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## 1.1 Definition of the term upland

The distinction between upland and lowland habitats in England is often blurred with no precise dividing line between the two. The 250 m contour is the most commonly used cut-off between upland and lowland, but in reality this 'line' does not exist, and the two merge through a broad band of transitional vegetation and land management. Further complications arise with this means of rigid definition as one travels farther north and west in England, with 'upland' vegetation, species and land-use occurring at much lower levels in response to the harsher environment.

To use a precise altitudinal definition is therefore both inappropriate and constraining for a management handbook, particularly so as the land management systems in the uplands do not use high land in isolation; the management of the higher land is always integrated with the activities on the adjacent lower ground. In this handbook we have used the term 'upland' to refer to those Natural Areas (see 1.2) of England which fall within the Less Favoured Areas (LFA) boundary and are upland in character. By this we mean land from the valley bottoms with its streams and rivers, hay meadows and pastures right up to the mountain tops, incorporating the in-bye grassland, the unenclosed moor with its heaths and bogs along the way.

Natural Areas have been identified by English Nature and are parts of the country with similar types of wildlife and other natural features. In many cases they also share similar landscapes. Their boundaries do not follow administrative boundaries but are defined by their wildlife and natural features, their land use and human history. Their distinctive features have been described and long-term objectives have been identified which provide direction and focus for action to maintain or restore our natural heritage. Natural Areas provide a framework for much of English Nature's work and are the basis of our advice to others.

LFAs were introduced in 1975 (see 2.8.1) to 'ensure the continuation of farming, thereby maintaining a minimum population level or conserving the countryside' in recognition of the difficult farming conditions (such as low soil fertility, high rainfall, short growing seasons and steep slopes) and, in some cases, geographical remoteness. Although originally they were primarily a socio-economic designation, they closely relate to the extent of upland habitats in England.

## 1.2 Location and extent of the English uplands

Precise information on the distribution and extent of upland landscapes is not available because of the variety of ways in which the uplands have been defined, surveyed and classified (Manley & Smith 1994). However, in one study the Institute of Terrestrial Ecology (ITE), now the Centre for Ecology and Hydrology, developed a land classification system which identified 13 upland land classes. Estimated figures for these land classes put the total area of uplands (including forest and agricultural grass) at 39% of Britain, and the area of upland vegetation (bog, moorland and grassland) at 23% of Britain (Bunce & Barr 1988). Of the upland vegetation, 32% was estimated to comprise bog, 37% moorland and 31% grassland. In England the LFAs (see 2.8.1) encompass around 2.2 million ha and this correlates closely with the area of land predicted as being upland by the ITE land classification.

A more recent survey of the British countryside was carried out in 1990 under the title of the *Countryside Survey 1990* (Barr *et al* 1993). This was the first survey to be based on the integration of information from satellite imagery and traditional field survey methods. It reported that semi-natural vegetation covered over 73% of upland landscapes in GB. In England, open and dense scrub covered 25.6% of upland habitats (1,112 km<sup>2</sup>), heath/moor grass 34.9% (1,515 km<sup>2</sup>), bog 2.7% (119 km<sup>2</sup>), bracken 5.6% (245 km<sup>2</sup>), deciduous/mixed woodland 0.8% (37 km<sup>2</sup>) and coniferous woodland 8.1% (353 km<sup>2</sup>). *Countryside 2000* (Haines-Young *et al*) has since been published which provides more up to date information on the extent of upland habitats in England.

Natural Areas within the LFA with upland characteristics are listed below and are shown in Figure 1.1 (English Nature 1993b, 1994c; English Nature 1996c; English Nature & Countryside Commission 1996):

- |                                |   |
|--------------------------------|---|
| 2. Border Uplands              | 29. South West Peak                       |
| 4. North Pennines              | 30. White Peak                            |
| 8. Yorkshire Dales             | 41. Oswestry Uplands                      |
| 10. Cumbria Fells and Dales    | 42. Shropshire Hills                      |
| 12. Forest of Bowland          | 58. Clun & North West Herefordshire Hills |
| 14. Southern Pennines          | 60. Black Mountains and Golden Valley     |
| 15. Pennine Dales Fringe       | 87. Exmoor and the Quantocks              |
| 17. North York Moors and Hills | 92. Dartmoor                              |
| 26. Dark Peak                  | 94. Bodmin Moor                           |

### 1.3 Intended audience for the handbook

This handbook is written for people who advise farmers and other land managers in upland areas about the best management for wildlife and other natural features. It is also for people who actively manage upland areas and wish to accommodate or encourage wildlife and other natural features. It is equally applicable to all land in the uplands, not just nature reserves, and should be particularly helpful in the implementation of schemes such as Environmentally Sensitive Areas, the Countryside Stewardship scheme and other agri-environment measures. In addition, the handbook should be useful for training and educational purposes, such as agricultural and ecological courses within colleges.

It is intended for readers with some understanding of basic ecological processes and practical land management. Information on standard agricultural practices is included to assist those readers with limited agricultural training. In due course English Nature intends to produce management advice derived from the handbook in forms suitable for other audiences.

### 1.4 Aims of the handbook

The overall aim of *The upland management handbook* is to provide advice on the management of the English uplands for wildlife and other natural features. In pursuing this aim the handbook:

- ! identifies the features of nature conservation significance in the uplands of England;
- ! outlines the distribution of these features in England;
- ! explains the habitat and management requirements of these features;

- ! presents management options and guidelines for land with these features;
- ! recognises the need to integrate management for nature conservation with other land uses;
- ! assists in implementing the UK Biodiversity Action Plan;
- ! identifies sources of further information.

## **1.5 Wildlife and other natural features covered by the handbook**

This handbook covers habitats, species and earth heritage features within the uplands of England, as defined above. These can be divided into the following broad categories:

- ! geological and geomorphological interests (Chapter 4 Earth heritage features);
- ! montane communities (Chapter 5 Montane areas);
- ! heaths (Chapter 6 Moorland);
- ! mires (Chapter 6 Moorland and Chapter 7 Meadows & enclosed pasture);
- ! grasslands (Chapter 6 Moorland and Chapter 7 Meadows and enclosed pasture);
- ! woodland and scrub (Chapter 8);
- ! freshwater habitats (Chapter 9);
- ! rock communities (Chapter 10);
- ! the constituent species of all these habitats (Chapters 5-10).

Many of the features covered are not exclusive to the uplands and also occur in Natural Areas which are more lowland in character and are not covered by this handbook.

Not all the habitats, species and earth heritage features of the uplands are of equal conservation value. This handbook concentrates on those features of recognised nature conservation importance.

While this handbook concentrates on the provision of information on the management of land with existing nature conservation interest, enhancement of areas of lesser interest is also covered. The handbook, however, does not cover the re-creation of features of wildlife interest, nor does it discuss survey and monitoring techniques, because these subjects warrant, and indeed have, publications in their own right.

## **1.6 How to use the handbook**

The users of this handbook are likely to vary, from individuals already knowledgeable in this subject seeking small amounts of specialised information, to those wishing to find out more general information about the English uplands and their management for wildlife. Consequently, there are different ways in which to use this handbook. One option is to look through the contents list for the subjects covered, another is to look through the relevant chapter, or the reader can consult the index for key words. For example, moorland management is covered in Chapter 6 Moorland and grassland management in Chapter 7 Meadows and enclosed pasture. Information on grazing and burning is included in several chapters, such as Chapter 6 Moorland and Chapter 7 Meadows and enclosed pasture. Information on particular species, for example golden plover or bracken, is included in the most appropriate chapter for the species in question and can be found by consulting the index. A broad outline of the handbook structure and contents follows.

The handbook is divided into 10 main chapters, followed by a bibliography and further reading list, a glossary and 10 information notes of additional technical information. The second chapter describes the wildlife interest and land use of the English uplands. Chapter 3 describes the approaches to decision making. The handbook is then divided into chapters which cover the major earth heritage features and wildlife habitats of upland areas. These include montane areas, unenclosed moorland, enclosed meadows and pasture, woodland and scrub, freshwater habitats and rocky areas including crags, scree and limestone pavement. These chapters identify the habitats and species of nature conservation significance, together with management options, techniques and guidelines for land supporting these interests.

## **1.7 Sources of information for the handbook**

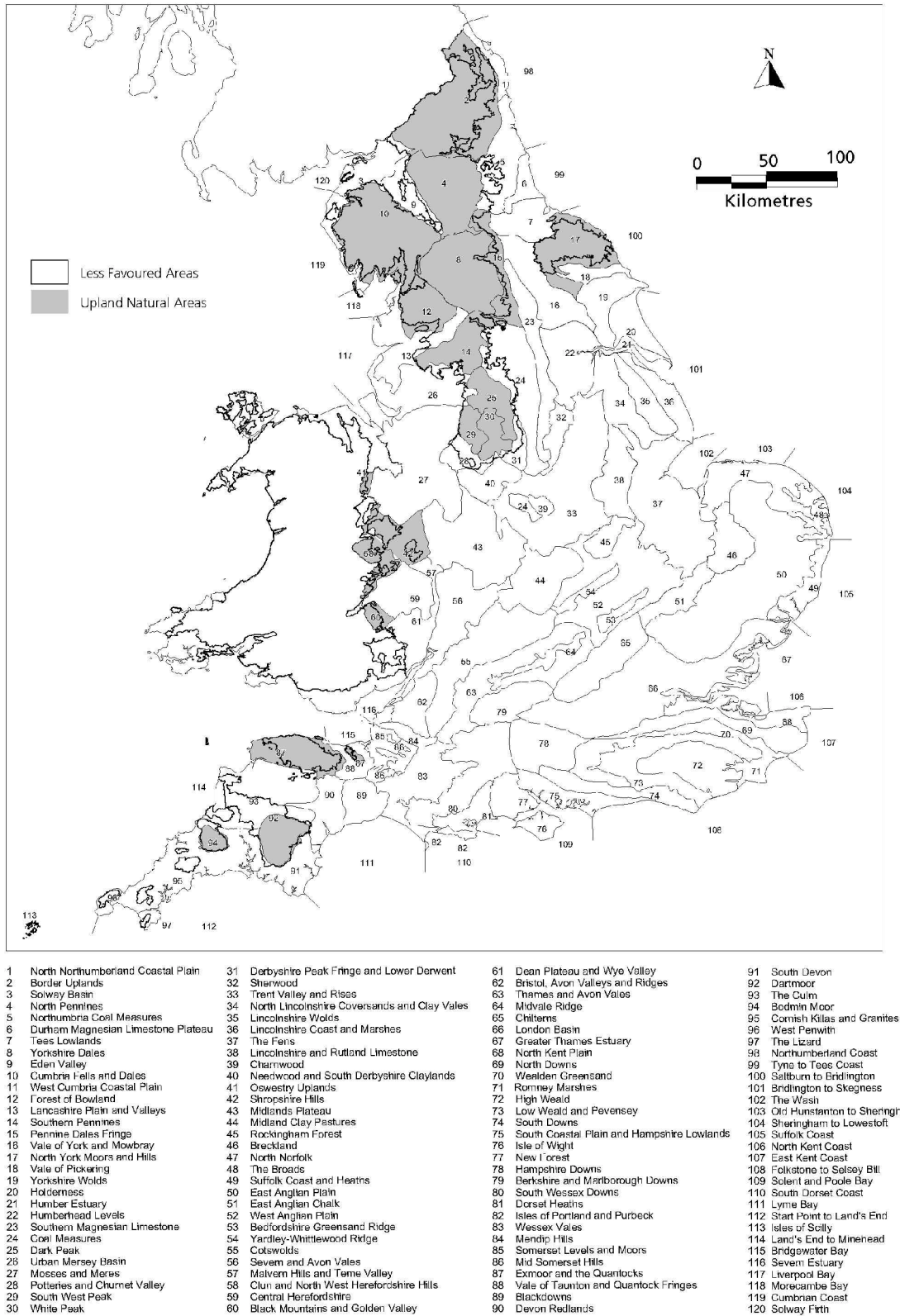
The information contained in this handbook comes from published sources where they exist, as well as from unpublished sources and from people with particular species knowledge or practical experience of nature conservation in the uplands of Britain. Where information is derived from published material, the appropriate references are cited in the text. However, there are many areas where our knowledge is scant or absent, for example the distribution and ecology of many upland invertebrates. There are also many aspects of nature conservation management in the uplands about which little has been published, although a great deal of knowledge and expertise exists. Therefore, much of the information in the handbook is not from published sources but represents the best available knowledge from experienced nature conservation practitioners.

The National Vegetation Classification (NVC) provides a systematic classification of British vegetation and is used in this handbook.

## **1.8 How the handbook will be kept up to date, and feedback**

It is intended that sections of the handbook will be updated as further experience and information is acquired. Management recommendations are likely to evolve with time as practical experience, monitoring and research identify more effective management techniques. We welcome suggestions and information which will assist us with the updating process. Please complete and return the enclosed feedback form to the English Nature Uplands Team in Peterborough.

Figure 1.1 Upland Natural Areas in England



Reproduced from an Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office. Crown copyright. Licence no. GD272299. Geographic Information Unit, English Nature January 2001.

Figure 1.1. Upland Natural Areas and the Less Favoured Area boundary in England

## ***The upland management handbook feedback form***

Name .....

Position .....

Name of organisation .....

Contact address .....

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Post Code .....

Telephone ..... E-mail .....

If you would like to receive information on revisions of *The upland management handbook* as they are produced, please tick here

1. Are there any areas not covered or not covered in enough detail in the handbook?

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2. Do you have any comments with respect to the format and style of the handbook, ie is it user friendly?

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3. Please tell us or send us copies of any further information which you think should be included in future versions.

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Please send completed forms to:  
English Nature, Uplands Team, Northminster House, Peterborough, PE1 1UA