, economic viability and relevant environmental factors. To be eligible for approval for grant-aid, all schemes are required to be technically sound, economically effective, environmentally sympathetic (as far as possible) and with no outstanding objections" (MAFF, 1989).

### ■ Environmental Responsibilities

Under the terms of the Agriculture Act 1986, MAFF has a duty to balance interests in exercising its agricultural functions. Alongside the promotion of a stable and efficient agricultural industry, economic and social interests and the enjoyment of the countryside by the public, MAFF must have regard to the:-

"Conservation and enhancement of the natural beauty and amenity of the countryside (including its flora and fauna and geological and physiographical features) and of any features of archaeological interest" (S.17).

This Act also enabled the designation of Environmentally Sensitive Areas (ESAs) through S.18 (ESAs are discussed further in Section 5.6). In many respects the 1986 Act therefore represents the Ministry's primary responsibilities in terms of the protection and enhancement of the British Countryside.

As discussed above, MAFF currently provide funds for sea defence, tidal defence and coast protection schemes (among others) in the form of grant-aid. In common with other projects involving the expenditure of public money, such schemes must be justified in economic terms (i.e. the discounted national economic benefits of a scheme must be at least as great as its discounted costs). The problems associated with quantifying environmental benefits were discussed in Section 4 but, even if a national economic benefit can be demonstrated, MAFF will only grant-aid a project involving the creation or restoration of coastal/tidal habitats if the following conditions are also met:-

- i. the scheme must meet the criteria for a flood defence or coast protection scheme as defined in the 1976 Land Drainage Act or the 1949 Coast Protection Act respectively. Schemes not meeting these criteria will not usually qualify for grant-aid under current guidelines.
- ii. the habitat restoration/creation element must either serve a coastal engineering function and/or be essential to meet planning permission requirements or those which arise as a result of an Environmental Assessment.

- iii. the environmental enhancement component of a scheme should not represent an unreasonable (unspecified) proportion of the overall costs of that scheme.

Given these factors, it is conceivable that some habitat creation/restoration projects associated with a retreat option might attract grant-aid from the Ministry. A scheme involving the establishment of saltmarsh or other species of vegetation could qualify if it can be demonstrated that this vegetation will act as a buffer. Experiments have shown that the passage of waves through saltmarsh vegetation may reduce wave height by 71% and wave energy by 92% (Harmsworth and Long, 1986), and establishing saltmarsh could therefore significantly reduce potential erosion of the "new" post-retreat coastline (the upland edge). Similarly, the creation of an intertidal habitat offshore could attract funding from MAFF if the feature either acts as an offshore breakwater (e.g. preventing cliff erosion) or performs a function as a "feeder" berm (e.g. feeding a beach as part of a coast protection scheme). Further examples are provided by schemes involving the creation of a secondary flood defence line fronted by environmentally desirable habitat, or a managed wetland site which acts as a temporary flood storage reservoir. On the other hand, it is unlikely that a project specifically designated to create a nature reserve for wading birds and therefore requiring strict year-round water level controls, for example, would attract grant-aid in its own right.

#### ■ Dumping Licence Requirements

MAFF also have duties under the terms of the Food and Environment Protection Act 1985. Operations such as beach replenishment which involve the dumping of materials in tidal areas below the level of mean high water springs, requires a licence from the Ministry. Such a licence may also be required for habitat creation/restoration initiatives in front of the existing sea defence (e.g. saltings regeneration building out to seaward).

Sections 3.4.7 and 3.4.8 of this report deal with the possible dumping of dredged material to raise land levels to a suitable elevation relative to the tide for the development of a particular type of habitat. In cases where this operation is carried out prior to the failure of the sea defence, a dumping licence will not generally be required. Similarly, any repairs to the sea defence itself will not usually require a licence.

In other cases, however, the raising of land levels to create a preferred habitat may follow the failure of the defence. In circumstances where a decision has already been taken not to reinstate the failed structure as a flood defence and the land behind has become subject to tidal ingress, a dumping licence might be required before any works can be undertaken. MAFF should therefore be contacted if there is any uncertainty in this respect.

## ■ Land Acquisition

The Ministry of Agriculture, Fisheries and Food have significantly reduced the extent of their land ownership over recent years and currently retain only limited areas of land for experimental purposes (e.g. experimental farms). There are no proposals to acquire new land for such purposes. The Ministry is essentially a Government department responsible for policy and direction. Similarly, it is not a functional authority in respect of flood defence and coast protection and there is consequently no provision under either the Land Drainage Act 1976 or the Coast Protection Act 1949 for the acquisition of land.

### 5.3.4 Countryside Commission

The Countryside Commission, originally known as the National Parks Commission, was established by the National Parks and Access to the Countryside Act 1949, and was reconstituted under its present name by the Countryside Act 1968. The principal objectives of this statutory body with responsibility for landscape and recreation, are to seek the preservation and enhancement of the landscape beauty of the countryside, and to encourage the development and improvement of facilities for informal recreation and access to the countryside by the public. The Commission also plays a key role in the designation of Areas of Outstanding Natural Beauty (AONB), Heritage Coasts and National Parks. Among its various roles outside these designated areas, Countryside Commission promote the maintenance of regional distinctiveness and the diversity of landscapes.

The AONB designation, made under the National Parks and Access to the Countryside Act 1949, signals to the local planning authority the importance of applying strict development control policies to the designated area in order to preserve and enhance its natural beauty.

Heritage Coasts have no statutory protection. They are, however, defined in order to protect the UK's most beautiful and undeveloped coastlines, including cliffs and drowned river valleys among others, from the growing pressures of agriculture, recreation and development. Protection is offered by local development control which aims to combine the conservation of unspoiled coast with positive management to enable local people and visitors to enjoy the coast. The recent policy statement on Heritage Coasts, issued by the Countryside Commission (CCP:305), calls for a more "holistic" response in coastal areas. It targets the removal of eyesore caravan sites, a halt to cliff edge cultivation, and the establishment of public footpaths along all lengths of Heritage Coast. It also offers a broader definition for the coastal heritage itself: heritage embraces terrestrial, littoral and marine flora and fauna and architectural, historical and archaeological features. The "environmental health" of inshore waters and beaches is also a relevant consideration, as are the economic and social needs of the communities within Heritage Coast areas.

There are eleven National Parks in England and Wales designated under the National Parks and Access to the Countryside Act 1949. From north to south these are the Northumberland National Park, the Lake District, the North York Moors, the Yorkshire Dales, the Peak District, Snowdonia, the Broads, the Pembrokeshire Coast, the Brecon Beacons, Exmoor and Dartmoor. Five of these parks - the North Yorks Moors, the Lake District, Snowdonia, the Pembrokeshire Coast and Exmoor - have coastal frontages.

The Parks are administered by joint boards in the Lake District and Peak District and by Committees appointed by the County Council in the remaining nine. In all the Parks, the boards or committees have management as well as planning responsibilities. Protection is afforded through development control as well as through other provisions such as Special Development Orders. The latter limits the scope of the General Development Order thereby reducing the categories of development which are exempt from planning permission.

The Countryside Commission's designated areas, like those of the NCC, centre on sites of existing value. The philosophy of "improvement" does, however, play a more significant role in the various policies of the former. If a candidate site for managed retreat is identified within one of the designated areas, the Countryside Commission are likely to be generally supportive of any attempt to improve or restore the "natural" character of the countryside. It is envisaged, however, that the Commission's initiatives in respect of the wider countryside are likely to prove as important, if not more important, in respect of the managed retreat option outside notified areas.

#### ■ Funding Abilities

The Countryside Commission offers landscape conservation grants towards the creation and management of features in the landscape. Eligible work includes, for example, the planting of trees and small areas of woodland under a quarter of a hectare. The work should be of benefit to the landscape and contribute to the public's enjoyment of the countryside. In terms of providing funding for the managed retreat option, however, a recently announced scheme appears to be far more appropriate.

A major new countryside initiative, which will help to enhance and re-create valued English landscapes and habitats whilst making them more accessible to the public, is currently being promoted among farmers, landowners and anyone with a controlling interest in a suitable area and willing to comply with the management requirements of the scheme.

This pilot scheme, known as Countryside Stewardship, will initially target chalk and limestone grasslands, heathlands, waterside landscapes, coastal land, freshwater and estuarine grazed marsh, and grazed dune systems.

The scheme offers enormous potential for the restoration and re-creation of landscapes in coastal areas under the managed retreat option. In order to be eligible for regular payments under the Stewardship scheme the land must be managed, although it may be possible to apply for a one-off payment for newly created but unmanaged habitat (e.g. to help meet capital costs). **The recreation and restoration of natural landscapes and habitats would, in this respect, represent an appropriate application of the Countryside Stewardship objectives, but it may be necessary to amend the list of targeted habitats to specifically include coastal lowlands.**

#### ■ Land Acquisition

The Countryside Commission is not itself a land-owning body and it possesses few direct executive powers in respect of land ownership. The Commission does, however, give grants for land acquisition mainly to local authorities and voluntary groups such as wildlife trusts. Their priorities in this respect currently lie with land acquisition at the coast and with land for community forests. It is expected that any land acquired would be of at least regional importance, if not national significance, in terms of its recreation potential and/or landscape.

### 5.3.5 Local Planning Authorities (LPA)

Local planning authorities have a number of powers and duties relevant to the retreat option:-

#### ■ Flood Defence, Coast Protection and Nature Conservation

District Councils, subject to the consent of the NRA, have various powers to carry out drainage works on non-main river watercourses for the purpose of preventing or remedying the damage caused by flooding. It is therefore appropriate that the findings of this report should be applied not only by the NRA but also by LPAs. This would ensure that managed retreat to benefit nature conservation is properly investigated and evaluated as an option in areas where the LPA is responsible for flood defences. Such measures are likely to be particularly important in areas such as the NRA's Wessex and South-West Regions where the regional meetings undertaken as part of this study indicated that a significant proportion of sea and tidal defences are maintained by individuals or agencies other than the NRA.

Of less direct relevance to this report, LPAs also have powers in accordance with the 1949 Coast Protection Act to carry out such coast protection works as appear necessary or expedient. This power does, however, become important when new coast protection schemes are being reviewed because of the possible implications for sediment supply to low-lying areas down-drift of proposed erosion prevention works.

From the nature conservation perspective, S.21 of the National Parks and Access to the Countryside Act (1949) gives local authorities the power to acquire, declare, and manage nature reserves where it appears to them expedient to do so. Although in the 1949 Act these reserves are referred to as "Nature Reserves Managed by Local Authorities" they have, by common usage, become generally known as Local Nature Reserves (LNRs). The responsibility for selecting, acquiring, and managing these nature reserves is the local authorities'. However, the NCC must be consulted prior to their designation, and the sites chosen must be of special interest in the context of the local authorities' areas (NCC, 1988).

Financial assistance for carrying out management may be available from the NCC, but LNR designation does not give automatic entitlement to NCC grant-aid. Where a major part of the purpose of a project is for the enjoyment of nature by the public, for example, the Countryside Commission may give grant-aid (NCC, 1988).

#### ■ Funding Abilities

Local Planning Authorities (LPAs) represent the most disparate source of potential funding for the retreat option, with some 50 County Councils and several hundred District Councils in England and Wales alone. The most significant contribution to nature conservation currently made by LPAs is through the designation of Local Nature Reserves (LNRs) as discussed above.

A survey of the role and performance of LPAs in nature conservation in Britain revealed that nine out of ten county authorities and two out of three district authorities regularly or occasionally carry out projects specifically to create habitats of conservation value (Tyldesley, 1986). Tyldesley also points out that LPAs are less inclined to support research preferring to support site specific projects (e.g. implementation) via grants, advice or donations. This provides a clear indication of what LPAs consider to be their role in nature conservation, and is very encouraging in respect of possible future implementation of the managed retreat option - either in areas where the LPA are responsible for the flood defences, or possibly in support of NRA or NCC initiatives.

Blunden and Curry (1988), however, are critical of the level to which LPAs have exercised their powers to benefit conservation through LNRs, the acquisition of "amenity" land and the establishment of management agreements. National Park Authorities (NPAs), although not LPAs by definition and status, do operate under the auspices of LPAs and cover many of the same functions. NPAs perform better in terms of funding for nature conservation than other LPAs. The most significant difference between the two is the former's annual allocation of financial resources specifically for nature conservation work and the employment of full-time qualified nature conservationists.