

APPENDIX 7.2

RATCLIFFE CRITERIA

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Introduction

- 7.1 It is important to appreciate that the level of protection given to a particular species or habitat through national or international legislation does not necessarily relate to the evaluated level of importance of that receptor to nature conservation. Whilst species may be widespread or common nationally, but of scarce occurrence in a particular county (for example, it might be at the limit of its geographical range), a species may also be considered to be rare nationally or internationally but be abundant within particular areas. The Ratcliffe Criteria (Ratcliffe, 1977) provide a long established and widely accepted method of determining the nature conservation value of a particular site and have been used to aid the evaluation of the habitats associated with the Scheme. The attributes of the Ratcliffe Criteria are described below.

Fragility

- 7.2 Some habitats, communities and species are particularly sensitive to environmental change. Such habitats tend to be rare, having been subject to past fragmentation. In some cases, fragile areas may be vulnerable to change distant from the site itself. For this reason, activities at sites distant from a fragile habitat should be considered for their potential damaging effects e.g. drainage, stormwater run-off and nutrient build-up (eutrophication). One example of a fragile site would be a marsh or bog, where the maintenance of the ecosystem would be dependent on the continuation of a particular water level and quality.

Rarity

- 7.3 Rarity is one of the prime reasons for the establishment of protected areas. The threat of loss of a particular habitat or species lends value to the organism and the site it occupies. Rarity is also a matter of definition. A species or habitat can be internationally rare, but relatively common locally or nationally. Likewise, a nationally rare species can in some circumstances be more common at international level.
- 7.4 Rare species can be distributed in a number of ways. They can either be sparsely distributed within widely separated sites, or they can be widespread with a large geographical range, but locally infrequent. In addition some species are rare, but in the few locations where they occur, they may be found in large numbers. Whether a species has rarity value therefore depends upon the context.

Size (Area or Extent)

- 7.5 Size plays a major part in determining the ecological interest of an area. It is also a relative concept. For example, a 30-acre woodland or a one-acre meadow could have a similar degree of nature conservation importance. An area of moorland or upland grassland would normally need to be more extensive to be of similar importance. This is in part due to the differing range requirements of species supported by these habitats.
- 7.6 A reduction in size of an area can reduce its nature conservation value considerably. An example of this is the Dorset heaths where, over a period of time, the heathland has been fragmented into increasingly smaller areas. At some point a size is reached below which the nature conservation value of a fragment is lost because the range requirements of important species are no longer met. It is also worth noting that a site which has been divided in some way will not normally be able to support the same number and range of species as it did before fragmentation occurred.

Diversity

- 7.7 The diversity of a site can be expressed in three ways:
- as diversity of species (where the number and variety of species is great);
 - as diversity of habitats (e.g. Thursley Common, Surrey, which contains heath, woodland, grassland and bog); and
 - as diversity of numbers (where a habitat is seen to support large numbers of one or more individual species).
- 7.8 The variety in number of both communities and species depends largely on the diversity of habitat. Diversity is also related to area and the number of both plant and animal species shows a marked tendency to increase with the size of the area.
- 7.9 Both low and high diversity can have a high nature conservation value under different circumstances. High species diversity would be important for areas such as herb-rich grassland or ancient woodland, whereas low diversity would be an important attribute for moorland, heathland or reedbeds. It is not the case that high diversity immediately equates to a high value.

Potential Value

- 7.10 Some sites have the potential to provide greater nature conservation interest than they presently display. Examples of such sites, include abandoned quarries, mine workings, spoil heaps, flooded gravel pits and low intensity agricultural land.

Position with the Ecological/ Geographical Unit

- 7.11 A site which is near or adjacent to other similar habitats may have a higher nature conservation value than an isolated one because the range of fauna can be greater. This is particularly so if the area is joined to adjacent sites by linear features which can act as wildlife corridors (e.g. railway lines, hedgerows, verges, and riverbanks).

Typicalness

- 7.12 When a site is viewed in the context of the local or regional area, certain habitats assume importance because they are good examples of what is, or has historically been, typical of the area. As a response to post-war habitat loss in the UK, efforts have been made to safeguard representative areas to prevent formerly common habitats from becoming fragmented.

Recorded History

- 7.13 The history of the site is important, especially where it is to be used for research and education. A well documented past with detailed biological and/or natural history records of species and habitat change, presents a valuable insight into the ecology of the site. Such information also provides a basis for current and future management built upon knowledge of the past.

Naturalness

- 7.14 Naturalness is a measure of the degree to which an area has been modified by human activity. In England, unmodified habitats are typically extremely rare, being restricted to remote, inaccessible areas such as cliffs, and some saltmarshes. The bulk of England's land surface is semi-natural, improved or artificial. Naturalness is ascertained by site surveys, which detail the species present (looking for key indicator species). In this way, an area can be valued according to the degree to which it represents a former natural landscape, if appropriate.

Intrinsic Appeal

- 7.15 This refers to value in a popular rather than ecological sense. For example, the knowledge of the distribution and numbers of popular groups of species, such as birds, is greater than for obscure groups, such as liverworts. This highlights the fact that value is also derived from society's preferences for landscape and other aesthetic features, and is not just based on ecological considerations.