ENGLISH NATURE

Birds in England

A Natural Areas approach

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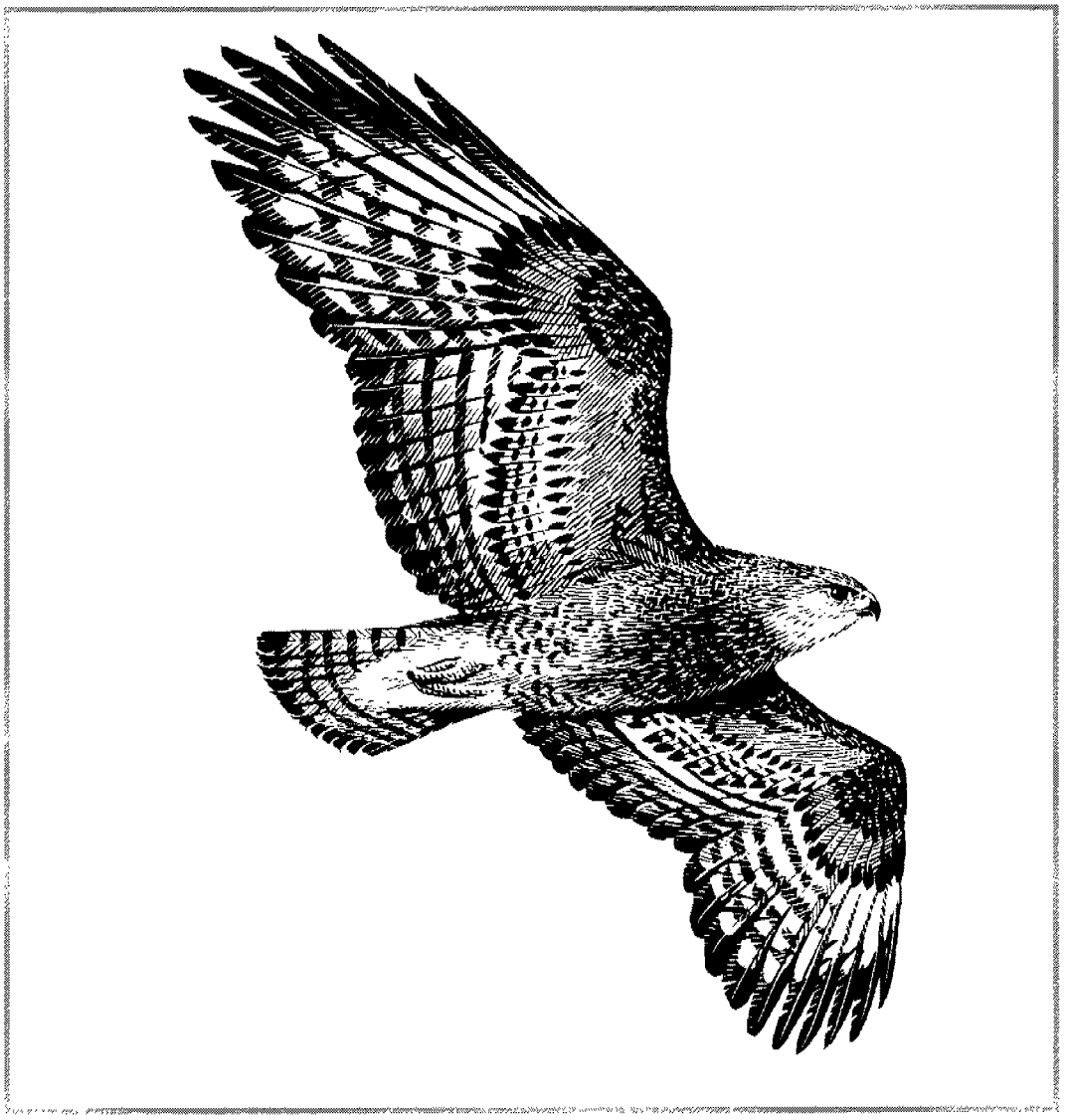

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BIRDS IN ENGLAND: A NATURAL AREAS APPROACH

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1. INTRODUCTION

During 1992/93, English Nature reviewed, for the first time, the conservation significance of England's birds and bird habitats, and set national priorities for bird conservation from both a species and habitats perspective (published as *Birds in England: context and priorities* - Brown & Grice 1993). Over the same period, English Nature began developing the *Natural Areas* concept. The final version of the Natural Areas map was launched by English Nature at the *Progress '94* event. This is reproduced as Figure 1.

English Nature is working with others to describe the nature conservation character of each Natural Area, to define the current and target states of the main nature conservation elements characteristic of the area, to agree up to five key shared objectives and to promote and facilitate conservation action in each Natural Area.

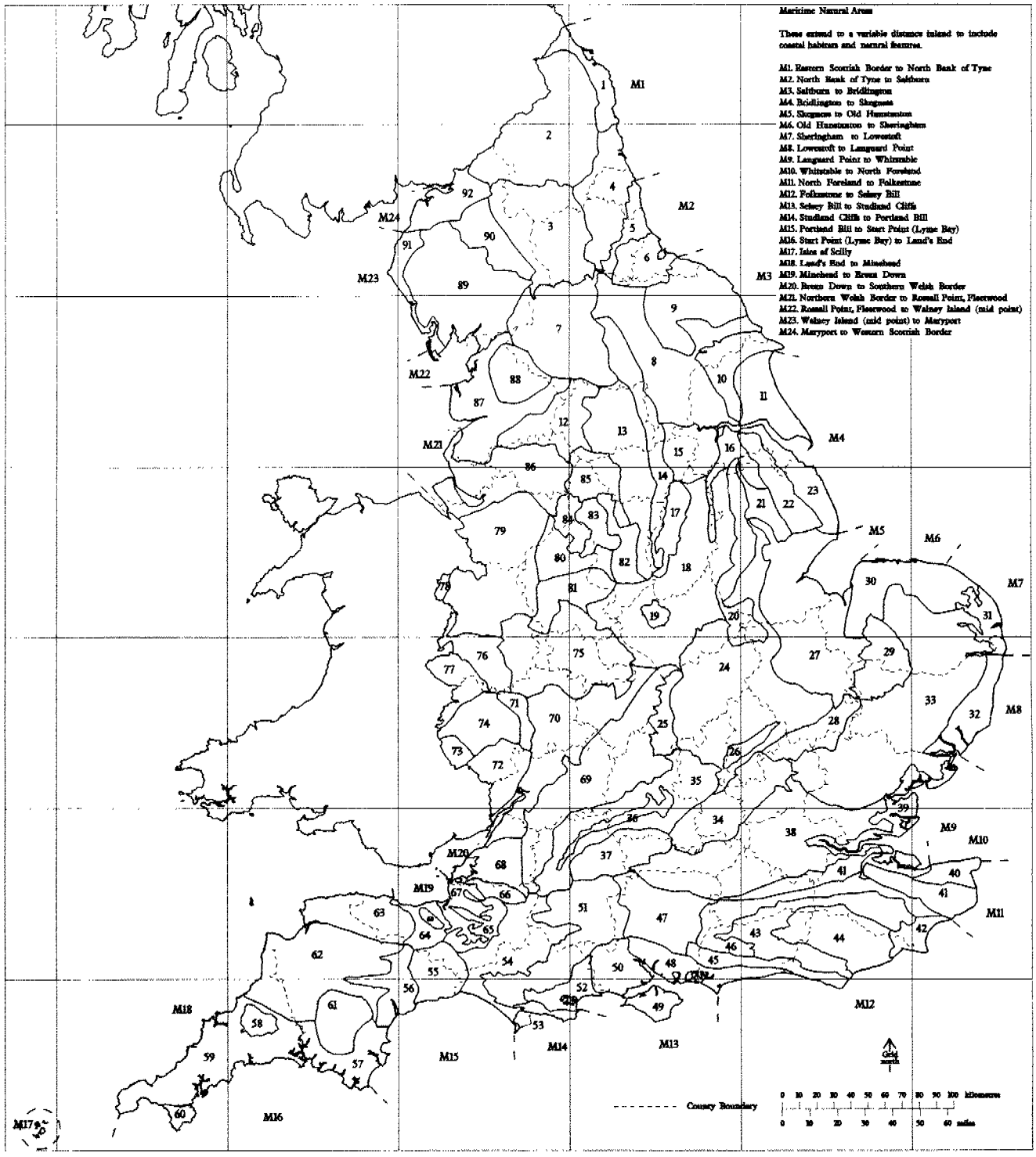
The aim of the present document is to provide specialist ornithological input to this process, seeking to ensure that national priorities for conservation action for England's birds are reflected in the objectives and targets for each Natural Area. The document consists of 'ornithological profiles' for each of the 92 terrestrial and 24 Maritime Natural Areas in England, prepared by the Specialist Support Team ornithologists in consultation with staff in local teams. These consist of a simple *pro-forma* and constitute the bulk of the document. They provide a summary of the overall ornithological character and significance of each Natural Area, the key bird species and bird-habitats that it supports, and the need for species specific action and additional monitoring. This is followed by a list of key issues affecting birds within the Natural Area and a list of key ornithological objectives aimed at safeguarding and, where appropriate, enhancing populations of important species. The document is intended to assist staff in local teams with the characterisation of England's Natural Areas and the identification of key issues and objectives within each area; provide a source document concerning the ornithological interest of England's Natural Areas; and through both the consultation process and this finished report, provide a mechanism by which all staff consider the conservation needs of birds and increase their awareness of national ornithological priorities.

This is clearly a two-way process. Derivation of local objectives and targets will clearly inform prioritization of work at both the local and national scale. Effective liaison between staff operating in the local, national and international theatres is crucial to this process. We believe this document illustrates that an effective mechanism is already an integral part of EN's work in this area and will facilitate future refinement of Natural Area objectives and targets.

Figure 1.

ENGLISH NATURE

Natural Areas



1. Northumberland Coastal Plain
2. Border Uplands
3. North Pennines
4. Northumbrian Coal Measures
5. Durham Magnesian Limestone
6. Lower Tees
7. Yorkshire Dales
8. The Vales of Yorkshire
9. North York Moors
10. Yorkshire Wolds
11. Plain of Holderness
12. Southern Pennines
13. Coal Measures
14. Southern Magnesian Limestone
15. Humberhead Levels
16. Coversands
17. Sherwood Forest
18. Trent Valley and Levels
19. Charnwood Forest
20. Lincolnshire Limestone
21. Lincolnshire Clay Vales
22. Lincolnshire Wolds
23. Lincolnshire Marsh and Coast
24. Middle England
25. Northamptonshire Uplands
26. Bedfordshire Greensand
27. Fenland
28. East Anglian Southern Chalk
29. Breckland
30. North Norfolk
31. Broadland
32. Suffolk Coast and Heaths
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34. Chilterns
35. Oxford Clay Vales
36. Oxford Heights
37. Wessex Downs
38. London Basin
39. Thames Marshes
40. North Kent Plain
41. North Downs
42. Romney Marsh
43. Low Weald
44. High Weald
45. South Downs
46. Greensand
47. Hampshire Chalk
48. South Coast Plain
49. Isle of Wight
50. New Forest
51. South Wessex Downs
52. Dorset Heaths
53. Isles of Portland and Purbeck
54. Wessex Vales
55. Blackdowns
56. Devon Redland
57. South Devon
58. Bodmin Moor
59. Cornish Killas and Granite
60. The Lizard
61. Dartmoor
62. Culm Measures
63. Exmoor and the Quantocks
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66. Mendips
67. Somerset Levels and Moors
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88. Forest of Bowland
89. Cumbrian Fells and Dales
90. Eden Valley
91. West Cumbria Coastal Plain
92. Solway Basin

2. METHODS

2.1 Data sources

A variety of data sources aided preparation of the profiles. The principle sources were:

1. The two atlases of breeding birds in Britain and Ireland (Sharrock 1976; Gibbons *et al.* 1993) and the wintering atlas (Lack 1986).

2. The results of the *Wetlands Bird Survey* (Waters & Cranswick 1993).

3. *The status of seabirds in Britain and Ireland* (Lloyd *et al.* 1991).

4. County avifaunas and breeding birds atlases.

Upon completion of the first draft, each profile was sent to the appropriate Natural Area lead contact for comment, together with an explanation of the data fields (see section 2.3). Most lead contacts circulated the forms to colleagues for discussion and comments, and presented a joint response. In total, written and verbal comments were received from 80 staff based in EN's local teams (see Acknowledgements).

2.2 Natural Area boundaries

Natural Areas are based mainly on ecology and physical geography. Natural Area boundaries are, therefore, rarely sharply defined. Maritime Natural Areas include freshwater wetlands that abut the coast, including grazing marsh, reedbeds and open freshwaters, as well as the 'coastal' habitats, eg intertidal mud and sandflats, saltmarsh, rocky shores, cliffs, dunes, shingle and saline lagoons. This is because many bird species associated with the coast regularly use both coastal and freshwater wetland habitats on a daily basis. In addition, coastal and their associated freshwater wetlands are often managed as one unit. Given the threats and opportunities that may arise from relative sea level rise in many parts of England, the future of coastal habitats and adjacent freshwater wetlands is inextricably linked. However, extensive freshwater wetlands that abut the coast can extend a considerable distance inland and form a major feature of some terrestrial Natural Areas, such as Thames Marshes (39) and Romney Marsh (42). Such interfaces between Maritime and terrestrial Natural Areas will be treated as transitions. We have therefore apportioned the bird interest of these Natural Areas accordingly.

2.3 Explanation of data fields

The following is an explanation of the content of each box on the profiles.

Ornithological significance

Four categories are used to provide a subjective assessment of the gross overall ornithological significance of each Natural Area. Table 1 summarises the criteria for each category together with our perception of the level of priority which should be attached to ornithological objectives within each Natural Area.

Table 1. Criteria for the ornithological significance of Natural Areas

OUTSTANDING	Ornithological objectives should be of the *highest* priority within the Natural Area because it: 1. supports at least 4 species in internationally important numbers; 2. forms a core area for the populations of at least 4 high priority species; & 3. includes at least 2 internationally important bird sites or itself forms one large site.
CONSIDERABLE	Ornithological objectives should be regarded as a *high* priority within the Natural Area because it: 1. supports at least 2 species in internationally important numbers; 2. forms a core area for at least 2 high priority species; & 3. includes at least one internationally important bird site.
NOTABLE	Ornithological objectives should be regarded as a *medium* priority within the Natural Area, although conservation action for one or more species may be of higher priority. This is because the Natural Area: 1. supports at least one species in internationally important numbers, forms a core area for one or more high priority species, or contains one internationally important bird site; or 2. species specific action may be required to safeguard and enhance populations of one or two rare or vulnerable species of high priority.
SOME	Ornithological objectives are, overall, a *low* priority within the Natural Area. Bird conservation will generally be achieved through initiatives targeted at habitats or issues within the Natural Area, although there may be exceptions where species specific action is required.

General ornithological character

A short summary of the Natural Area's overall ornithological interest and characteristic bird habitats.

Internationally important species

Two groups of species of international importance are listed:

1. Species which breed in internationally important numbers in Britain, as listed in Table 2.4 of Brown & Grice (1993), and which breed in at least *nationally* significant numbers (1%) within the Natural Area. Significant populations of the two globally threatened species that breed in England (red kite and roseate tern) are also noted.

2. Species which occur in Britain in internationally important numbers during the winter, as listed in Tables 2.5 and 2.6 in Brown & Grice (1993), and which are supported in *internationally* significant numbers by one or more sites within the Natural Area.

Species which only occur in internationally important numbers during the spring/autumn passage period within the Natural Area are indicated in the *general ornithological character* section.

EN high priority

Species identified as high priority 'List 1' and high priority 'List 2' in chapter 3 of Brown and Grice (1993) and which occur in significant numbers within the Natural Area.

Other notable species

Three groups of notable species are listed:

1. Species identified as medium priority in chapter 3 of Brown & Grice (1993) that occur in significant numbers within the Natural Area. Medium priority species that occur in virtually every Natural Area, such as sand martin, swallow, whitethroat and spotted flycatcher, are not listed.

2. Species identified as high priority in Brown & Grice (1993) but which occur in small numbers, such as wintering raptors or passage waders.

3. Species identified as low priority in Brown & Grice (1993) but which occur in highly significant numbers within the Natural Area. These are listed in brackets.

'Core Area' species

Natural Areas which support at least 5% of the British population of a breeding or wintering species are considered to form a core area for that species and so play a vital role in safeguarding their populations.

Extinct/very rare breeding species

Three groups of species are listed:

1. Species which have been lost as breeders from the Natural Area since the first atlas of breeding birds (1968-72), as shown by the 'Change maps' in Gibbons et al. 1993, or we have good historical evidence for their widespread occurrence in habitats that apparently remain suitable.

2. Species which breed in very small numbers within the Natural Area.

3. Species which breed occasionally or irregularly within the Natural Area.

Key bird habitats

A list of the principal habitats that support the high priority and other notable bird species that characterise the Natural Area.

Species specific action

A list of actions required to safeguard and/or enhance populations of key species that would not normally be carried out as part of site or habitat based conservation measures within the

Natural Area. Such actions typically include nest/species protection and the provision of specialised nesting or feeding habitats.

Additional monitoring required

A list of additional bird monitoring projects that are required to assess the status of key species/assemblages within the Natural Area, over and above those already undertaken at a national level.

Key issues

A list of the main issues affecting key bird species and their habitats within the Natural Area.

Key objectives

A list of the key ornithological objectives for the Natural Area aimed at safeguarding and, where appropriate, enhancing populations of high priority and other notable bird species, based on both species-specific and habitat management measures.

3. RESULTS

The ornithological profiles for each Natural Area forms Part II of the document. Upon completion, the ornithological significance of and key issues for each of the Upland, Lowland and Maritime Natural Areas were collated into tables (Appendices I-III). Tables 2 and 3 provide a summary of this information which is discussed in the following sections.

3.1 Ornithological significance

Table 1. Summary of the ornithological significance of England's Natural Areas

Ornithological significance	Upland	Lowland	Maritime	Total
OUTSTANDING	3	6	12	21
CONSIDERABLE	6	8	6	20
NOTABLE	4	18	4	26
SOME	5	42	2	49
Total	18	74	24	116

Of the 24 Maritime Natural Areas, twelve are of outstanding ornithological significance and six are of considerable significance. This re-emphasises the crucial role of coastal habitats in the conservation of populations of key bird species within England. This not only reflects the importance of England's estuaries and other coastal habitats for wintering waterfowl and breeding seabirds, but also the populations of rare and vulnerable breeding species supported by freshwater wetlands closely associated with the coast.

In contrast, well over one half of the Lowland Natural Areas (42 out of 74) are of only some ornithological significance, with an additional 18 of notable significance. The Lowland Natural Areas of outstanding (6) or considerable (8) significance contained either extensive blocks or many fragments of semi-natural habitats (usually lowland heath or wetlands), or one or more exceptional bird sites. For example, the Breckland (29), Broadland (31), New Forest (50), Dorset Heaths (52) and Somerset Levels and Moors (67) Natural Areas retain extensive areas of semi-natural habitats and are all of outstanding ornithological significance. In contrast, the outstanding ornithological significance the Fenland (27) Natural Area relies on the exceptional bird interest of the Ouse and Nene Washes rather than on the Natural Area as a whole. This is also true, to a large extent, of Lowland Natural Areas of notable or some ornithological significance. Their interest is often dependent upon the remnants of formerly more extensive semi-natural habitats, or on man-made wetland complexes (particularly reservoirs and flooded gravel pits), rather than being characteristic of the interest of the Natural Area as a whole. Whilst there are notable exceptions, such as Natural Areas which support important populations of key farmland birds (eg stone curlew and cirl bunting), this suggests that many Lowland Natural Areas are currently of rather limited significance for conserving populations of key bird species, outside of their special sites.

The Upland Natural Areas exhibit a more balanced distribution between the significance categories, with one half rated as either considerable (6 out of 18) or outstanding (3) ornithological significance. This confirms the importance of the English uplands for populations of key bird species and, in particular, the outstanding significance of the North Pennines (3), Yorkshire Dales (7) and Southern Pennines (12) Natural Areas.

3.2 Key issues

Table 2. Summary of the key issues affecting birds within England's Natural Areas

KEY ISSUE	Upland	Lowland	Maritime	Total
Lack/inappropriate management of habitats	6	63	-	69
Disturbance	13	29	24	66
Land use change/development	6	36	17	59
Habitat creation	-	44	-	44
Water quality	5	14	18	37
Intensification of agriculture	18	13	-	31
Implementation of ESAs	10	12	1	23
Hydrological threats to wetlands	-	19	-	19
Relative sea level rise/coastal defence	-	5	11	16
Commercial exploitation of marine organisms	-	-	16	16
Mineral extraction	-	7	7	14
Persecution	9	3	-	12
Predation	2	-	5	7

Table 2 summarises the key issues affecting birds in England's Natural Areas. It is apparent that the management of bird habitats and the threat to them from changes in land use and development continue to be the main issues across most Natural Areas. For example, the lack of or inappropriate management of semi-natural habitats is a key issue in 63 of the 74 Lowland Natural Areas, with hydrological threats to wetlands identified in 19. Similarly, the threat to coastal habitats from development is identified in 17 of the 24 Maritime Natural Areas, and the intensification of agricultural practices is, not surprisingly, an issue in all Upland Natural Areas. It is worrying too, that the persecution of raptors is identified as a key issue in half (9) of the Upland Natural Areas.

Whilst there are few surprises in the issues identified, it is interesting to note the high profile of disturbance, mostly from recreation but also from commercial and industrial activities, across many Natural Areas. It is identified as a key issue in all Maritime and 13 out of 18 Upland Natural Areas, as well as a lower proportion of Lowland Natural Areas (29 out of 74). Analysis of the profiles confirms that recreational disturbance continues to be a key issue in those Lowland Natural Areas that support significant populations of wintering waterbirds residing on reservoirs and flooded gravel pits.

Whilst water quality is an issue which affects birds in all types of Natural Area, it is particularly so on the coast, being identified in 18 of the 24 Maritime Natural Areas. Predation of the eggs or young of rare or vulnerable bird species (particularly seabirds and waders) also seems to be mainly an issue on the coast and, to a lesser extent, in the uplands. The commercial exploitation of marine organisms is identified in 16 Maritime Natural Areas.

Whilst most of the key issues identified concern threats to England's birds, a number clearly offer opportunities for enhancing populations. For example, habitat creation on farmland (eg through the appropriate use of the options for set-aside land) is identified in 44 of the 74 Lowland Natural Areas, with the opportunities arising from mineral extraction identified in seven. Implementation of Environmentally Sensitive Areas (ESAs) is clearly a major issue affecting bird populations in the English uplands, being identified in 10 of the 18 Natural Areas (as well as 12 in the Lowlands). Two of the three Upland Natural Areas of outstanding significance and three of the six of considerable significance have identified ESAs as a key issue.

Relative sea-level rise poses both threats and opportunities to the bird populations in a number of Maritime Natural Areas (11 out of 24) as well as several in the Lowlands abutting the coast (5). In areas where important coastal habitats, including freshwater wetlands, are unable to retreat fully due to the terrain or hard sea defences, coastal bird populations are obviously threatened due to habitat loss, unless replacement areas can be created as compensation elsewhere within the coastal management unit. However, in areas where intensively managed farmland abuts coastal defences, there may be great opportunities for the creation of saltmarsh, grazing marsh, reedbeds and other key bird habitats should the coastline undergo managed retreat.

A number of key issues affecting birds are not shown in Table 2. Key issues identified in more than one Upland Natural Area include bracken control (4), lack of clear management objectives (4), burning (2) and woodland management (2). Those identified in more than one Lowland Natural Area include declines in farmland birds (8), wildfowl-farmer conflicts (4),

scrub 'bashing' (4), species protection/management (4), opportunities for 'showing birds to people' (2) and afforestation (2). Finally, the key issues identified in more than one Maritime Natural Area include barrage/estuary crossings (7), disposal of dredgings (6), fossil fuel exploitation (4), cord grass invasion (2) and SPA designation (2).

Whilst the results of this analysis confirmed our expectations of the key issues affecting birds within England's Natural Areas, they have obvious implications for the work of English Nature and, in particular, the 'Natural Areas' Specialist Support Teams. We will be discussing the results in detail with each of these teams.

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