

# Renewing the Alde Trial Area report

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**English Nature  
Habitat Restoration Project**

**"RENEWING THE ALDE"  
Trial Area Report**

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**August 1997**



**HABITAT  
RESTORATION  
PROJECT**



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## Preface

The countryside has changed dramatically over the last fifty years; bluebell woods, heathlands, flower-rich meadows, skylarks, bitterns are just some of the treasured habitats and species that have declined in area or numbers. It is not just that habitats have been lost, but the areas that are left are smaller and more isolated. In signing the International Biodiversity Convention at the Rio Earth Summit of 1992 the Government committed itself to the task of reversing this trend and of increasing the variety of wildlife in our countryside. The UK Biodiversity Action Plan which was produced following the Summit states that ‘the fragmentation or isolation of key habitats [is] to be avoided and wherever practicable past fragmentation [is] to be reversed’.

The current agricultural grants and other incentives now provide a means of reversing the tide; to bring back some of the things that we have lost, to link up areas that have become separated, to provide stepping stone patches to help wildlife move across the landscape. There is a chance in the next few years, not to set rigid rules about which habitats should be created where, but to evolve criteria, procedures and practices that will help us, and others, to make the countryside a richer and more attractive place for wildlife and for people.

English Nature is taking a lead, through the Habitat Restoration Project, by establishing four trial areas in which these ideas can be put into practice. Within each we are identifying which habitats and species are most important now, and for which there are opportunities to restore or create. Possibilities include improving areas that have been degraded, such as heathland that has been invaded by pines, or creating new areas, for example establishing wide herb-rich field margins to link patches of old semi-natural grassland. This is being done within the framework of our Natural Areas and the Biodiversity Action Plan.

This initiative is not however something that we can or should do on our own. To be successful it must involve everyone else with an interest in the countryside. Therefore the trial areas are also about building support and enthusiasm among landowners, voluntary conservation bodies, government bodies such as MAFF and the Forestry Commission and local authorities.

The following report sets out how we are going about this in the Suffolk trial area where the Project is being publicised as *Renewing the Alde*.

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## 1. Introduction

### 1.1 The Renewing the Alde Project

The Renewing the Alde Project is part of a national Habitat Restoration Project, initiated by English Nature in April 1996. The aim of the project is to investigate ways of increasing the variety and abundance (the biodiversity) of wildlife in our countryside. The project will focus on reversing the effects of habitat fragmentation, which have reduced the biodiversity of our countryside, using existing Environmental Land Management Schemes (ELMS) such as Countryside Stewardship. The benefits to wildlife will be monitored over a ten year period. Each area has been chosen to represent a particular type of agricultural landscape typical of lowland England.

Four areas, each of 100km<sup>2</sup>, have been established where practical habitat restoration will be encouraged in cooperation with farmers and other landowners. In Suffolk the project is being promoted locally as "Renewing the Alde". The area contains a wide variety of semi-natural habitats of high conservation value in addition to extensive areas of intensively managed farmland.

The project forms part of English Nature's contribution to the UK's Biodiversity Action Plan in achieving targets at the Rio Earth Summit in 1992. Its aims also accord with Article 10 of the EC Habitats Directive.

Experience gained from the trial areas will allow conservation organisations to target the most effective means of reversing habitat deterioration and fragmentation using the current schemes and to identify any constraints which may prevent this from being achieved.

In the first year of the project we have concentrated on the following:

- i. Letting farmers and landowners know about the project and how they can help. Many have allowed us access to their land to carry out a field survey of the existing wildlife, and have answered questions about their view of the value of existing ELMS.
- ii. Discussed with representatives of the countryside organisations, statutory and non statutory, how they might support the project, and with them, identified existing incentive schemes which are available to farmers to help them enhance the biodiversity of their farms.
- iii. Set up a Steering Group comprising representatives of the countryside organisations and farming community.
- iv. Used our field survey of wildlife, along with existing records from the area, to target the BAP habitats and species which are present, or have occurred recently within the area, for priority action.



- v. Combined this information to develop an idealised "vision" for creating a more wildlife friendly countryside with particular reference to the priority BAP habitats and species.

This document sets out this vision, and presents the information on which it is based. Possible ways of implementing the vision over the next ten years are given in Section 5. We will be consulting widely about its implementation with both farmers and other landowners and the countryside organisations. It should be emphasised that at present the vision is a hypothetical one only. No specific areas of land are being targeted for restoration action.

It is recognised that the aim of the project; to investigate the extent to which BAP targets can be met using existing ELMS, can only be achieved through gaining the cooperation of all interested parties, particularly those who manage our farmland.

## **1.2 The Renewing the Alde Trial Area**

The Trial Area is situated on land around the Alde Estuary on the Suffolk coast. The landscape is very varied and contains many important wildlife habitats. Much of the low lying land adjacent to the river is used as grazing marsh. As the land gently slopes up from the estuary, the sandy soils, which once supported extensive areas of heathland, have been largely converted to arable use or to plantations of conifers. The heathland is now reduced to a few isolated blocks.

The extent of semi-natural habitats has been reduced and many areas have been degraded in recent history for a variety of reasons, including agricultural intensification, housing developments, erosion, land drainage and conifer plantations. To redress the losses, it is important that habitats are both created and restored.

To ensure that the most appropriate habitats are targeted for restoration:

- A phase 1 habitat survey of the project area has been completed to show the current extent of semi-natural habitats and farmland. Additional notes were made on the type of management and the quality of habitats.
- Maps showing the historical distribution of some habitats were consulted.
- Geology maps were used to identify the most appropriate areas for the creation of particular habitats.
- A map showing all land lying below 5m has been produced which shows the most appropriate areas for the creation of wetland habitats.

The UK Biodiversity Action Plan has the following overall goal and objectives: "To conserve and enhance biological diversity within the UK, and to contribute to the conservation of global biodiversity through all appropriate mechanisms." (HMSO, 1994).

To achieve this aim in the Suffolk trial area, habitats identified for restoration will include some of the key habitats in the Biodiversity Action Plan (HMSO, 1994) and some of the Key Nature

Conservation Features in the Suffolk Coast and Heaths Natural Area (EN, 1997), (shown in brackets).

Key habitats which occur in the Alde trial area include:

- lowland heathland (Sandlings heaths, conifer plantations)
- lowland dry acid grassland (Sandlings heaths, conifer plantations)
- coastal and floodplain grazing marshes (grazing marshes and dykes)
- reedbeds (reedbeds)
- estuarine habitats (intertidal mud and sand, saltmarsh)
- ancient and/or species-rich hedgerows
- cereal field margins
- coastal vegetated shingle (shingle structures)
- saline lagoons
- (brackish lagoons)



## **2. Past and Present Land Use**

In Suffolk, human activity has changed the natural landscape since the Palaeolithic period 200,000 to 300,000 years ago, although these inhabitants probably had only a slight effect on their surroundings. It was not until around 6,600 years ago, the Neolithic period, when there was the first evidence of farming, that human activity began to change the natural vegetation to any great extent. Suffolk has been heavily farmed since the Roman occupation, and many important habitats, such as grassland, heathland and fens were created and managed for their products from this time.

The period since 1939 has seen a dramatic change in agricultural land use, with an increase in specialisation, and an increase in mechanisation, irrigation, land drainage and the use of artificial fertilisers, herbicides and pesticides. There has also been a tendency towards larger field sizes, loss of field diversity and an increase in the sizes of individual farms.

Because the soil is very light throughout much of the project area, agriculture relies heavily on irrigation. This often has a detrimental effect on water-dependent species and habitats in the surrounding area, as almost 100% of the water used in spray irrigation is lost to evaporation and transpiration. (Suffolk Wildlife Trust, 1996). The very light soil is also prone to wind and water erosion.

Other activities which have also had a detrimental effect on wildlife include housing developments, the management of water courses (associated with increased drainage), road building, pollution, disturbance and the cessation of traditional management practices.

The trial area comprises approximately 100 square kilometres of land near the Suffolk coast, with roughly half the area lying north of the Alde estuary, and half south. It lies within the Suffolk Coast and Heaths Joint Character Area and contains a wide variety of semi-natural habitats including intertidal mudflats and saltmarsh on the estuary and grazing marshes around the estuary. The land is gently undulating, reflecting glacial deposition. Heathland and acid grassland is scattered throughout, where the soil is sandy. Woodland is also scattered throughout the area, with coniferous plantations dominating in the south-western portion of the area.

The diversity of habitats and their high conservation value is reflected in the large number of designated sites, for example, the Alde estuary is a Special Protection Area; North Warren RSPB reserve and the adjacent Thorpeness Meare are Sites of Special Scientific Interest and Aldringham Walks, Thorpeness Haven, South Warren, Hazelwood Marshes and Tunstall Forest are County Wildlife Sites. Map 1 shows the distribution of Sites of Special Scientific Interest and County Wildlife Sites.

There are no large towns in the area and there is a feeling of remoteness in many parts, especially on Sudbourne Marshes and Orford Ness. The area is very sparsely populated compared to most of the county. Mixed and arable farming, commercial forestry and tourism are the most important economic activities in the area. It is hoped that semi-natural habitats can be restored without detrimentally affecting the commercial value of farming and commercial forestry and will lead to visual enhancement of the area, making it more attractive to visitors.

## **2.1 Factors Affecting the Type of Habitats in the Project Area**

### **2.1.1 Climate**

East Anglia has a more continental climate than the rest of the UK. Inland, there is greater daily variation in temperature than in western UK; on the coast, the daily variation is smaller. Suffolk has a particularly low rainfall with only 500 - 600 mm a year falling in 150 - 180 days. The hinterland of Lowestoft, Essex and coastal Suffolk are the driest parts of the country. The coastal strip of Suffolk (within 2-3 km of the coast) is characterised by less rainfall, more sunshine and less temperature variation than the rest of the county (Suffolk Wildlife Trust, 1996).

### **2.1.2 Soils**

The surface soils of the area have developed mainly from glacial drift material which was laid down by ice sheets during the Anglian Ice Age (500,000 years ago). Alluvial soils are present in the river valleys and surrounding the Alde estuary. Adjacent to these are a mixture of silt, sand and gravel. There are areas of clay (Lowestoft till formation) towards the north and east of the project area, and outcrops of Chillesford clay near Aldeburgh, Chillesford and Sudbourne. Coralline Crag and Red Crag occur in the south-east of the project area, near Iken and Sudbourne. There is a small area of blown sand at Thorpeness. (British Geological Survey 1:50,000 maps).

## **2.2 Losses of Species and Habitats**

Despite being relatively rich in terms of key habitats and species, there have been significant losses throughout Suffolk, particularly since 1939. For example:

- 86% of Sandlings heaths have been lost in the last 60 years (Fitzgerald, Auld & Martin, 1986)
- 70% of intertidal habitats has been lost to agriculture and developments (Beardall, Dryden & Holzer, 1987)
- 96% of species-rich grassland has been lost in the last 50 years, with 12.5% lost in the last 10 years (Beardall & Casey, 1995)
- 84 species of flowering plants are now extinct in Suffolk (Simpson, 1982)
- 4 species of dragonfly are now extinct in Suffolk (Mendel, 1992)
- 21 species of butterfly are now extinct in Suffolk (Mendel & Piotrowski, 1986)

## 2.3 Why is the Area Important for Wildlife Now?

### 2.3.1 Habitats

Several habitats in the area are nationally or internationally important, including saltmarsh, lowland heaths, reedbeds, estuaries, shingle and coastal and floodplain grazing marshes. The percentage of the project area covered by these habitats is shown below (the figures are derived from the phase 1 habitat survey of 1996):

coastal and floodplain grazing marsh	10%
estuary	10%
heath (including acid grassland)	5%
shingle	2%
saltmarsh	1-2%
reedbed	<1%

### 2.3.2 Species

The following are on the Biodiversity Action Plan short and middle lists of globally threatened or declining species and have been recorded or have bred (birds) in the project area during 1996:

skylark	bittern
nightjar	linnet
reed bunting	woodlark
spotted flycatcher	tree sparrow
grey partridge	song thrush
bullfinch	turtle dove
brown hare	otter
pipistrelle bat	starlet sea anemone

Other scarce and declining species that have occurred in the project area are listed in appendix 1.



### **3. Results of the Wildlife Survey**

#### **3.1 Methodology**

The method followed for the survey was based on that in The Handbook For Phase 1 Survey - A Technique For Environmental Audit (England Field Unit NCC 1990). Additional information about the quality of semi-natural areas and their management was included in target sheets that were designed specifically for use during the survey of the trial area.

The survey was carried out during September, October and early November, 1996 with the permission of the majority of the landowners. Where it was not possible to gain permission of the landowners, the relevant areas were surveyed from public rights of way. Using this approach it has been possible to achieve approximately 99% coverage of the project area.

Additional information, which is included on the target sheets, was obtained from recent NVC surveys of Orford Ness (Beecroft et al, 1994), Alde / Ore saltmarsh (Crewe, 1993), North Warren RSPB reserve (Ausden et al, 1990), Thorpeness Haven (Hughes, 1995), Snape Saltings (Hughes, 1994) and Tunstall Common (Sibbet, 1993), and river corridor surveys of the rivers Hundred and the Alde (Environment Agency, 1994).

#### **3.2 Summary of the Wildlife Habitats present**

##### **3.2.1 Woodland and Scrub**

###### *Broad-leaved semi-natural woodland*

Broad-leaved semi-natural woodland is scattered throughout the project area. A few of the woods are ancient, with a herb-rich ground flora, including Kiln Wood, Chillesford; Foxburrow Wood, Farnham; Grove Wood, Knodishall; and Captain's Wood, Sudbourne. All ancient woodlands are County Wildlife Sites.

The vast majority of woods are used for rearing and shooting pheasants. Very few have been recently coppiced, and some have been re-planted with mixtures of broad-leaved species.

Broad-leaved semi-natural woodlands cover approximately 2% of the project area.

###### *Broad-leaved and mixed plantations*

There are several different types of broad-leaved and mixed plantations throughout the trial area. Some are commercial, e.g. poplar plantations; some were planted for their landscape value when the large estates in the area were established, such as those at Sudbourne Park, Benhall Lodge Park and surrounding Blackheath Mansion and some have been planted in recent years to replace woodlands that were damaged during the storm of October 1987.

Approximately 3% of the project area is covered by mixed plantations.



### *Coniferous plantations*

A large proportion of the trial area is covered by the coniferous plantations of Tunstall Forest which are owned and managed by Forest Enterprise. Several conservation areas within the forest support nationally important populations of breeding nightjar and woodlark. The breeding populations of both these species has declined by more than 50% over the previous 25 years. Tunstall forest forms part of the larger Aldewood Forest County Wildlife Site. There are a few other, much smaller coniferous plantations scattered throughout the remainder of the area.

Approximately 15% of the project area is covered by conifer plantations.

### *Scrub*

Scrub is often present in areas that were previously grazed and have been unmanaged for several years, such as at Knodishall and Aldringham Commons; or where there has been deliberate encouragement of scrub, such as on Aldeburgh Golf Course (South Warren) and North Warren RSPB reserve. Elm, elder, hawthorn and blackthorn are the most frequent species of shrub throughout the area, with gorse becoming more prevalent on the acidic sandy soils.

Scrub covers approximately 5% of the trial area.

## **3.2.2 Grassland**

### *Acid grassland*

Acid grassland is confined to sandy soils and is often associated with heather. There are several areas of unimproved acid grassland, e.g. on Knodishall Common, Blaxhall Heath, Tunstall Common and Snape Warren. Several of the sites which contain unimproved acid grassland and heath are Sites of Special Scientific Interest and most of the remainder are County Wildlife Sites. There are also several areas of semi-improved acid grassland, either as a result of the agricultural improvement of existing swards, such as on Aldeburgh Golf Course (South Warren) and Church Marshes (North Warren RSPB reserve), or as a result of reversion to grassland from previous arable use, such as on land on the Blackheath Estate or on the Marshland Estate at Sudbourne.

Acid grassland covers approximately 3% of the project area.

### *Neutral grassland*

The areas of neutral grassland within the project area are generally of low ecological value, the majority having been artificially fertilised. The extent of a suitable substrate for the formation of a neutral grassland sward is limited to the areas of boulder clay near Tunstall, Farnham, Sternfield, Knodishall and Leiston. The only notable example of a site containing neutral unimproved grassland is at Benhall Green Meadows County Wildlife Site.

Neutral grassland covers less than 1% of the trial area.

### *Calcareous grassland*

There are no examples of herb-rich calcareous grassland within the project area, however, the calcareous element in Red Crag has led to isolated pockets of grassland supporting plants which prefer a chalky substrate. The most notable example is at Aldeburgh Brick Pit SSSI, where chicory (*Cichorium intybus*), bee orchid (*Ophrys apifera*) and blue fleabane (*Erigeron acer*) were found.

Less than 1% of the trial area is covered by calcareous grassland.

### *Floodplain and coastal grazing marshes*

These are the low-lying areas of grassland close to the rivers Alde, Fromus and Hundred on alluvial soils. The majority are grazed by cattle, a few are grazed by sheep. A large proportion of these extensive areas of grassland have been agriculturally improved by the use of artificial fertilisers and herbicides.

A few small fragments of unimproved wet grassland remain, including Benhall Green Meadows County Wildlife Site; Manor Farm Meadows County Wildlife Site; Gromford Meadow Site of Special Scientific Interest and a cattle-grazed pasture at Chillesford, part of which lies within the Alde / Ore SSSI, the remaining portion being a County Wildlife Site.

In total, floodplain and coastal grazing marshes cover roughly 10% of the trial area.

### **3.2.3 Heathland**

Pockets of dry dwarf shrub which are dominated by heather (*Calluna vulgaris*) are present in Tunstall Forest, Blaxhall Heath, Tunstall Common, Snape Warren, Blackheath Wood and Aldringham Walks. These areas of heathland are important for several scarce and declining species such as adders, nightjar and woodlark. Silver-studded blue butterflies were seen for the first time on Blaxhall Heath during the summer of 1996.

Approximately 2% of the trial area is covered by acid dry dwarf shrub heath.

### **3.2.4 Reedbeds**

The most extensive areas are near to Snape Maltings and on North Warren RSPB reserve. The latter is the only reedbed within the project area which is larger than 20 hectares. There are a few other, much smaller fragments of reedbed on Aldeburgh Marshes, near to Round Hill, Aldeburgh and on Sudbourne Marshes. Common reed (*Phragmites australis*) is frequent in the wet ditches throughout the extensive areas of grazing marshes.

Less than 1% of the project area is covered by reedbeds.

### 3.2.5 Vegetated Shingle

Thorpeness Haven and Orford Ness are two of the most important areas of vegetated shingle in the county. Thorpeness Haven supports nationally scarce\* species including sea pea (*Lathyrus japonicus*), sand catchfly (*Silene conica*), mossy stonecrop (*Crassula tillaea*), bur medick (*Medicago minima*), suffocated clover (*Trifolium suffocatum*) and dune fescue (*Vulpia fasciculata*).

Shingle covers approximately 2% of the project area.

### 4.2.6 Saltmarsh

Several areas of saltmarsh occur along the length of the Alde Estuary. They support the nationally scarce\* species, marsh sow-thistle (*Sonchus palustris*) and marsh-mallow (*Althaea officinalis*). Erosion is causing the annual loss of approximately 1% of the saltmarsh in the Alde estuary.

These areas of saltmarsh cover between 1 and 2% of the trial area.

\* occurs in 16 - 100 different 10 x 10 km squares in the British Isles.

### 3.2.7 Intertidal Mudflats

The intertidal mudflats in the Alde estuary are nationally and internationally important for wildfowl and waders, their importance being recognised by the declaration of the area as a Special Protection Area for birds in October 1996.

Intertidal mudflats cover roughly 5% of the trial area.

### 3.2.8 Saline Lagoons

There are a small number of saline lagoons within an area of saltmarsh on Orford Ness, one of which supports starlet sea anemone (a Biodiversity Action Plan short list species).

### 3.2.9 Hedges

Hedges are present wherever the land is used for the production of arable crops or surrounding pastures. The number of shrub and tree species is very variable. Species-rich hedges are confined to the areas of boulder clay, where species such as guelder-rose (*Viburnum opulus*) and dogwood (*Cornus sanguineus*) occur. There are many hedges where Dutch elm disease has killed all of the mature elm trees, leaving many gaps. Several such hedges have been re-planted by landowners using a mixture of native trees and shrubs.

Management practices vary widely throughout the project area. There are many examples of mature, dense hedges as well as gappy, poorly managed hedges.

### **3.2.10 Arable Farmland**

The majority of arable land is farmed intensively, with a heavy reliance on irrigation, particularly on the light, sandy soils. The Red Data Book species, red-tipped cudweed (*Filago lutescens*) has been recorded on arable land in the project area.

Approximately 45% of the trial area is covered by arable land.



## 4. The Vision

### 4.1 Introduction

Within the Suffolk trial area, there is much scope for habitat restoration. This could be in the form of either reversing fragmentation, restoration of degraded habitats through improved management or a general improvement in the general farming landscape through less intensive agricultural management.

The selection of the most appropriate habitats for restoration and the identification of the most appropriate zones where this should ideally occur has been achieved by:

- looking at the past and present distribution of semi-natural habitats and farmland;
- consulting the Biodiversity Action Plan (HMSO, 1995) and the Suffolk Coast and Heaths Natural Area (EN 1997), which identify those habitats that are under most threat;
- looking at topography;
- looking at the distribution of appropriate soil types.

### 4.2 How Can the Area Be Improved for Wildlife?

To prevent further habitat fragmentation and degradation, with the subsequent loss or decline of species, the first step is to encourage land owners and land managers to manage their land more sympathetically for wildlife.

46 (66%) out of the 70 land owners and land managers who were questioned have already created or improved habitats. The most popular habitats for creation or improvement were (in order of preference):

- woodland (33%)
- hedges (33%)
- ponds (30%)

These particular habitats are not those that have suffered the greatest losses and fragmentation, therefore the emphasis should be to target the restoration of those habitats that are considered to be under the greatest threat. i.e. key habitats in the Biodiversity Action Plan (HMSO, 1995) and key conservation features in the Suffolk Coast and Heaths Natural Area (EN, 1997).

A small number of landowners have created or improved the following habitats:

- |                                   |                            |
|-----------------------------------|----------------------------|
| • wet grassland( 13%)             | • saltmarsh (1%)           |
| • acid grassland /heathland (13%) | • a sand martin cliff (1%) |
| • planted trees (6%)              | • a lake (1%)              |
| • herb-rich grassland (1%)        | • ditches (1%).            |
| • a reedbed (1%)                  |                            |

Of these, coastal and floodplain grazing marshes, acid grassland/heathland, lowland dry grassland, reedbeds and estuarine habitats are identified in the Biodiversity Action Plan (HMSO, 1994) and the Suffolk Coast and Heaths Natural Area (EN, 1997) as being either nationally or locally important.

It is unrealistic at present to expect that a large number of agricultural land managers will radically change their land use with the emphasis changing away from agriculture to the large-scale creation of semi-natural habitats. An emphasis on integrating pockets of semi-natural habitats and wildlife corridors into the farming landscape and encouraging more wildlife-friendly farming practices, is probably more realistic.

The current levels of financial incentives from existing environmental land management schemes do not fully compensate for the loss of income that could otherwise be derived from intensive agricultural use. Despite this, a large proportion of land owners and land managers participate in environmental land management schemes. For example, out of 70 land owners or managers interviewed in the project area, 64% are involved in one or more schemes. 19% have created or managed habitats without becoming involved in any schemes, illustrating that a lack of involvement in environmental land management schemes does not necessarily indicate a lack of enthusiasm for habitat creation or management.

This high level of enthusiasm could be further encouraged and focused by increasing the involvement in environmental land management schemes, with a particular emphasis on the restoration of nationally and locally important habitats and the creation of links between these habitats.

### **4.3 Which Habitats Should Be Created?**

Whilst it might appear desirable to restore all existing wildlife habitats and enhance all farmland for the benefit of wildlife, it is important to view the area from regional and national perspectives, and concentrate limited resources on those species and habitats that are either a) under most threat or b) those that are significant within the trial area.

The UK Biodiversity Action Plan (HMSO, 1994) provides a national synthesis of species and habitats, and targets action according to national and international priorities, directives, status, threat and rarity. The Natural Area profile for the Suffolk Coast and Heaths provides a similar synthesis, highlighting the nationally and locally important habitats and species (EN, 1997).

To highlight the national and regional importance of the trial area for particular species, lists of scarce or declining species that occur in the trial area can be found in appendix 1. These are species that are highlighted in the Biodiversity Action Plan, Birds of Conservation Concern (RSPB, 1996) and Scarce Plants in Britain (JNCC, 1994).

According to the priorities in the Biodiversity Action Plan (HMSO, 1994), the following habitats are those that are the highest priority for restoration and it is these that the project will concentrate on restoring:

- lowland heathland
- lowland dry grassland
- coastal and floodplain grazing marshes
- reedbeds
- estuarine habitats
- ancient and/or species-rich hedgerows
- cereal field margins
- Saline lagoons

Other habitats that are in the UK Biodiversity Action Plan (HMSO, 1994) that occur in the trial area include broad-leaved woodland and vegetated shingle. Vegetated shingle is not considered further in this vision as options for its creation within the trial area are limited. The broad-leaved woodlands which occur in the trial area are not of particularly high conservation value. Since this habitat is widespread throughout the region, it was thought that greater emphasis should be placed on restoring other key habitats. The restoration of woodland is, however, considered within the context of improving the general farming landscape.

#### **4.4 Where Should New Habitats Be Created?**

As well as identifying which habitats are most important to create locally, it is important to identify zones within the trial area where habitat creation should be targeted. There are a number of considerations. For example, soils are the key feature determining the distribution of heathland, land levels determine that of wetlands and for some habitats it may be more important to restore links than create new, isolated areas. To ensure that the most appropriate locations are targeted for habitat restoration:

- A phase 1 habitat survey of the project area has been completed to show the current extent of semi-natural habitats and farmland. Additional notes were made on the type of management and the quality of habitats.
- Maps of the historical distribution of habitats have been consulted.
- Geology maps have been used to identify the most appropriate areas for the creation of particular habitats.
- A map showing all land lying below 5m has been produced to identify the most appropriate areas for the creation of wetland habitats.



## 4.5 Recommendations for Priority Habitats

### 4.5.1 Heathland and Acid Grassland

#### *Habitat Objectives*

- Link existing fragments of former heathland distribution and increase overall extent.
- Maintain and improve management of existing heathland.

#### *Habitat Target*

- Increase area of heathland in trial area by 20% over next ten years. (The Biodiversity Action Plan target for the whole of the UK is 10%).

#### *Preferred Areas for restoration*

Since heathland and acid grassland often occur together as mosaics and require the same substrate, they will be treated as a single habitat for the purpose of these recommendations.

Heathland has a high priority for restoration within the project area because it has been so severely fragmented and reduced (86% loss of Sandlings heaths in the last 60 years). It has probably suffered a greater degree of recent fragmentation and isolation than any other habitat in the trial area. Heathland and acid grassland currently accounts for approximately 5% of the project area.

There are areas of acid grassland throughout the project area, but the greatest concentration of conservation value lies within a broad band which runs north-east to south-west from Aldringham Walks, through North Warren, South Warren, on the edges of Black Heath wood, Snape Warren, on the south side of the Alde estuary at Blaxhall and Tunstall commons and in small pockets within Tunstall forest (map 2).

This broad band is also where the greatest concentration of heathland and acid grassland was found in 1931/32 (map 3). It is the preferred zone for the re-creation and restoration of heathland and acid grassland (map 4), as it will serve to link existing areas of highest conservation value. The creation and improvement of heathland should also be encouraged wherever the substrate is suitable outside this preferred zone, but should be treated as a lower priority.

#### *Key mechanisms and incentives available*

##### *i. Management :*

- **MAFF Countryside Stewardship**

Annual payments (£20-£50/ha/yr) for management and capital payments (£50-£500/ha) for scrub and bracken control.

Payments for obtaining technical and professional advice required in preparing a successful application.

- **MAFF Environmentally Sensitive Area (ESA)**

Annual payments (£190-£290/ha) to enhance ecological interest and capital payments for scrub and bracken control (up to 50% of cost).

- ii. **Creation:**

- **MAFF Countryside Stewardship**

Annual payments (£275/ha/yr) plus additional annual payments (£50/ha/yr) where special measures are required for establishment.

Capital payments for fencing and for obtaining technical and professional advice in preparing a successful application.

- **MAFF ESA**

Annual payments (£270/ha/yr) for arable reversion to grassland.

Capital payments for other measures required to re-introduce grazing.

- **Non-Rotational Set-Aside**

May be feasible for land adjacent to existing heathland.

- **Help with practical management may be available from the Sandlings Project and the Suffolk Coast and Heaths Project.**

### **Issues**

The uptake of schemes to encourage creation of heathland and acid grassland has been quite low. This may be because financial incentives are not high enough. However, uptake of schemes (particularly Countryside Stewardship) for management of heathland has been higher throughout the Suffolk Coast and Heaths area, with the majority of existing heaths participating in a scheme.

Twelve out of 44 (27%) of land owners/managers in suitable areas have created or improved this habitat. Of these, one is managing the land for agricultural purposes, and five own areas that have been designated either Sites of Special Scientific Interest or County Wildlife Sites.

### **Priority species**

Heathland within the project area already support populations of adders\*\*, nightjars\*\*, woodlarks\*\* and silver-studded blue butterflies\*\*. If the area of heathland is increased and links are made between existing areas, then this habitat has the potential to support breeding stone curlew\*\*, stonechat\*\*, wheatear\*\* and Dartford warbler\*\*. Many heathland species, especially invertebrates, are highly localised and poor re-colonisers, so the colonisation of suitable habitat may only be achieved in the long term.

\*\*species in the Biodiversity Action Plan

## 4.5.2 Coastal and Floodplain Grazing Marshes

### *Habitat Objectives*

- Increase the proportion of marsh in ESA tiers 2 and 2A
- Increase the overall extent of this habitat.

### *Habitat Targets*

- 10% of existing marshes currently in tier 1 into tier 2
- 5% of existing marshes into tier 2A
- 5% increase in area within ten years.

### *Preferred Areas for Restoration*

There are extensive areas of grazing marsh on the low-lying land close to the rivers Alde, Fromus and Hundred on alluvial soils. Most of them have been agriculturally improved, many are grazed by cattle, some are grazed by sheep. The most extensive area is Sudbourne Marshes which lies next to the Alde estuary in the south-east of the project area. There are other large areas at Church Marshes (RSPB); Stanny Farm, Iken; Hazelwood Marshes (SWT); on the north side of the river Alde close to Snape Maltings; and either side of the river Alde, upstream from Snape Maltings.

The current extent of grazing marshes is shown on map 5. It accounts for roughly 10% of the project area. The extent of this habitat in 1935 is shown on map 6. The preferred zone for arable conversion to grazing marsh is shown on map 7.

Most of the extensive areas of grazing marsh within the trial area are currently being managed under ESA tier 1 agreements with the result that most of them comprise is to improve the quality of the habitat by raising the water levels within existing marshes, by encouraging a greater uptake of tier 2 and 2A payments under the ESA scheme. The establishment of additional grasslands under tier 3 agreements should nonetheless be encouraged, but is considered a lower priority. If land owners wish to create more grassland under tier 3 agreements, they should be encouraged to do so where there are large blocks of arable land separating or near to large blocks of grazing marsh, such as at Iken Marshes and Aldeburgh Marshes.

### *Key Mechanisms and Incentives Available*

- **MAFF Countryside Stewardship**

Annual payments for arable reversion (£280/ha/yr) and existing grassland (£85/ha/yr).  
Annual supplements paid for additional management requirements.  
Capital payments made for water penning structures, dyke management and fencing.  
Capital payments for technical advice required to make a successful application.

- **MAFF Suffolk River Valleys ESA**

Annual payments for arable reversion (tier 3, £270-£320/ha/yr), and existing grassland. At present, tier 1 payments are £80/ha/yr; tier 2, £190/ha/yr, with an additional £50/ha/yr for tier 2A).

Capital payments for water penning structures, fencing, hedge planting, pond creation and restoration of dykes (40 - 80% of cost) within a conservation plan.

- **Help with practical management may be available from the Suffolk Coast and Heaths Project.**

### *Issues*

The majority of coastal and floodplain grazing marsh which is in the Suffolk River Valleys ESA Scheme is under tier 1 agreements, which is the least beneficial tier for water-dependent species. Farmers are reluctant to enter into tier 2 and 2A agreements, which require higher water levels, firstly because the payments do not always compensate them adequately for the loss of grazing, and secondly because the area under consideration needs to be hydrologically isolated from the neighbouring farm.

### *Priority species*

If water levels are high enough, and the grazing pressure is not too great, then waders such as snipe, redshank\*\* and lapwing may breed. Meadow pipits\*\* and skylarks\*\* may be attracted to breed on the drier areas of grazing marshes, providing the grazing pressure is not too great. Grazing marshes are important as feeding areas for over-wintering swans and geese such as dark-bellied brent geese\*\*, and during the summer months for swallows\*\*, martins and yellow wagtails\*\*. Grassland provides an attractive alternative to feeding on arable land, especially during the winter months.

Cattle grazing and poaching is especially beneficial to marginal vegetation. A reduction in the application of nitrates should lead to improved water quality with a consequent benefit to aquatic vegetation, aquatic invertebrates, and fish. \*\*species in the Biodiversity Action Plan.

### **4.5.3 Reedbeds**

#### *Habitat Objectives*

- Increase extent and quality of reedbeds in trial area.
- Reedbeds of 2ha or more should be targeted for restoration
- New reedbeds should be in blocks of at least 20ha (UK Biodiversity Action Plan).

#### *Habitat Target*

- A 20% increase in extent within ten years.

### ***Preferred Areas for Restoration***

Less than 1% of the project area is currently covered by reedbeds. The most extensive areas are near to Snape Maltings and at North Warren RSPB reserve. The latter is the only reedbed in the trial area which is larger than 20 ha. Common reed is frequent in the dykes throughout the extensive areas of grazing marshes. The current extent of reedbeds is shown on map 8

Since it has been difficult to establish the historical distribution of reedbeds in the project area and land levels may have changed in recent times because of drainage and subsequent shrinkage, it is thought most appropriate to create reedbeds where the land currently lies below 5m and where tidal influences will be avoided. These areas are shown on map 9. It is preferable to create large reedbeds rather than smaller fragments, since larger areas support a greater number and variety of breeding birds.

### ***Key Mechanisms and Incentives Available***

- **MAFF Countryside Stewardship**

Annual payments (£100/ha/yr) for management. Additional annual payments (up to £40/ha/yr) for five years following establishment.

- **MAFF Suffolk River Valleys ESA**

Annual payments (50% of cost) for reedbed management within a conservation plan - only where other land has been entered into an ESA agreement. There are currently no payments available under the ESA scheme for the creation of reedbeds.

- **English Nature**

Capital payments may be available for the restoration of existing reedbeds and the creation of new reedbeds.

### ***Issues***

One land owner (RSPB) has created a reedbed. Commercial farmers may be discouraged from doing so because the existing incentives may not be set at the correct level to fully compensate for the loss of productive arable land. Options for reedbed creation are currently not available under the ESA scheme.

### ***Priority species***

It is thought that bitterns\*\* need a large reedbed (>20ha) for breeding, although studies in continental Europe have shown that breeding populations of bittern can be supported by smaller areas providing that there are adequate feeding areas nearby. Bearded tit\*\*, water rail\*\*, marsh harrier\*\*, reed warbler\*\*, sedge warbler\*\*, reed bunting\*\*, and Savi's warbler\*\* also require reedbeds for breeding.

During the winter, reedbeds are used as roosting sites by raptors and often by large congregations of corn buntings\*\*, and starlings. Large groups of swallows\*\* often roost in reedbeds during the summer months, especially on passage. Reedbeds are also important for otter\*\* and the white-mantled wainscot moth\*\*

\*\*species in the Biodiversity Action Plan

#### **4.5.4 Estuarine Habitats**

##### ***Habitat Objective***

- To redress past losses.

##### ***Habitat Target***

- Create estuarine habitats following guidelines and in consultation with the Environment Agency as part of a programme of managed retreat in line with the coastal defence strategy.

##### ***Preferred Areas for Restoration***

The tidal flow of the Alde estuary is restricted by the sluice gate at Snape Bridge. Downstream from the bridge, the estuary has extensive areas of intertidal mudflats which are nationally and internationally important for wildfowl and waders. The mudflats cover approximately 5% of the project area. The extent of saltmarsh along the estuary is restricted for much of its length by river walls. There are small areas of saltmarsh along most of the length of the estuary, these are shown on map 10 and account for 1 - 2 % of the project area.

Saltmarsh on the Alde estuary is being lost at a rate of 1% annually because of erosion (Beardall & Casey, 1995 SWT). The preferred zones for the creation of saltmarsh are shown on map 11. These are areas of land which lie below 5m and are adjacent to the estuary.

##### ***Key Mechanisms and Incentives Available***

- **MAFF Countryside Stewardship**

Annual payments (£20/ha/yr) for the management of existing saltmarsh, supplements (£40/ha/yr) for additional measures.

- **MAFF Habitat Scheme**

Annual payments for reversion from arable (£525/ha/yr) and grassland (£195/ha/yr) for 20 years.

## **Issues**

Saltmarsh has been created by only one landowner in the project area. This had not been deliberate, but as a result of a breach in the river wall. The current levels of incentives (£525/ha/yr from arable and £195/ha/yr from permanent grass) may be too low to compensate for the permanent loss of productive land.

## **Priority species**

Birds such as redshank\*\*, avocet\*\*, shelduck\*\*, ringed plover\*\*, grey plover\*\*, black-tailed godwit\*\*, rock pipit\*\*, twite\*\* and Lapland bunting\*\* use saltmarsh for breeding and/or feeding. The nationally scarce plants, marsh mallow (*Althaea officinalis*) and marsh sow-thistle (*Sonchus palustris*) are found on salt-marsh within the trial area.

\*\*species in the Biodiversity Action Plan

## **4.5.5 Arable Farmland Habitats**

### **Habitat Objectives**

- Increase the area of semi-natural habitats
- Create links between habitats
- Enhance the wildlife value of productive arable land.
- Halt the losses and reverse the decline of farmland species and habitats.

### **Habitat Targets**

- Increase take-up of environmental land management schemes throughout project area, with a particular emphasis on key farmland habitats outside the preferred zones for the creation of other habitats and where farmland lies between existing areas of high conservation value.
- Achieve the favourable management of 25% of species-rich and ancient hedges by the year 2002 and 50% by 2007 (Biodiversity Action Plan target).

### **Preferred Areas for Restoration**

Farmland covers a large proportion (45%) of the project area. Ancient and/or species-rich hedgerows and field margins are identified as key habitats in the Biodiversity Action Plan. Other important habitats that are found in farmland are woodland, ponds and scrub.

The general farming landscape is important for many species and also provides an important link between less intensively managed areas of semi-natural habitat, therefore resources should be targeted at enhancing the wildlife value of farmland which lies between existing areas of semi-natural habitat of high conservation value.

### ***Key Mechanisms and Incentives Available***

- **MAFF Countryside Stewardship**

The scheme targets the conservation and enhancement of some key English landscapes, including watersides, historic landscapes, traditional orchards, old meadows and pastures and the restoration of field boundaries.

Capital payments are available for hedgerow restoration (£2/m), plus annual payments for establishing 2m (£15/100m) and 6m (£35/100m) grass margins. There is an additional payment for hedgerow maintenance 5 years following restoration.

- **Suffolk County Council Conservation Grants**

Capital grants (up to 40% of eligible costs) may be available for works which are not eligible under other grant schemes. Eligible projects can include the restoration of pine belts, the re-establishment of old boundary features, pond restoration and the coppicing of woodlands which are less than 4 ha.

- **Non-rotational and rotational set-aside**

The use of the 20m field margin option for grassland or natural regeneration management options is allowed. It is also possible to use the whole or part of a field for winter stubbles or wild bird cover. The payment is the basic set-aside payment. The minimum amount of set-aside is currently 5%.

- **MAFF Suffolk River Valleys ESA**

Supplementary annual payments (£8/ha) for hedgerow restoration on land in ESA agreement. Capital payments (40% of cost) for other hedgerow work.

- **Forestry Authority Woodland Grant Scheme**

Capital payments for broadleaf planting (£1350/£1050/ha, depending on area), with additional payments for trees planted on arable land or improved grassland (£600/ha). Capital payments for broadleaf re-stocking (£525/ha). Additional payments (£35/ha/yr) for the management of woodlands which have special environmental potential or for woodland which has public access.

- **Farm Woodland Premium Scheme**

Additional annual payments (£25/ha/yr) for woodland planted under a Woodland Grant Scheme on qualifying agricultural land.



- **MAFF Habitat Scheme (former 5-year set-aside)**

Land owners/managers coming out of the previous scheme are eligible for annual payments if keeping the land out of production will offer significant wildlife benefits.

- **FWAG Landwise Schemes and Whole Farm Plans**

A plan is produced which considers the farm as a whole and suggests ways of improving habitats and agricultural practices which would benefit wildlife.

- **Organic Aid Scheme**

Aid is given over a five year period to farmers who wish to convert from a conventional to an organic system of agriculture.

### *Issues*

The uptake of incentives to assist the restoration of woodlands, hedges and ponds is quite high. 33% (23/70) of land owners/managers have created or improved woodlands, with 20% (14/70) using Woodland Grant Scheme incentives; 33% have created or improved hedges using personal funds and a variety of schemes, including Local Council grants, Parish Council schemes, ESA and Countryside Stewardship and 30% have created or improved ponds either using personal funds or with the assistance of ESA and County Council schemes.

The organic aid scheme is currently the only scheme which provides incentives for the improved overall management of farmland habitats. Many conventional farmers feel that the levels of incentives that this scheme provides are currently not high enough to encourage them to commit themselves to a radically different system of agricultural management.

### *Priority species*

Breeding birds such as tree sparrow\*\*, grey partridge\*\*, corn bunting\*\*, skylark\*\*, song thrush\*\*, lapwing\*\*, barn owl\*\*, stone curlew\*\* should benefit from less intensive agricultural operations combined with an increase in the areas of semi-natural habitat within the farming landscape. Finch flocks in particular benefit from the increase in weed seeds available in winter stubbles when cereal drilling is delayed until spring.

Many arable weeds that were once common and widespread are becoming increasingly scarce because of the increased efficiency of modern farming methods. Consequently, these should benefit from less intensive agricultural management.

Farm ponds are particularly favoured by great crested newts\*\*. Mammals such as the brown hare\*\* tend not to thrive in an intensively managed farming landscape. The project area is a stronghold for brown hares\*\* and breeding tree sparrows\*\*, illustrating that this particular area of Suffolk is not farmed as intensively as other parts of the country

\*\*species in the Biodiversity Action Plan

## **4.6 Discussion**

As a result of discussions with land owners in the trial area it has been possible to ascertain that there is a high level of enthusiasm for wildlife which is not at present being fully targeted at the restoration of key habitats in the UK Biodiversity Action Plan (HMSO, 1994).

Targets set in the Biodiversity Action Plan (HMSO, 1994) were considered, but the current extent of certain key habitats (notably heathland and reedbeds) in the project area compared with previous distributions suggest that higher targets should be set which would give rise to more substantial gains for the wildlife that these habitats support. Map 12 shows the existing extent of the key habitats together with the zones where their recreation should be technically feasible.

The project has identified priority areas for restoration which were based on past and present land use, topography and soil types. Restored habitats in these areas should provide the maximum benefit to wildlife since they aim to link or enlarge existing habitats of high conservation value and/or create semi-natural habitats where there is historical evidence of their former existence.

By targeting the existing high levels of enthusiasm towards the restoration of the key habitats identified in the Biodiversity Action Plan (HMSO, 1994), and by improving the schemes which support their restoration, it should be possible to redress past losses of species and habitats by reversing fragmentation and create a countryside where farming and wildlife exist side by side, which is more aesthetically pleasing; sustainable; and which supports a greater variety and abundance of wildlife.

A summary of the key habitats and species within the trial area, indicating their BAP status and identifying the incentive schemes applicable are shown in table 1.



**Table 1. Summary of Key Habitats and Species Within the Trial Area Indicating Their BAP Status and the Incentive Schemes Applicable**

Target Habitat	Target Species	Status	Incentives	
Arable Farmland Habitats	tree sparrow grey partridge corn bunting skylark song thrush lapwing barn owl stone curlew great crested newt brown hare	BAP (M) BAP (S) BAP (M) BAP (S) BAP (S) BAP (L) BAP (L) BAP (S), BD BAP (S), HSD BAP (S)	Cereal Field Margins	Countryside Stewardship set-aside
			Ancient and/or Species-rich Hedgerows	Countryside Stewardship Suffolk County Council ESA
			Woodland	WGS FWPS Suffolk County Council (coppicing)
			Other Habitats	Suffolk County Council (e.g. ponds) set-aside MAFF Habitat Scheme Organic Aid Scheme
Lowland Heath and Acid Grassland	adder nightjar woodlark silver-studded blue stone curlew stonechat wheatear dartford warbler	BAP (L) BAP (M) BAP (M) BAP (M) BAP (S), BD BAP (L) BAP (L) BAP (L), BD	Countryside Stewardship ESA Non-rotational set-aside	
Coastal Grazing Marshes	snipe redshank lapwing meadow pipit skylark dark-bellied brent goose swallow yellow wagtail	BAP (L) BAP (L) BAP (L) BAP (L) BAP (S) BAP (L) BAP (L) BAP (L)	Countryside Stewardship ESA	
Reed Beds	bittern bearded tit water rail marsh harrier reed warbler sedge warbler reed bunting savi's warbler corn bunting swallow otter white-mantled wainscot	BAP (S), BD BAP (L) BAP (L) BAP (L), BD BAP (L) BAP (L) BAP (M) BAP (L) BAP (M) BAP (L) BAP (S), HSD BAP (L)	Countryside Stewardship ESA English Nature	
Estuarine Habitats	redshank avocet shelduck ringed plover grey plover black tailed godwit rock pipit twite lapland bunting marsh mallow marsh sow-thistle	BAP (L) BAP (L), BD BAP (L) BAP (L) BAP (L) BAP (L) BAP (L) BAP (L) BAP (L) BAP (L)	Countryside Stewardship MAFF Habitat Scheme	



## **5. Implementation**

The vision identifies the priority habitat and species within the *Renewing the Alde* Trial Area the restoration of which would contribute to achieving the BAP targets. We have also identified the mechanisms and financial incentives available to assist its implementation. Clearly the vision can only be successfully implemented with the agreement and support of the local farmers and other landowners. The resources and influence of the many countryside organisations will also be vital to success of the project. A summary of the key mechanisms and incentives schemes for implementing the vision is given in appendix 2.

During the first year many farmers and other landowners have already supported the project by allowing us access to their land, while the countryside organisations including MAFF, Forestry Authority, Environment Agency, National Farmers Union, Country Landowners Association, Farming and Wildlife Advisory Group, Game Conservancy Trust and Royal Society for the Protection of Birds and given us practical help and advice.

We will now be consulting further over the vision and how we can work together to implement it. It is only by working together in this way that the BAP programme can be implemented at a landscape level. A summary of ways that each of the partner organisations can help is given in table 2. The following actions will therefore be taken in the next few months.

### **5.1 Promotion**

#### **5.1.1 To canvass opinion on the vision statement and its implementation we will be consulting with the following.**

- i. The Steering Group.
- ii. Local farmers and other landowners.
- iii. The statutory and non statutory countryside organisations.

#### **5.2. To implement the vision at the farm level our Project Officer will:**

- i. Visit farmers to advise them on the priorities for habitat restoration and the availability of practical advice to undertake the restoration.
- ii. Produce short farm reports, identifying sources of funding through ELMS and producing costed action plans. In appropriate cases it is proposed to grant aid the production of more detailed "Landwise Plans" by FWAG or other approved specialist advisor.

- iii. Assist farmers to complete application forms for Stewardship and other ELMS and liaising with the relevant officers at MAFF/FRCS.
- iv. Liaise with other landowners and managers including the Environment Agency to encourage them to enhance the wildlife value of their land within the project area.

**5.3. To achieve wider publicity about the Project and Habitat Restoration we will:**

- i. Organise farm walks and demonstrations on restoration techniques for farmers in partnership with the Game Conservancy, FWAG and others.
- ii. Produce a biennial Newsletter about the project for participating farmers and other land managers.
- iii. Submit articles for publication in the farming and nature conservation press. Press releases in local newspapers will also be used to inform the public about positive conservation measures carried out by local farmers.

**5.4 To monitor the success of the Project we will:**

- i. Monitor the take up of Environmental Land Management Schemes to determine the number of schemes applied for, the extent of wildlife habitat restored/created and whether habitat fragmentation is being reversed.
- ii. Monitor the quality of the habitat created and the wildlife it can support to determine whether biodiversity targets are being met.
- iii. Maintain a dialogue with participating farmers to determine whether they remain happy with the schemes they have entered.

Monitoring will occur during the last (third) year of the project, then five and ten years later (years eight and thirteen).

**Table 2. Ways in which the other Countryside Organisations can support the Project.**

<b>Organisation</b>	<b>Potential Contribution</b>
<b>MAFF</b>	Responsible for administration of the Countryside Stewardship Scheme and Set-aside including the Habitat Scheme.
<b>FRCA (Formerly ADAS)</b>	The Stewardship Officers in Suffolk are able to advise on the acceptability of individual Countryside Stewardship applications. The ESA officer is responsible for liaison with farmers regarding advice and applications under this scheme.
<b>Countryside Commission</b>	An provide advice on the landscape implications of the Habitat Vision for the Alde
<b>Forestry Authority</b>	Responsible for administration of the Woodland Grant Scheme (WGS) and Woodland Improvement Grant (WIGS) and can . advise on individual applications.
<b>Forest Enterprise</b>	Responsible for the management of Tunstall Forest where heathland restoration projects are being undertaken.
<b>Environment Agency</b>	Advice on river and flood plain restoration and sea level rise. May be able to promote small projects such as tree planting, ponds, riverside strips and reedbeds.
<b>Country Landowners Association</b>	Able to promote the project among its membership by assisting with farm walks, and demonstrations.
<b>National Farmers Union</b>	Able to promote the project among its membership through article/s its newsletters.
<b>Suffolk County Council</b>	Help and advice including use of SCC Conservation Grants. Can enhance the value of road verges as linking habitats through its management policies
<b>Suffolk Coast and Heaths Project</b>	Help and advice with practical conservation work.
<b>Alde/Ore Association</b>	Can promote the project among its membership through newsletter articles. Able to offers financial and practical support to projects which involve the River Alde and its catchment



<b>Organisation</b>	<b>Potential Contribution</b>
<b>Game Conservancy Trust</b>	Able to provide advice, including a range of fact sheets on many aspects of habitat restoration and management. An advisor on restoration management for wildlife and game is available to assist with farm demonstration events.
<b>Farming and Wildlife Advisory Group</b>	Able to provide advice, including a range of fact sheets on many aspects of habitat restoration and management. FWAG's whole farm "Landwise Plans" provide a suitable methodology for delivering the aims of the project.
<b>Royal Society for the Protection of Birds</b>	Able to provide advice, including published fact sheets on many aspects of habitat restoration and management. Can provide detailed advice on habitat restoration/management for birds.
<b>Suffolk Wildlife Trust</b>	Able to provide help and advice on all aspects of habitat restoration and management. In particular in relation to the Sandlings Heathland Restoration Project, County Wildlife Sites and SWT Nature Reserves.
<b>Wildfowl and Wetlands Trust</b>	Able to provide help and advice on all aspects of wetland restoration and management
<b>Woodland Trust</b>	Able to provide help and advice on all aspects of woodland creation and management.

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## APPENDICES

### Appendix 1 Priority Species

The following are on the Biodiversity Action Plan short and middle lists of globally threatened or declining species and have been recorded or have bred (birds) in the project area during 1996:

skylark	bittern
nightjar	linnet
reed bunting	woodlark
spotted flycatcher	tree sparrow
grey partridge	song thrush
bullfinch	turtle dove
brown hare	otter
pipistrelle bat	starlet sea anemone

The following scarce (found in 16 - 100 different 10 x 10 km squares) and red data book\* ( found in less than 16 different 10 x 10km squares) plants have been recorded during the last 50 years:

Corncockle	<i>Agrostemma githago</i>
Marsh-mallow	<i>Althaea officinalis</i>
Dense Silky-bent	<i>Apera interrupta</i>
Slender Hare's-ear	<i>Bupleurum tenuissimum</i>
Sea-kale	<i>Crambe maritima</i>
Mossy stonecrop	<i>Crassula tillaea</i>
Rush-leaved fescue	<i>Festuca arenaria</i>
Red-tipped Cudweed	<i>Filago lutescens*</i>
Sea-buckthorn	<i>Hippophae rhamnoides</i>
Smooth Cat's-ear	<i>Hypochoeris glabra</i>
Sea Pea	<i>Lathyrus japonicus</i>
Dittander	<i>Lepidium latifolium</i>
Bur medick	<i>Medicago minima</i>
Toothed Medick	<i>Medicago polymorpha</i>
Fine-leaved Sandwort	<i>Minuartia hybrida</i>
Greater Broomrape	<i>Orobanche rapum-genistae</i>
Curved Hard-grass	<i>Parapholis incurva</i>
Bulbous Meadow-grass	<i>Poa bulbosa</i>
Borrer's Saltmarsh-grass	<i>Puccinellia fasciculata</i>
Spiral Tasselweed	<i>Ruppia cirrhosa</i>
Perennial Glasswort	<i>Sarcocornia perennis</i>
Sand Catchfly	<i>Silene conica</i>
Marsh Sow-thistle	<i>Sonchus palustris</i>
Small Cord-grass	<i>Spartina maritima</i>
Clustered Clover	<i>Trifolium glomeratum</i>
Suffocated Clover	<i>Trifolium suffocatum</i>
Bearded Fescue	<i>Vulpia ciliata ssp ambigua</i>
Dune Fescue	<i>Vulpia fasciculata</i>
Narrow-leaved Eelgrass	<i>Zostera angustifolia</i>

The project area supports breeding populations of the following birds which are on the RSPB Birds of Conservation Concern red list :

grey partridge	turtle dove
nightjar	woodlark
skylark	song thrush
spotted flycatcher	tree sparrow
linnet	bullfinch
reed bunting	

The following birds on the Birds of Conservation Concern red list have bred during the last 50 years:

marsh harrier	grey partridge
stone curlew	black-tailed godwit
turtle dove	nightjar
woodlark	skylark
song thrush	spotted flycatcher
red-backed shrike	tree sparrow
linnet	bullfinch
reed bunting	corn bunting

## **Appendix 2      Summary of the Key Mechanisms and Incentives for Implementation**

### ***MAFF Countryside Stewardship***

This scheme provides revenue and capital payments for the management of a wide variety of key habitats and traditional land uses, with additional payments for the provision of new public access. Acceptance into an agreement is discretionary, and lasts for 10 years. The scheme is not available for any operations that would be otherwise eligible for payments under the Suffolk River Valleys Environmentally Sensitive Areas scheme.

### ***MAFF non-rotational and rotational set-aside***

Payments are eligible for set-aside land that falls under field margin, grassland or natural regeneration management options. Relevant areas of land are eligible for the basic set-aside payment under the Arable Area Payments Scheme.

### ***MAFF Suffolk River Valleys Environmentally Sensitive Areas***

Revenue and capital payments are made for the ecological enhancement of land adjacent to some Suffolk river valleys. The agreements are for ten years with an optional break clause after five years. The payments are tiered, reflecting the management practices, the highest payments given for those management practices which provide the greatest benefit to wildlife. Additional payments are given for the provision of new public access. The boundary of the ESA area is shown on map 13.

### ***Forestry Authority Woodland Grant Scheme***

Capital payments are made for tree planting with the highest payments available for planting on arable land or improved grassland. 70% of the payment is made after planting and the remaining 30% five years later. There is a capital payment for re-stocking with broad-leaved species. Additional payments are available for woodlands of special environmental potential; any woodland which has public access; woodland which needs to be protected from grazing stock; and for any work needed to encourage natural regeneration.

### ***MAFF Farm Woodland Premium Scheme***

Revenue payments are made for woodland which is planted on qualifying agricultural land which has been planted under the Woodland Grant Scheme. Payments are given over 15 years for broad-leaved plantations and over 10 years for conifers.

### ***Suffolk County Council Conservation Grants***

Capital payments of up to 40% of costs are available for the creation and management of a wide variety of habitats for small projects not covered by the other schemes.

### ***MAFF Habitat Scheme (former 5-year Set-Aside and Saltmarsh)***

*Former 5-year set-aside:* land owners/managers coming out of the previous scheme are eligible for annual payments if keeping the land out of production will offer significant wildlife benefits. *Saltmarsh:* revenue payments are given which vary subject to detailed management plans and necessary consents or agreements for capital works (saltmarsh creation). The scheme must be consistent with the provision of an effective and sustainable coastal defence.

### ***English Nature Schemes***

Capital payments are available for the restoration of existing reedbeds and the creation of new reedbeds. The scheme is administered by the RSPB.

*Wildlife Enhancement Scheme:* Revenue and Capital payments are available for up to 100% of the costs of managing Sites of Special Scientific Interest.

Grants for other projects not on SSSIs can be available up to 50% of available costs. These are discretionary payments.

### ***Suffolk Coastal District Council, Parish tree planting***

Trees and materials only are supplied.

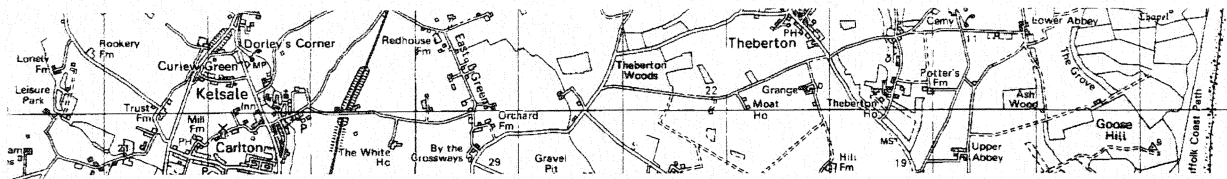
### ***Organic Aid Scheme***

This is aid available to farmers who wish to convert to organic production during the period of conversion. Payments are progressively reduced over 5 years and payments vary from area to area. A standard additional payment is made for the first 5ha for all farmers and growers.

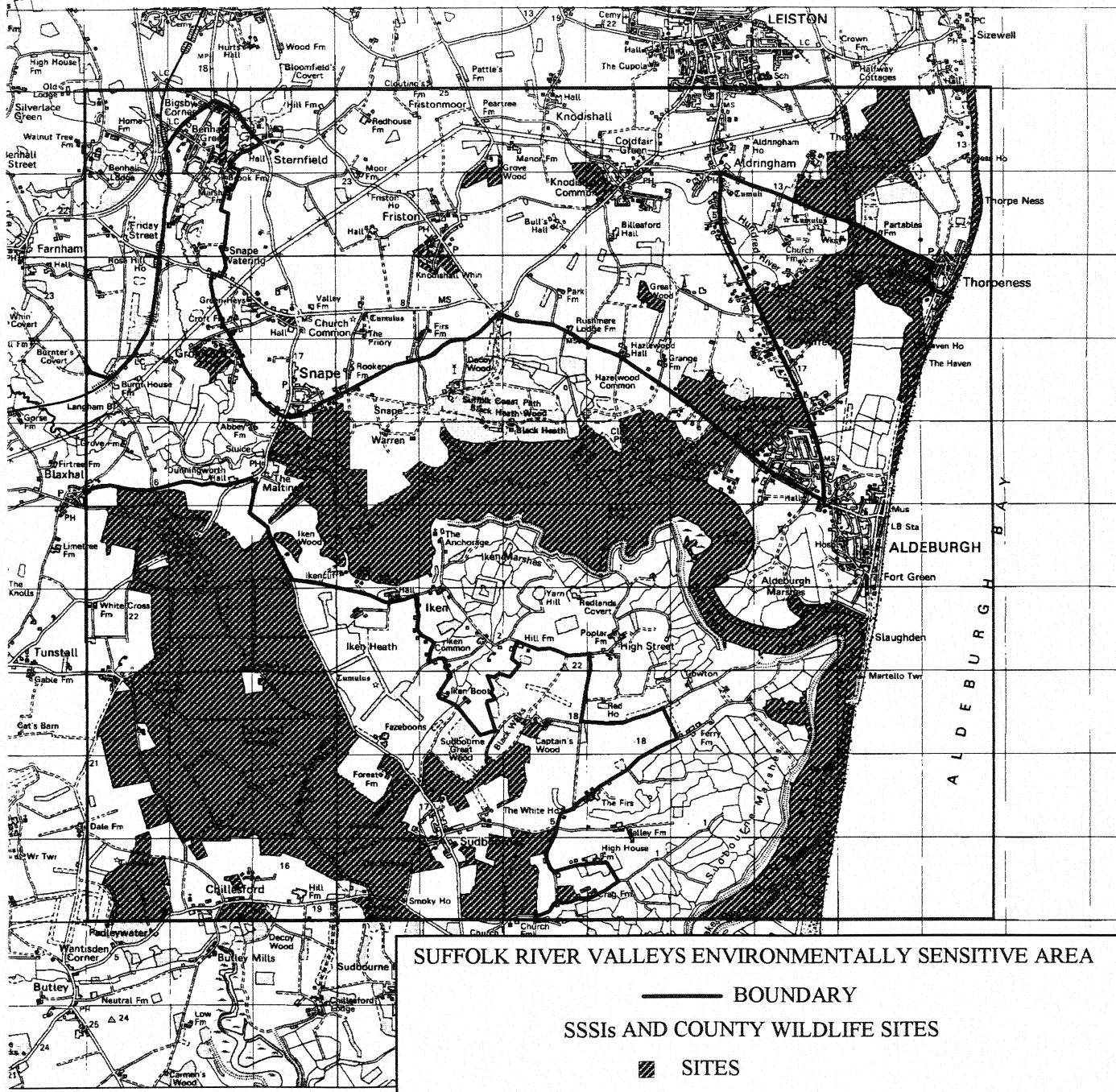
A number of grants from a variety of sources are also available for community groups.

In addition to the incentive schemes, the following should also be considered as options to assist in the implementation of the project:

- **FWAG Landwise and Whole Farm Plans.**
- **Heritage lottery funds.**
- **European Union LIFE funds**
- **assistance from the Coast and Heaths Project and the Suffolk Wildlife Trusts' Sandlings Project.**
- **assistance from the Environment Agency**
- **grants from the Alde/Ore association**

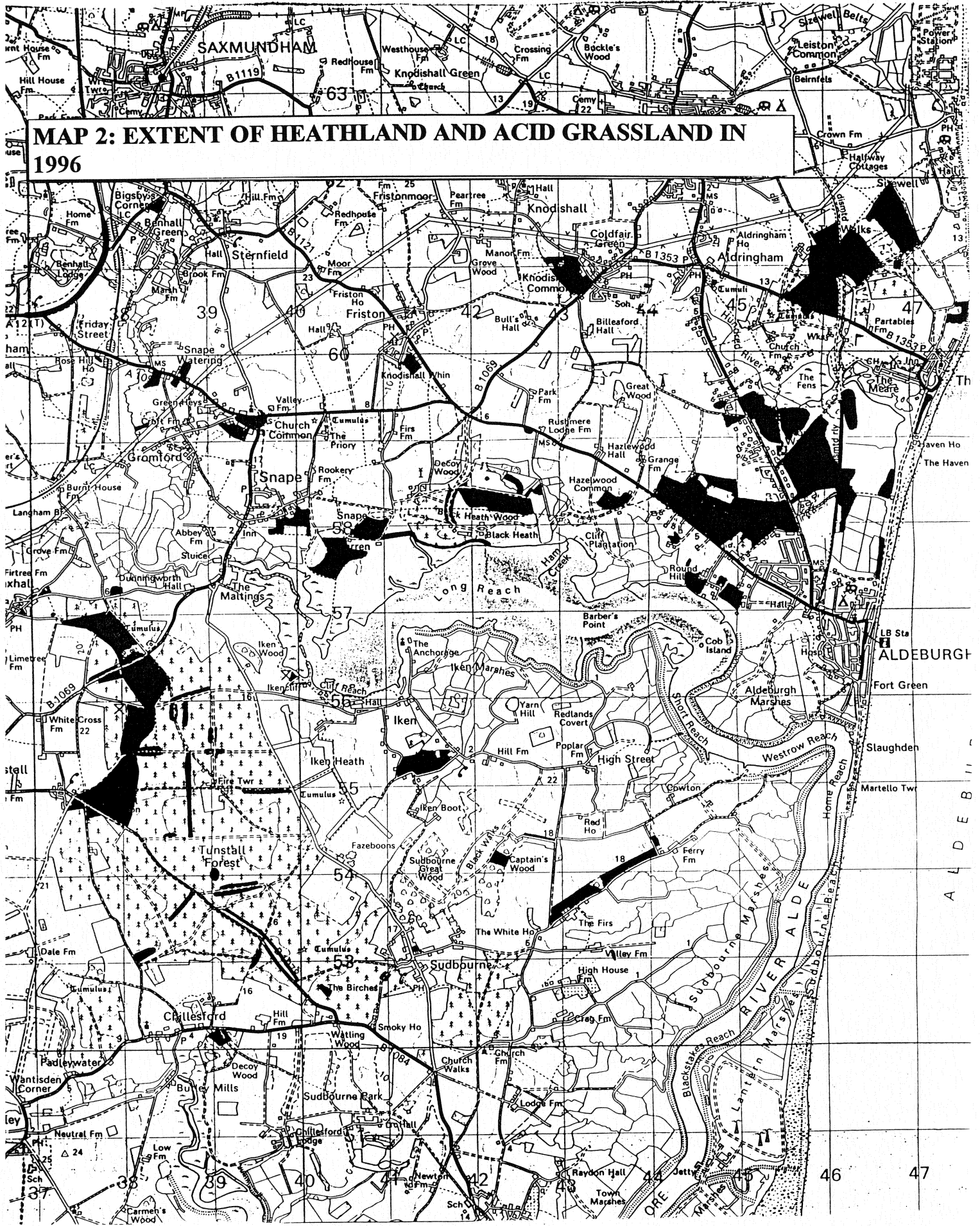


MAP 1: DISTRIBUTION OF SITES OF SPECIAL SCIENTIFIC INTEREST, COUNTY — WILDLIFE SITES AND SUFFOLK RIVER VALLEYS ENVIRONMENTALLY SENSITIVE AREA

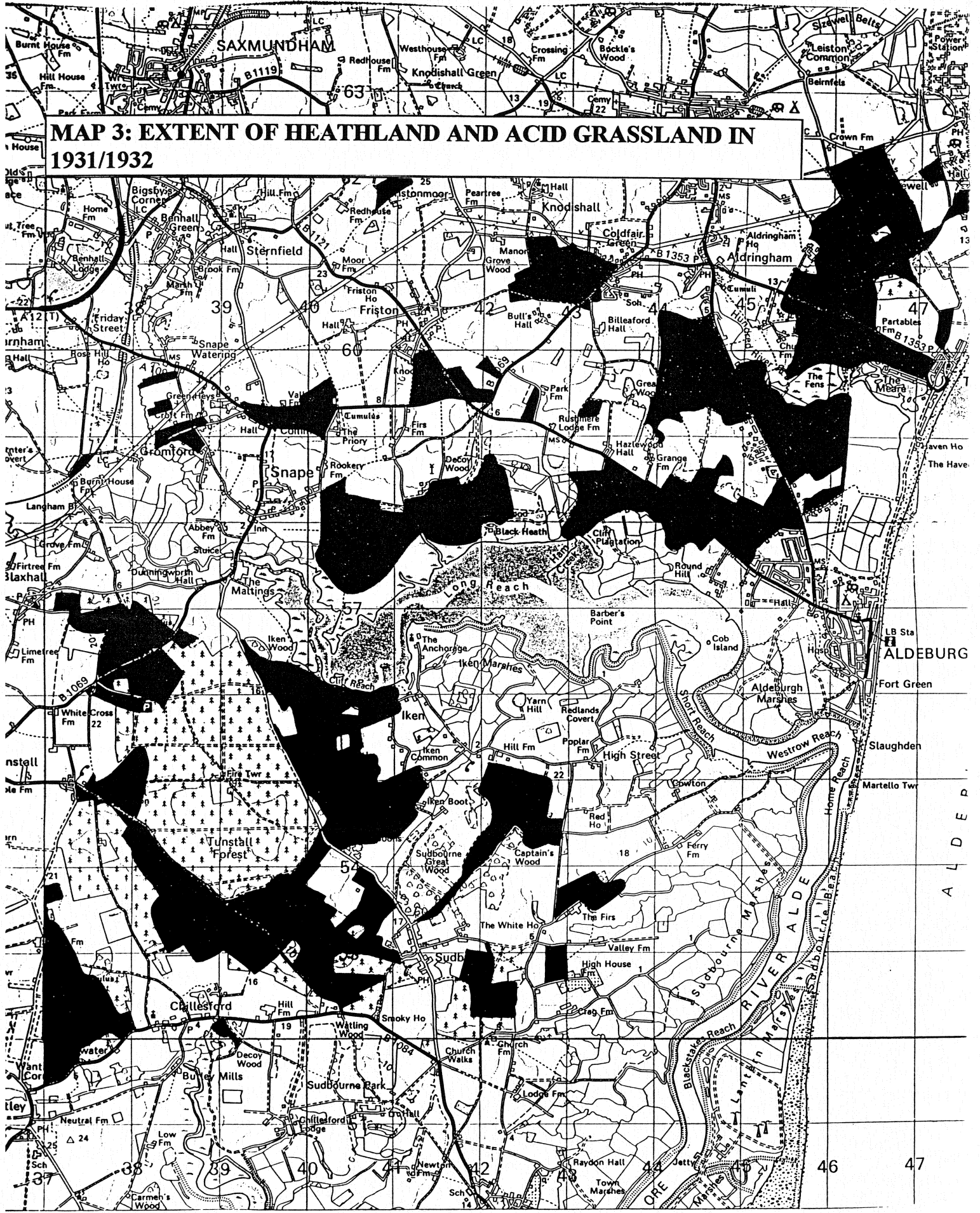




# MAP 2: EXTENT OF HEATHLAND AND ACID GRASSLAND IN 1996



**MAP 3: EXTENT OF HEATHLAND AND ACID GRASSLAND IN 1931/1932**

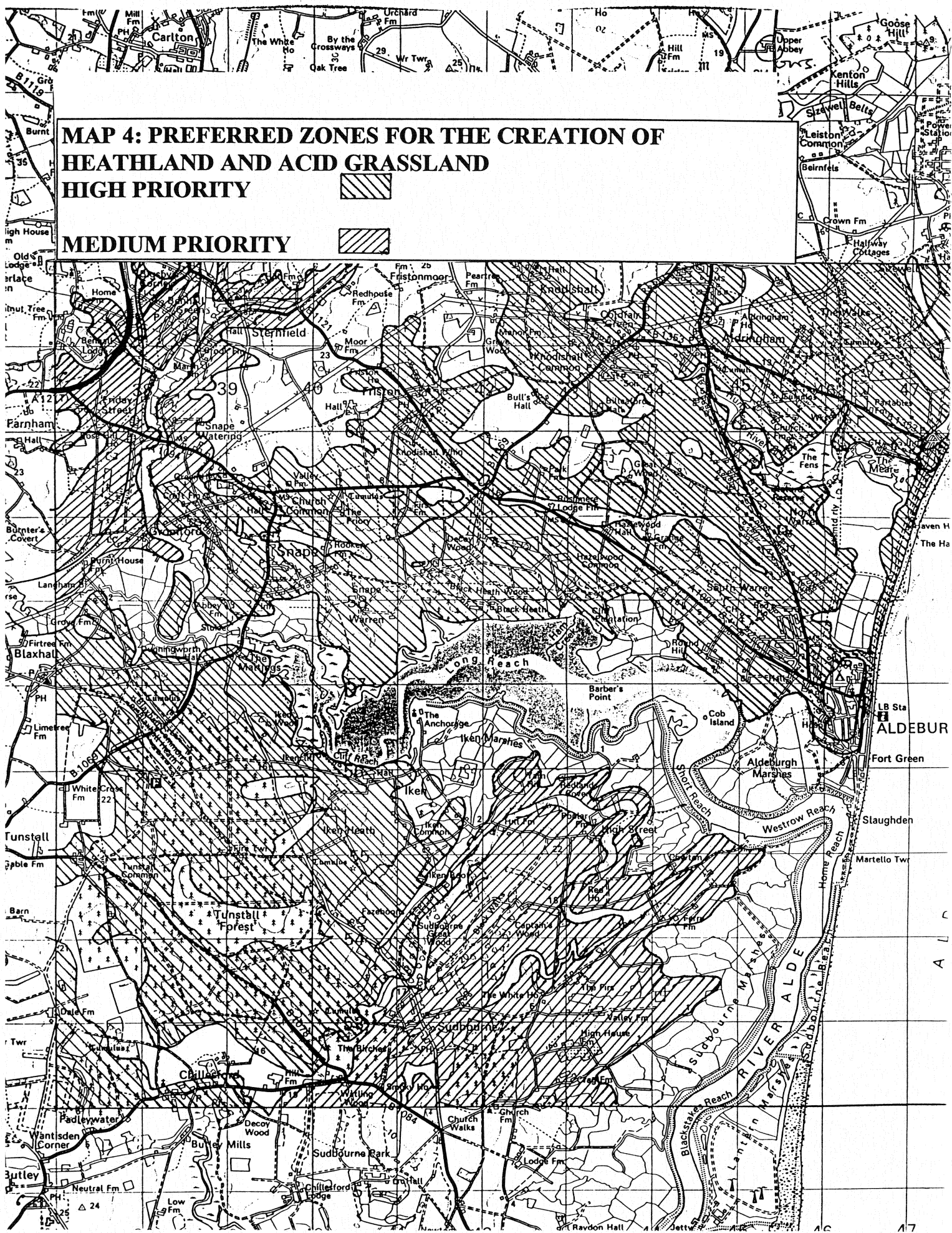


# MAP 4: PREFERRED ZONES FOR THE CREATION OF HEATHLAND AND ACID GRASSLAND

**HIGH PRIORITY**



**MEDIUM PRIORITY**



ALDEBUR

Fort Green

Sloughden

Martello Twr

ALDE

ALDE

ALDE

ALDE

ALDE

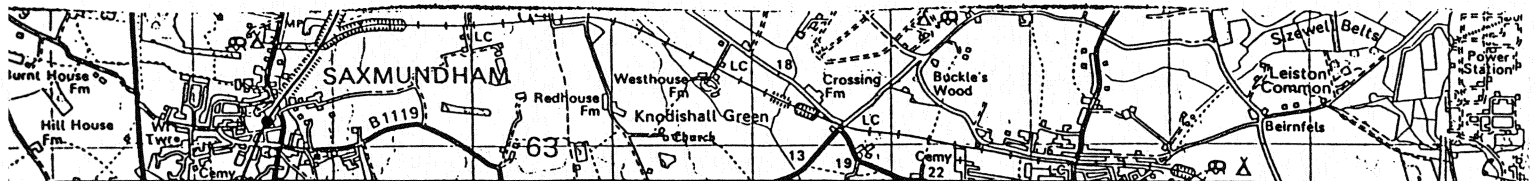
ALDE

ALDE

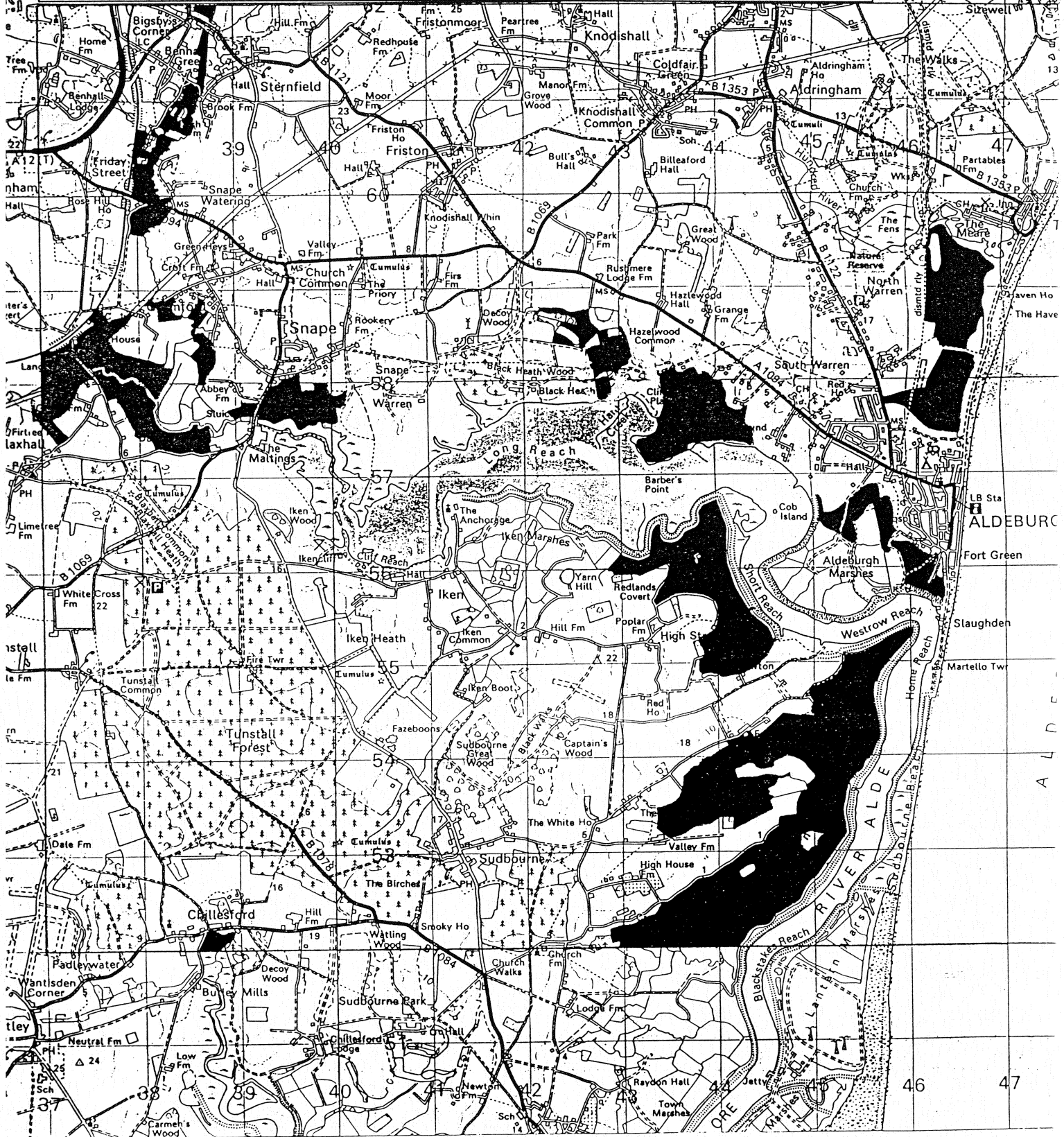
ALDE

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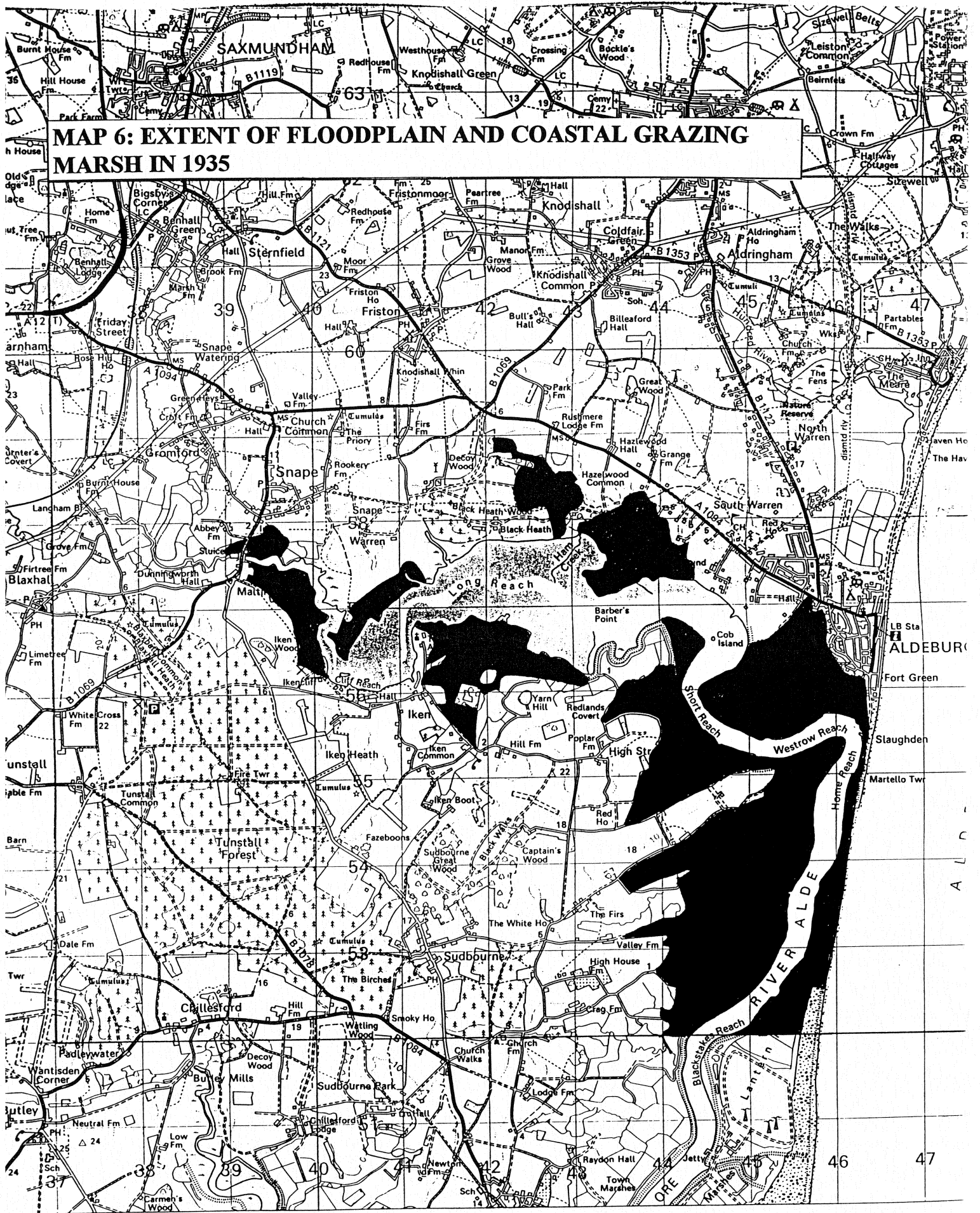


# MAP 5: EXTENT OF FLOODPLAIN AND COASTAL GRAZING MARSH IN 1996



A L D E

# MAP 6: EXTENT OF FLOODPLAIN AND COASTAL GRAZING MARSH IN 1935

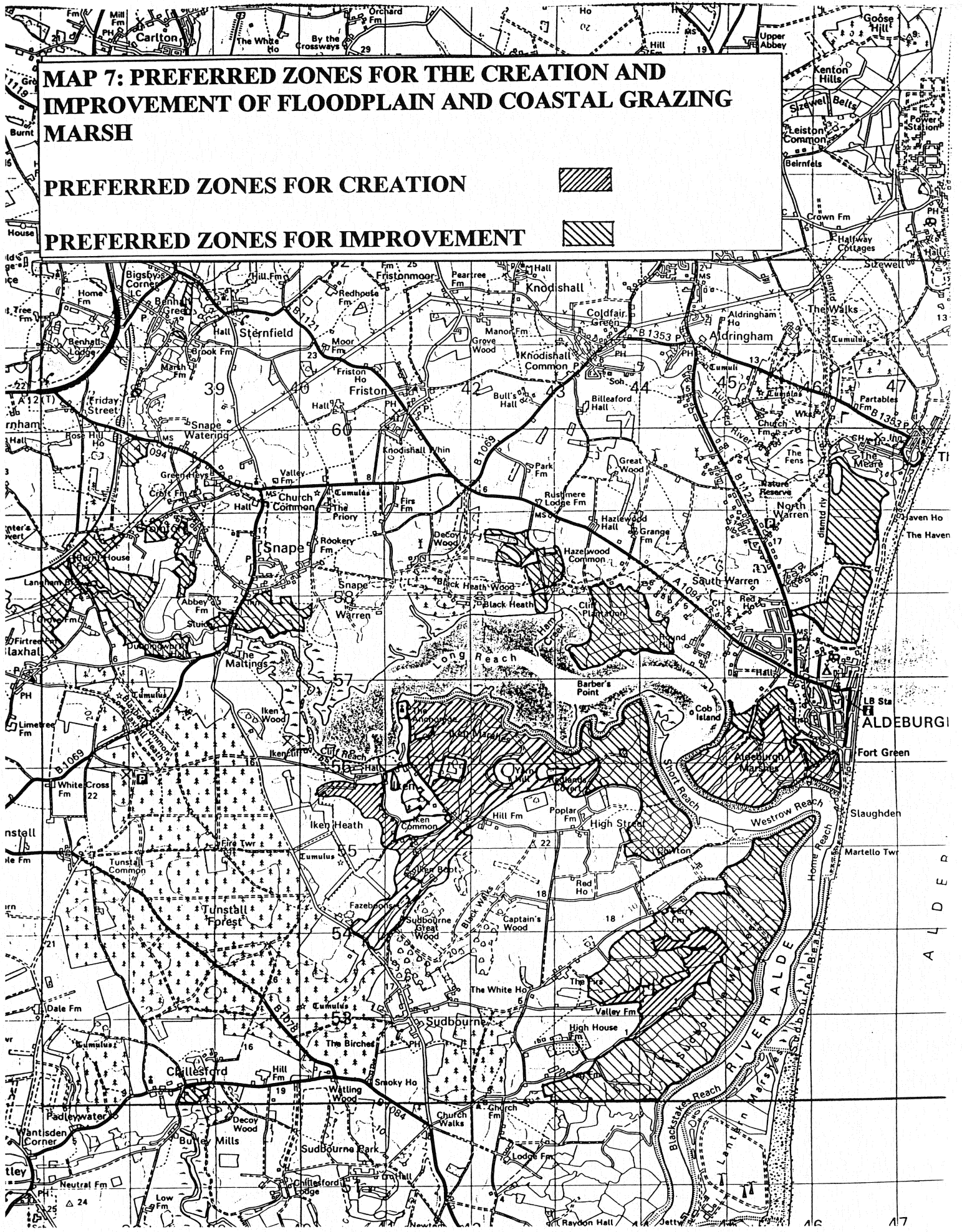


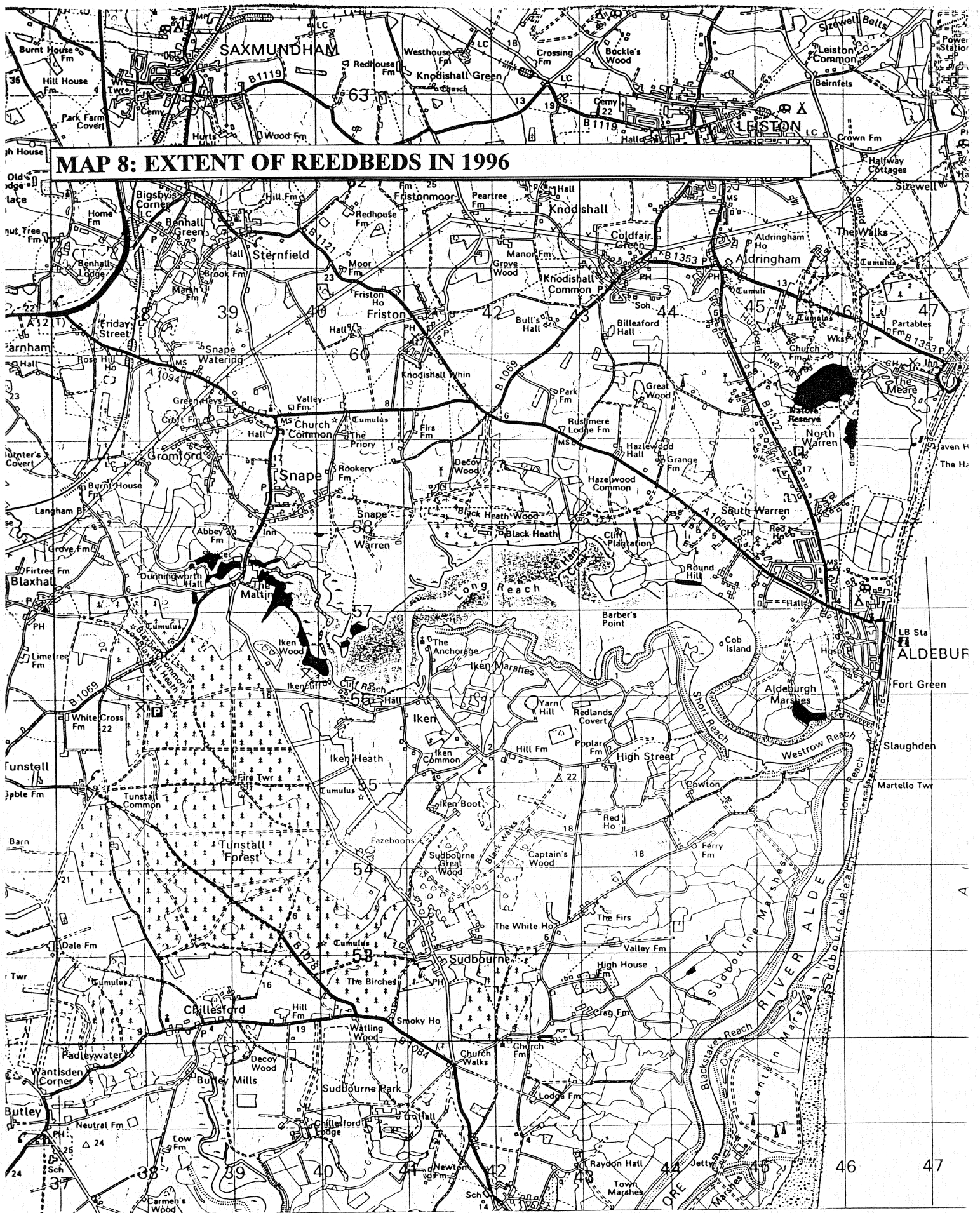
# MAP 7: PREFERRED ZONES FOR THE CREATION AND IMPROVEMENT OF FLOODPLAIN AND COASTAL GRAZING MARSH

PREFERRED ZONES FOR CREATION



PREFERRED ZONES FOR IMPROVEMENT





**MAP 8: EXTENT OF REEDBEDS IN 1996**

SAXMUNDHAM

LESTON

ALDEBURY

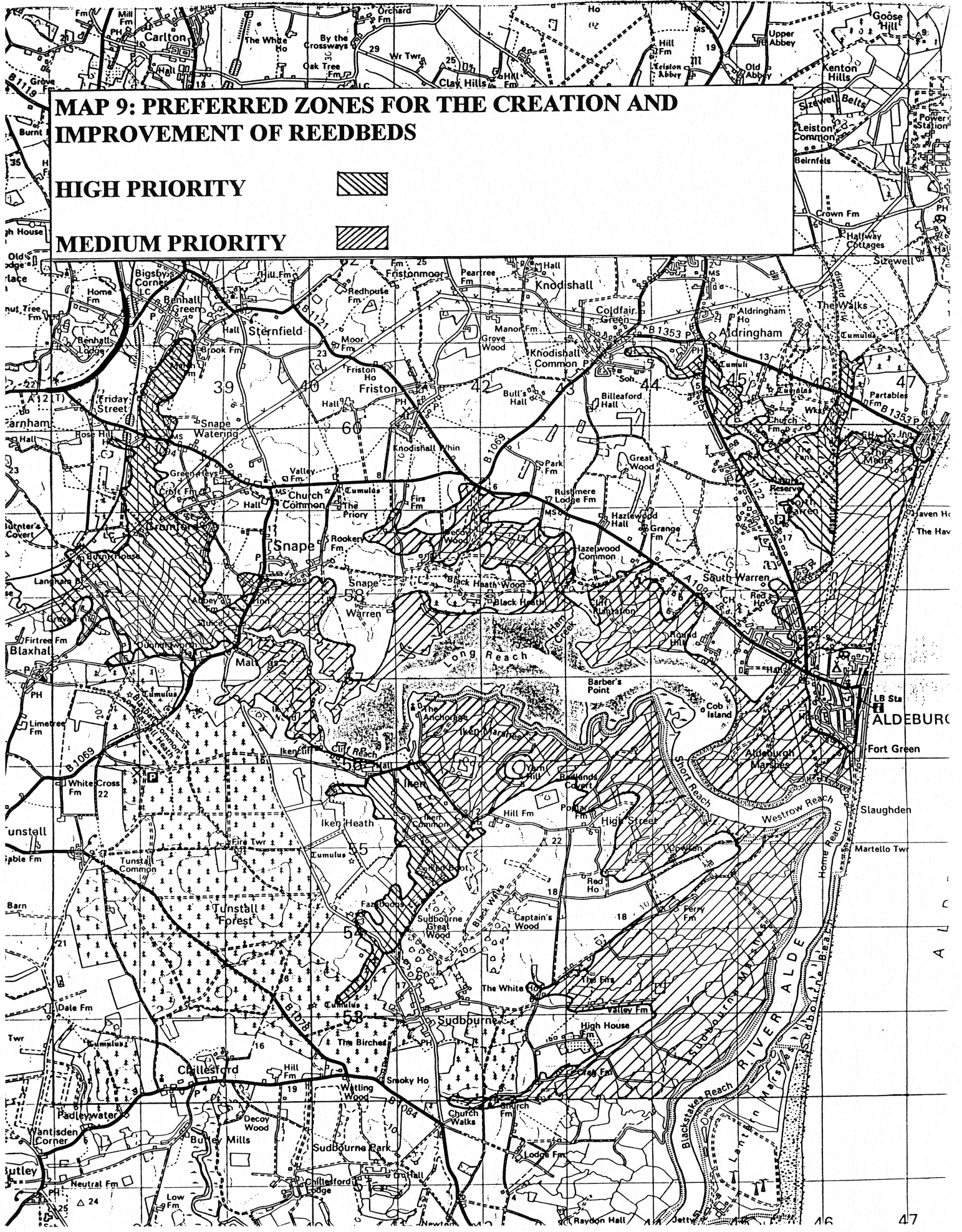
The map contains a dense network of labels for various locations and features. Key place names include Saxmundham, Leston, Aldebury, Sudbourne, Chillesford, and Butley. Other notable locations are Sterfield, Snape, Iken, and Tunstall. The map also shows numerous smaller settlements and farms, such as Redhouse, Knodishall, and Aldringham. Geographical features like the River Alde, Westrow Reach, and various commons and woods are also labeled. The map includes a grid with numerical coordinates and various symbols representing roads, rivers, and other landmarks.

# MAP 9: PREFERRED ZONES FOR THE CREATION AND IMPROVEMENT OF REEDBEDS

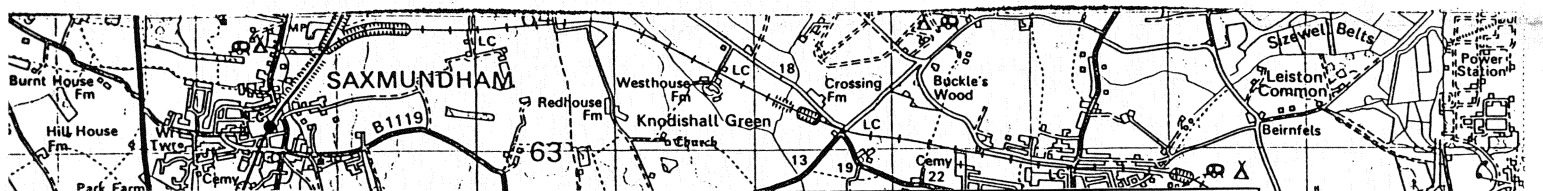
**HIGH PRIORITY**



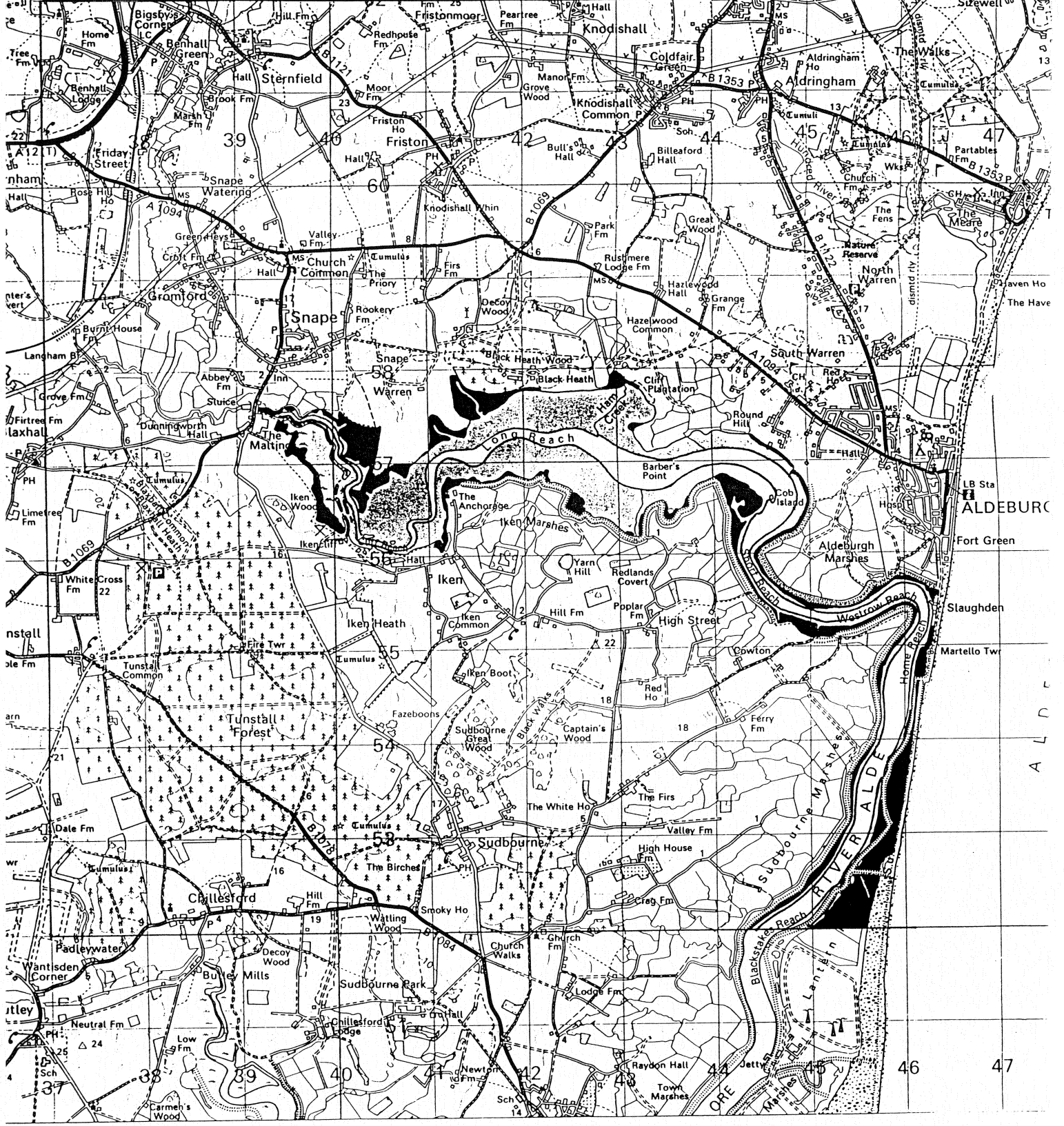
**MEDIUM PRIORITY**







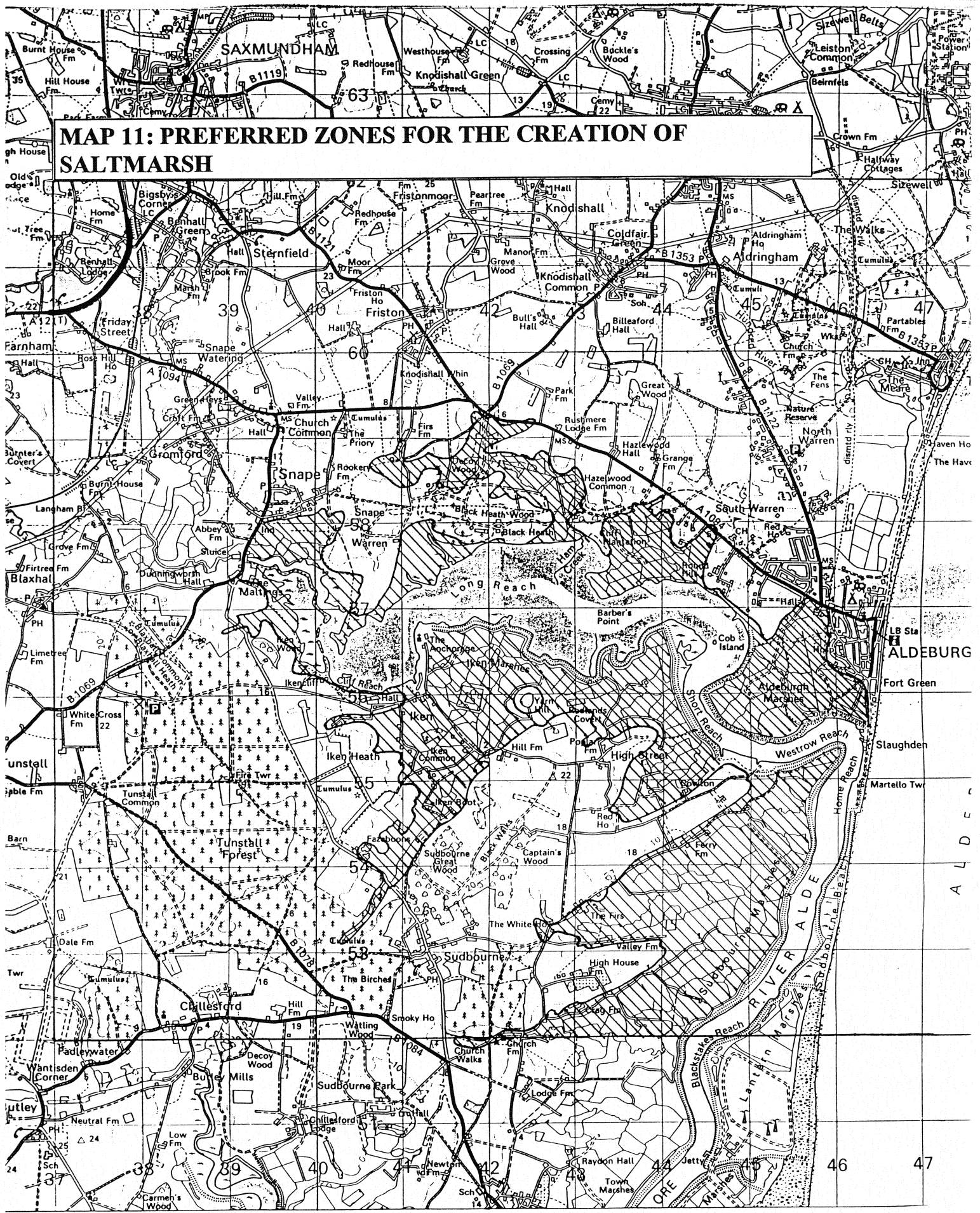
**MAP 10: EXTENT OF SALTMARSH AND INTERTIDAL MUDFLATS IN 1996**



A L D E

46 47

# MAP 11: PREFERRED ZONES FOR THE CREATION OF SALT MARSH



**MAP 12: HYPOTHETICAL EXTENT OF HABITATS IF ALL TARGETS ARE ACHIEVED:**

**EXISTING                      HYPOTHETICAL**

**HEATHLAND AND ACID GRASSLAND**



**COASTAL AND FLOOD-PLAIN GRAZING MARSH**



**REEDBED**



**SALTMARSH**

