Guidelines for the Selection of Biological SSSIs

Part 2: Detailed Guidelines for Habitats and Species Groups

Chapter 17 Birds

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Cover note

This chapter updates and replaces the previous Birds SSSI Selection Guidelines chapter (Nature Conservancy Council 1989). It was prepared by Allan Drewitt (Natural England), Sian Whitehead (Natural Resources Wales), and Simon Cohen (Scottish Natural Heritage), and provides detailed guidance for use in selecting bird sites throughout Great Britain to recommend for notification as SSSIs. It should be used in conjunction with Part 1 of the SSSI Selection Guidelines, as published in 2013 (Bainbridge *et al* 2013), which detail the overarching rationale, operational approach and criteria for selection of SSSIs.

The main changes from the previous version of the chapter are:

- the addition of international site feature requirements to ensure SSSIs include all coincident international site features, regardless of importance at SSSI level;
- the addition of new text relating to inclusion of artificial habitats, consistent with SPA guidelines;
- the addition of new text defining regular use, consistent with Ramsar definition;
- the deletion of section 3.6.2 relating to the Moorland Bird Index;
- the deletion of section 3.7 Variety of species;
- the deletion of Appendix A with some text moved into the main guidance;
- the deletion of Appendix B and associated Table 27, to be replaced by updated details on the JNCC website;
- Appendix C retained (now Annex A);
- the deletion of Appendix D (out of date).

This chapter has been subjected to appropriate levels of evidence quality assurance. It is compliant with the JNCC Evidence Quality Assurance Policy 2014, and has been subjected to external peer review by Niall Burton, Head of Wetland and Marine Research, British Trust for Ornithology.

1 Introduction

The aim of SSSI selection procedures for birds is similar to that for other wildlife, but the high degree of mobility of birds gives rise to a rather different set of problems. Even within the breeding season, individual birds may depend on sites separated by considerable distances and consisting of very different habitats. This wide use of different localities may occur within a single day, for example in the case of widely separated nesting and foraging areas or foraging and roosting areas, or may involve progressive changes during the season. Outside the breeding season many bird species are even more mobile, with migratory species in particular dependent on a network of locations between breeding and wintering areas. Many of these locations are used regularly and each provides resources essential for the wellbeing of the population. Such areas include those used for pre- and post-breeding gatherings, migration staging posts, moulting and different stages of the winter.

The movements of some species in winter may occur across Britain, and between continental Europe and Britain, depending on the severity of weather conditions and the site-fidelity of species. This means that different parts of Britain, or locations on different sides of the North Sea, may be more or less important for non-breeding waterbirds both within and between years. Many species use alternative wintering sites, although some may be used only occasionally, for example severe weather refuges. Consequently, there is a need to protect sites used by birds in particular conditions and to allow for this mobility (as covered by section 3.4). There is also a need to maintain the level of protection in response to changes in bird distribution, for example as a result of future predicted changes in climate, by reviewing the adequacy of the network of sites and taking action to protect new locations of importance.

The migratory behaviour of birds, and the dependence of breeding and non-breeding populations on locations in different countries, requires the protection of an international network of sites across their biogeographic range. This need has caused birds to become the focus for several international governmental conservation treaties (see section 2).

The international conventions and the EU Birds Directive tend to base protected area selection on estimates of population size and regularity of use. The selection criteria used here are also based mainly on population sizes, for which there are often good data. This is an example of the *critical standard principle*, one of the two fundamental guiding principles for SSSI site selection. In this case, the critical standard of nature conservation importance is a number of birds equivalent to 1% of the national or biogeographic population. The other guiding principle, the *exemplary site principle*, aims to achieve adequate representation of the range of variation of habitats and associated species for each Area of Search. More information on these principles and their application is given in sections 4 and 5 in Bainbridge *et al* (2013).

Site selection based on the critical standard principle underlies the criteria given in sections 3.1 to 3.4. The threshold of 1% of a population in particular has gained wide acceptance from conservationists and governments because it selects the locations of importance to those species whose specialised requirements cause them to concentrate into relatively few sites. This threshold level also provides for protection for rare species in a manner roughly equivalent to that used for other taxa.

However, some species occur in concentrations, any one of which tends to hold less than 1% of the British population, whilst others are adapted to dispersed breeding. Sections 3.5 to 3.9 cater for these species by applying the exemplary site principle. Section 3.5 in particular provides extra coverage for seabirds, for which Britain has a particular international responsibility owing to its world importance for the breeding populations of many species.

Relatively dispersed but rapidly declining species and those restricted to particularly threatened and fragmented habitats require special attention. It is likely that habitat protection and management conferred by SSSI notification will make an increasingly significant contribution to the conservation of these species, especially if further declines continue in the wider countryside. These species are catered for in sections 3.6 and 3.8 which relate to rare and unusual features and exceptionally diverse breeding bird assemblages respectively.

In most species which occur in breeding concentrations, these concentrations also produce most of the young. However, there are exceptions, for example more young shelducks are produced where the species breeds in a dispersed pattern than at more colonial sites. The criteria in section 3.7 allow for such information, if available, to be used for site selection purposes.

In the case of many habitats, particularly fragmented and relatively discrete lowland habitats or wetlands, it is often relatively simple to delimit a site. This may not be the case for more continuous habitats, particularly in the uplands. For this reason, section 3.9 uses density of breeding birds. In such situations, if boundaries are drawn too widely, average densities within the site will be lower than will be the case if more restricted boundaries are used.

Mosaics of habitats can be very important for birds. Habitat mosaics or mixed habitats present particular problems for site selection which are discussed elsewhere in the SSSI Selection Guidelines (see section 9 in Bainbridge *et al* 2013 and section 3.8 below).

These guidelines cannot cover all eventualities and any queries arising from their application should be referred to the relevant specialist agency ornithologists.

2 International commitments

Certain categories of sites of importance to birds qualify for protection under the EU Birds Directive or the Ramsar Convention or both. There is information on the rationale and selection guidelines for such sites (JNCC 1999, Ramsar 2012, Bainbridge *et al* 2013).

Any site that meets the ornithological criteria of the Ramsar Convention, notably the quantitative criteria for waterbirds, will also fall within these selection guidelines for birds, particularly the criteria in sections 3.1 and 3.3. Offshore marine areas are an exception because they are not normally notified as SSSIs (see section 8.10 in Bainbridge *et al* 2013).

The EU Birds Directive requires special conservation measures concerning the habitat of rare or vulnerable species (listed in its Annex I) and of regularly occurring migratory species sufficient to ensure the maintenance of their distributions. These measures include the classification of Special Protection Areas (SPA) where appropriate. The wetland aspects of the SPA Selection Guidelines have been deliberately designed to parallel the Ramsar Convention requirements. The criteria in sections 3.1 to 3.7 meet the requirements of the EU Birds Directive including the requirements of Annex I species (which are those that are particularly scarce or vulnerable).

3 Selection requirements

For more guidance on site evaluation and selection see section 5 in Bainbridge *et al* (2013).

3.1 International site features

As stated above, these selection guidelines for birds complement the Ramsar Convention and UK SPA Selection Guidelines (JNCC 1999, Stroud *et al* 2001) so that locations supporting international features will also qualify for SSSI selection for the same features. The SPA Stage 1 selection guidelines include locations which regularly support:

(i)   1% or more of the GB population of a species listed in Annex I of the EU Birds Directive in any season;

(ii)   1% or more of the biogeographical population of a regularly occurring migratory species (other than those listed in Annex I of the EU Birds Directive) in any season;

(iii) over 20,000 waterbirds (as defined by the Ramsar Convention) or 20,000 seabirds in any season;

(iv) an area which meets the requirements of one or more of the SPA Stage 2 selection guidelines in any season where the application of other Stage 1 selection guidelines for a species does not identify an adequate suite of sites.

For the purposes of SPA classification an assemblage of 20,000 individual birds must include more than one species within the relevant season. This does not apply for Ramsar Sites.

The SPA Stage 2 selection guidelines comprises assessment of population size and density, species range, breeding success, history of occupancy, multi-species areas, naturalness and severe weather refuges (JNCC 1999, Stroud *et al* 2001).

Some of the larger international sites include two or more SSSIs. In such cases, although each SSSI will contribute to the international importance, individual sites may not support enough birds to qualify for SSSI selection in isolation. It is important that these SSSIs are notified for all the coincident international site features where they are present, regardless of their importance at the SSSI level. This is necessary to protect Ramsar and SPA features with regard to land management changes and operations likely to damage features of special interest. This approach accords with section 6.3 in Bainbridge *et al* (2013) in relation to compound SPA. Ultimately, it would be most effective if all of the component SSSI supporting a SPA were amalgamated into a single SSSI.

3.2 Localities used by aggregations of breeding species

Localities which regularly support 1% or more of the total British breeding population of any native species and seabird colonies of over 10,000 breeding pairs will qualify for SSSI selection. In practice, this criterion often covers colonial species (for example seabirds and herons and egrets), semi-colonial species (for example some grebes, ducks and waders) and rare species. Current estimates of British breeding populations are given in Musgrove *et al* (2013). In view of the mobility of some birds this criterion applies to sites used for other essential activities by breeding birds, for example display sites of lekking species and feeding areas. Any site considered should normally be large enough to include all the areas required by the individuals concerned. This criterion will rarely be appropriate for single pairs of wide-ranging species and the selection of sites for rapidly colonising species may not be appropriate until populations stabilise.

3.3 Localities used by aggregations of non-breeding birds

Localities which regularly support 1% or more of the total British non-breeding population of any native species in any season and non-breeding waterbird assemblages of over 20,000 individuals will qualify for SSSI selection. The main use of this criterion will be for wintering populations, but, where data are available, it can be applied at other seasons (for example for pre- and post-breeding gatherings, non-breeding summer flocks, moulting flocks and passage concentrations). Current estimates for non-breeding populations (and 1% of GB populations) are given in Musgrove (*et al* 2013). Use of this criterion for passage rather than wintering populations requires particular care, as the numbers recorded on sites and nationally during these times will underestimate true populations due to turnover of individuals through sites.

3.4 Localities used by birds in particular conditions

Localities which contain 1% or more of the total British non-breeding population regularly in definable conditions, even if not in most years, also qualify for SSSI selection. This category might cover areas used consistently by large numbers of birds in severe weather. It does not apply to cases in which large numbers of birds occur without attributable cause, nor to occurrences of migrants driven off course by adverse weather.

3.5 Smaller isolated colonies of seabirds and other birds

The largest colony of a colonial seabird species, herons or sand martins in an Area of Search (see section 4.13 in Bainbridge *et al* 2013) will qualify for SSSI selection. Britain's seabird populations are of special international importance and section 3.2 is therefore supported by this additional category, which allows fuller geographical cover for colonial birds. Colonies must hold more than 10 pairs of the species concerned to qualify.

3.6 Rare species and features

Consideration should also be given to the selection of regularly used sites with unique or unusual features and rare and declining species. Unusual features include isolated colonies outside the main range of a species, inland cormorant colonies, and cliff-nesting house and sand martins. Locations with high numbers and/or densities of rapidly declining and localised bird species, which are included on (i) the country-level lists of species of principal importance/highest priority for the conservation of biological diversity (as defined by the lists established under Sections 41/42 of the Natural Environment and Rural Communities Act 2006 (England/ Wales) and Section 2(4) of The Nature Conservation (Scotland) Act 2004), or (ii) Red-listed in the UK Birds of Conservation Concern (Eaton *et al* 2009) and which are poorly covered by SSSIs, should also be considered for selection. Similarly, in the case of breeding waders on lowland wet grassland, sites within the remaining core areas for these species should be selected.

3.7 Sites with high breeding productivity

In cases where relevant information is available, sites where breeding productivity is consistently higher than at other sites in Britain, which meet the more usual criteria based on population size or density, may be selected in consultation with specialist ornithologists.

3.8 Assemblages of breeding bird species

Localities which support an especially good range of bird species characteristic of a particular habitat, as defined by an index value, will qualify for SSSI selection. Different habitats support different numbers of bird species, and there are geographical differences within the same habitat type. Therefore, the index value denoting a breeding assemblage of special quality differs between habitats and may differ geographically in order to maintain the

range of the birds concerned. Refer to Annex 1 for use of species lists and index values, and for the approach to sites consisting of mixed habitats.

3.9 Upland areas

Most sites of natural or semi-natural habitats in Britain tend to be well defined either because of the natural delimitation of the habitat or because of habitat fragmentation by man. This is not the case for many upland areas, and some of the above criteria may be difficult to apply here (see also section 8.8 in Bainbridge *et al* 2013). Defining boundaries presents particular problems and it is thus even more desirable for this habitat than for others to include, where possible, considerations of breeding density and adequate population samples, partly in order to assist the placing of limits on the areas of special interest. (If boundaries are drawn too widely, average densities will be lower.) Because the nature of upland habitats varies greatly through the country, surveys are necessary to assess the range of densities observed in the region as well as to identify areas of importance. Breeding waders are the most practicable species on which to base assessments of many upland habitats for birds by identifying sites of relatively high densities. Sites are of special quality if the mean density of a key indicator species exceeds by 50% the mean upland breeding density for that species in that part of the country.

3.10 Artificial habitats

The approach to selecting bird SSSIs is based on the presence of important aggregations or assemblages of birds rather than any inherent qualities of the supporting habitats. This does not mean that habitat quality is unimportant, indeed many aggregations and breeding bird assemblages are associated with high quality habitats. Other things being equal, it is clearly preferable to notify semi-natural and unmodified habitats for birds rather than those which depend on costly and potentially unsustainable interventions such as flood defence and extensive vegetation management. This is important because less modified habitats are often more able to adapt to the effects of climate change (for example coastal habitats, as long as they are allowed to migrate landward in response to changing sea-levels). It is also important because selecting habitats where a high density of birds depends on man-made modification, such as flood protection or moorland burning, may result in conflicting objectives when action is taken to restore such habitats to a more natural state.

In reality, many important aggregations and assemblages of bird species depend on more-or-less modified habitats requiring some form of long-term human intervention. This includes birds breeding on lowland wet grassland, open heathland habitats and forestry plantations and non-breeding birds on reservoirs, gravel pits and farmland. Given the paucity or even absence of more natural alternatives in modern Britain, it is inevitable that SSSIs for birds will be dominated by such habitats. Although this situation is unlikely to change in the foreseeable future, it is necessary that these selection guidelines for birds recognise the value of selecting near- or semi-natural habitats of importance to birds wherever they provide an alternative of equivalent importance to more modified habitats. In cases where notification of artificially maintained habitats is necessary, then there should be a preference for locations where the bird interest is compatible with future restoration to more natural processes.

The inclusion of cropped habitats is potentially problematic as, in the case of foraging geese and swans in particular, such an approach could result in the notification of very large areas of intensively managed farmland. Farmland is essential to many species, at least for part of their daily requirements (for example roost sites for estuarine and coastal waders). An assessment of the importance of a cropped habitat to a particular species should be undertaken on a site-by-site basis and should include the following considerations, which are

consistent with the approach developed for SPA (Stroud *et al* 2003, Baker and Stroud 2005, 2007):

- ecological importance to the selected species;
- species fidelity to particular locations;
- the proportion of birds (for each designated species feature) reliant on cropped areas;
- area of cropped habitat used;
- benefits of notification compared to alternative conservation measures such as implementation of agri-environment schemes over the same areas.

The inclusion of areas of farmland adjacent to coastal habitats, which may be of existing value to coastal waterbirds for roosting or foraging, will also help to increase the resilience of sites to the effects of climate change, allowing the landward migration of intertidal and cliff habitats in response to rising sea levels (see section 5 in Bainbridge *et al* 2013).

More information on the selection of artificial habitats, as well as other considerations relating to site boundaries and buffer land, is given in section 8 in Bainbridge *et al* (2013).

3.11 Regular use

It is usually important to establish that a site is regularly used by important numbers of birds, except in the cases of severe weather refuges where weather-dependent aggregations of large numbers may be less frequent. It is appropriate to apply the definition of 'regularly' used under the Ramsar Convention (see Ramsar 2012), which states that a wetland regularly supports a population of a given size if:

(a) *the requisite number of birds is known to have occurred in two thirds of the seasons for which adequate data are available, the total number of seasons being not less than three; or*

(b) *the mean of the maxima of those seasons in which the site is important, taken over at least five years, amounts to the required level (means based on three or four years may be quoted in provisional assessments only).*

In establishing long-term 'use' of a site by birds, natural variability in population levels should be considered especially in relation to the ecological needs of the populations present. Thus in some situations (for example, sites of importance as drought or cold weather refuges or temporary wetlands in semi-arid or arid areas - which may be quite variable in extent between years), the simple arithmetical average number of birds using a site over several years may not adequately reflect the true ecological importance of the site. In these instances, a site may be of crucial importance at certain times ('ecological bottlenecks'), but hold lesser numbers at other times. In such situations, there is a need for interpretation of data from an appropriate time period in order to ensure that the importance of sites is accurately assessed.

In some instances, however, for species occurring in very remote areas or which are particularly rare, or where there are particular constraints on the capacity to undertake surveys, areas may be considered suitable on the basis of fewer counts. For some countries or sites where there is very little information, single counts can help establish the relative importance of the site for a species.

4 References

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Annex 1. Breeding bird assemblages of different habitats

Lists of breeding bird assemblages of different habitats can be found below. Each species listed is given an index of abundance from 0 to 6, which refers to the current total number of breeding pairs in Britain as follows:

Index value	Population size (pairs)
0	>1 million
1	100,000 - 1,000,000
2	10,000 - 100,000
3	1,000 - 10,000
4	100 - 1,000
5	10 - 100
6	1 - 10

Where the population of a species falls on the border of two classes, an intermediate value may be given (for example 2.5).

The species list for each habitat is made up as follows. All species characteristic of the habitat and with indices of abundance of 4 to 6 (i.e. with a total British population less than 1,000 pairs) are included. Also included are more abundant species which are either primarily associated with this habitat or are associated with more than one habitat, some of which are particularly threatened by habitat change (for example drainage of wetlands or loss of heath or scrub). All species of index 0 (i.e. with more than 1 million pairs) are omitted from the lists.

The index value for a site is calculated by summing the indices of abundance for species breeding in it. A species may be included if it has been recorded as probably breeding in the majority of recent years for which information is available. Species regularly using a site for essential activities (such as feeding) while breeding may be included even if they nest outside the site. To qualify under section 3.8, the index value for a site should exceed the threshold value given for the relevant habitat.

The threshold values were derived as follows. For each habitat, the theoretical maximum score which could be obtained for those species with indices of 1 to 4 was calculated. Those species with scores of 5 and 6 were excluded, as these species with British populations of less than 100 pairs are generally very restricted in geographical distribution. In fact, this also applies to many species with an index of 3 or 4. Although species with indices of 5 and 6 are excluded in the calculation of site threshold values, any such species must be included in the calculation of a site index, as few, if any, will be present at any one site and inclusion allows the required added importance to be given to the sites used by these rarer species (such sites might also qualify under section 3.2). Even with these rare species included, it is most unlikely that the theoretical maximum score would be achieved at any site because species from all parts of Britain and all subdivisions of the general habitat category concerned are included in its calculation. For most habitats, a site reaching half the theoretical maximum as calculated above would be an especially good example of the breeding bird community. Thus this half-maximum value is the threshold given for each habitat.

The differences in distribution patterns shown by birds make the provision of national values difficult. For some habitats, different values are given for different parts of Britain to make some allowance for this. Even if a single threshold level is given, this may allow for the

absences of some species in some parts of the country. It is impracticable to make the very fine geographical divisions which biological purists might suggest. No list is provided for certain habitats (for example cliffs). In these cases, it is envisaged that sites selected on the basis of other criteria (for example see sections 3.2 or 3.5) should provide for adequate population coverage.

Mixed habitats

It is clearly impracticable to give lists for each possible combination of habitats within a site, although it is recognised that many bird species depend on a combination of habitats. Several approaches are possible:

(i)   if one (or more) of the composite habitats reaches the threshold value for that habitat, the whole site may be selected if the other habitats clearly form integral parts of the site;

(ii) if two habitats are included in one well-defined site, the indices for species which are on both habitat lists and have been recorded for the site should be double-counted; other species score in the usual way; for the site to qualify on this basis, its total score should exceed the qualifying threshold value for the two habitats combined (for example for a woodland and lowland scrub combination 39 + 14 = 53).

In all cases, local knowledge of the site and its context is essential.

Tables of breeding bird assemblage index values of different habitats – see above text for explanation

Sand-dunes and saltmarsh

Shelduck	2	Lesser Black-backed Gull	1
Eider	2	Common Gull	2
Red-breasted Merganser	3	Little Tern	3
Montagu's Harrier	5	Sandwich Tern	2
Little Egret	4	Common Tern	2.5
Oystercatcher	1	Arctic Tern	2
Ringed Plover	3	Roseate Tern	5
Lapwing	1	Cuckoo	2.5
Dunlin	2.5	Grasshopper Warbler	2
Black-tailed Godwit	5	Sedge Warbler	1
Curlew	2	Stonechat	2
Redshank	2	Wheatear	1
Black-headed Gull	1	Rock Pipit	2
Mediterranean Gull	4	Linnet	1
Herring Gull	1	Reed Bunting	1

Site threshold values
England: 27
Rest of Britain: 25

Lowland damp grassland

Mute Swan	3	Lapwing	1
Shelduck	2	Ruff	6
Gadwall	3.5	Snipe	2
Teal	3	Black-tailed Godwit	5
Pintail	5	Curlew	2
Garganey	5	Redshank	2
Shoveler	3.5	Cuckoo	2.5
Pochard	4	Grasshopper Warbler	2
Grey Heron	2	Sedge Warbler	1
Little Egret	4	Yellow Wagtail	2
Marsh Harrier	4	Reed Bunting	1
Corncrake	3		

Site threshold values
Wales and Scotland: 22
England: 24

Lowland open waters and their margins

Greylag Goose	2	Spotted Crake	5
Mute Swan	3	Crane	5
Shelduck	2	Avocet	3
Gadwall	3.5	Little Ringed Plover	3
Teal	3	Ringed Plover	3
Pintail	5	Snipe	2
Garganey	5	Redshank	2
Shoveler	3.5	Wood Sandpiper	5
Pochard	4	Red-necked Phalarope	5
Tufted Duck	2	Common Tern	2.5
Common Scoter	5	Cuckoo	2.5
Red-breasted Merganser	3	Kingfisher	3
Bittern	5	Bearded Tit	4
Little Egret	4	Willow Tit	3
Grey Heron	2	Cetti's Warbler	3
Little Grebe	3	Grasshopper Warbler	2
Great Crested Grebe	3	Savi's Warbler	6
Slavonian Grebe	5	Sedge Warbler	1
Black-necked Grebe	5	Marsh Warbler	6
Marsh Harrier	4	Reed Warbler	1
White-tailed Eagle	5	Yellow Wagtail	2
Osprey	4	Grey Wagtail	2
Water Rail	3	Reed Bunting	1

Site threshold values
Northern Scotland: 35.5
Rest of Britain: 44.5

Lowland fen (without open water)

Grey Heron	2	Bearded Tit	4
Bittern	5	Cetti's Warbler	3
Marsh Harrier	4	Grasshopper Warbler	2
Water Rail	3	Savi's Warbler	6
Spotted Crake	5	Sedge Warbler	1
Snipe	2	Marsh Warbler	6
Crane	5	Reed Warbler	1
Cuckoo	2.5	Reed Bunting	1

Site threshold values
Scotland: 11.5
Rest of Britain: 13

Northern wetlands

Greylag Goose	2	White-tailed Eagle	5
Wigeon	4	Hen Harrier	4
Teal	3	Osprey	4
Shoveler	3.5	Oystercatcher	1
Tufted Duck	2	Ringed Plover	3
Common Scoter	5	Dunlin	2.5
Goldeneye	4	Snipe	2
Red-breasted Merganser	3	Curlew	2
Goosander	3	Common Sandpiper	2
Red-throated Diver	3	Greenshank	3.5
Black-throated Diver	4	Wood Sandpiper	5
Grey Heron	2	Redshank	2
Little Grebe	3	Common Tern	2.5
Slavonian Grebe	5	Dipper	2.5
Black-necked Grebe	5	Grey Wagtail	2

Site threshold values
Northern Scotland: 35
(this does not readily apply elsewhere in Britain)

Montane

Ptarmigan	2.5	Purple Sandpiper	6
Buzzard	2	Dunlin	2.5
Golden Eagle	4	Raven	3
Peregrine Falcon	3	Shore Lark	5
Dotterel	4	Ring Ouzel	3
Golden Plover	2	Snow Bunting	5

Site threshold values
Scotland: 13
England: 10
(this does not readily apply to Wales)

Upland moorland with water bodies

Greylag Goose	2	Dunlin	2.5
Wigeon	4	Snipe	2
Teal	3	Whimbrel	4
Common Scoter	5	Curlew	2
Goldeneye	4	Common Sandpiper	2
Red-breasted Merganser	3	Greenshank	3.5
Goosander	3	Wood Sandpiper	5
Red Grouse	1	Redshank	2
Black Grouse	3	Arctic Skua	3
Red-throated Diver	3	Great Skua	3
Black-throated Diver	4	Common Gull	2
Little Grebe	3	Short-eared Owl	3.5
Slavonian Grebe	5	Cuckoo	2.5
Hen Harrier	4	Chough	4
Buzzard	2	Raven	3
Golden Eagle	4	Dipper	2.5
Osprey	4	Ring Ouzel	3
Merlin	3.5	Whinchat	2
Peregrine Falcon	3	Stonechat	2
Oystercatcher	1	Wheatear	1
Ringed Plover	3	Grey Wagtail	2
Golden Plover	2	Twite	2.5

Site threshold values
Northern and Western Isles: 46.5
Northern Scotland (except Northern and Western Isles): 55
Rest of Britain: 39.5

Upland moorland without water bodies

Teal	3	Redshank	2
Red Grouse	1	Common Gull	2
Black Grouse	3	Arctic Skua	3
Hen Harrier	4	Great Skua	3
Buzzard	2	Cuckoo	2.5
Golden Eagle	4	Short-eared Owl	3.5
Merlin	3.5	Chough	4
Peregrine Falcon	3	Raven	3
Golden Plover	2	Dipper	2.5
Dunlin	2.5	Ring Ouzel	3
Snipe	2	Whinchat	2
Whimbrel	4	Stonechat	2
Curlew	2	Wheatear	1
Greenshank	3.5	Grey Wagtail	2
Wood Sandpiper	5	Twite	2.5

Site threshold values
Northern and Western Isles: 34
Northern Scotland (except Northern and Western Isles): 37
Wales: 29
Rest of Britain: 27

Lowland heathland

Hobby	3	Woodlark	3
Stone-curlew	4	Dartford Warbler	3
Snipe	2	Grasshopper Warbler	2
Curlew	2	Stonechat	2
Redshank	2	Wheatear	1
Cuckoo	2.5	Tree Pipit	1.5
Long-eared Owl	3	Linnet	1
Nightjar	3		

Site threshold values
17.5 (this does not readily apply to Scotland or Northern England)

Lowland scrub (excluding heath)

Turtle Dove	2	Grasshopper Warbler	2
Cuckoo	2.5	Nightingale	3
Long-eared Owl	3	Linnet	1
Willow Tit	3	Lesser Redpoll	1
Long-tailed Tit	1	Bullfinch	1
Garden Warbler	1	Yellowhammer	1
Lesser Whitethroat	2	Cirl Bunting	4

Site threshold values
14 (this does not readily apply to Wales, Scotland or Northern England)

Lowland farmland

Grey Partridge	2	Cuckoo	2.5
Quail	4	Barn Owl	3
Marsh Harrier	4	Magpie	1
Montagu's Harrier	5	Rook	1
Buzzard	2	Swallow	1
Kestrel	2	Tree Sparrow	1
Hobby	3	Yellow Wagtail	2
Corncrake	3	Pied Wagtail	1
Stone-curlew	4	Linnet	1
Lapwing	1	Yellowhammer	1
Curlew	2	Cirl Bunting	4
Crane	5	Reed Bunting	1
Stock Dove	1	Corn Bunting	2.5
Turtle Dove	2		

Site threshold values
S and E England: 26
Wales: 17.5
Rest of Britain: 22

Upland In-bye and allotment farmland

Black Grouse	3	Cuckoo	2.5
Grey Partridge	2	Ring Ouzel	3
Corncrake	3	Yellow Wagtail	2
Lapwing	1	Linnet	1
Snipe	2	Twite	2.5
Curlew	2	Reed Bunting	1
Redshank	2		

Site threshold values
Scotland: 11
Rest of Britain: 13.5

Woodland

Grey Heron	2	Crested Tit	3
Little Egret	4	Coal Tit	1
Honey-buzzard	5	Willow Tit	3
Red Kite	3	Marsh Tit	2
Goshawk	4	Long-tailed Tit	1
Sparrowhawk	2	Wood Warbler	3
Buzzard	2	Garden Warbler	1
Osprey	4	Nuthatch	1
Hobby	3	Treecreeper	1
Black Grouse	3	Fieldfare	6
Capercaillie	4	Redwing	5.5
Woodcock	2	Spotted Flycatcher	2
Stock Dove	1	Nightingale	3
Cuckoo	2.5	Pied Flycatcher	2
Tawny Owl	2	Redstart	1.5
Long-eared Owl	3	Tree Pipit	1.5
Wryneck	6	Siskin	1
Green Woodpecker	2	Lesser Redpoll	1
Great Spotted Woodpecker	1	Common Crossbill	2
Lesser Spotted Woodpecker	3	Scottish Crossbill	2.5
Jay	1	Bullfinch	1
Raven	3	Hawfinch	4
Firecrest	4		

Site threshold values
Northern Scotland: 33.5
Wales: 37.5
Rest of Britain: 39

Scrub-heath mosaics of upland fringe or ffridd in Wales

Red Grouse	1	Raven	3
Merlin	3.5	Tree Pipit	1.5
Buzzard	2	Pied Flycatcher	2
Short-eared Owl	3.5	Redstart	1.5
Snipe	2	Wheatear	1
Curlew	2	Whinchat	2
Cuckoo	2.5	Stonechat	2
Grasshopper Warbler	2	Linnet	1
Garden Warbler	1	Lesser Redpoll	1
Ring Ouzel	3	Yellowhammer	1
Chough	4	Reed Bunting	1

Site threshold values
Wales: 22
Rest of Britain: 20