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### 1. Status in UK

Biological status		Legal status		Conservation status
Breeding	✓	Wildlife and Countryside Act 1981	<b>General Protection Schedule 1(1)</b>	Species of European Conservation Concern
Migratory	✓	Wildlife (Northern Ireland) Order 1985	<b>General Protection Schedule 1(1)</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering	✓	EC Birds Directive 1979	<b>Migratory</b>	All-Ireland Vertebrate Red Data Book <b>Rare</b>

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	1,440	50 (see section 5.1.2 for rationale)	408 (28% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	57,600	576	408 (0.7% of the biogeographic population)

*GB population source: Hancock et al. 1997*

*Biogeographic population source: Hagemeyer & Blair 1997*

### 3. Distribution

The global breeding distribution of Greenshank is widely spread across the boreal regions of Eurasia. It extends from Scotland and Scandinavia in the west, across Fennoscandia, northern Russia to Kamchatka and the shores of the Sea of Okhotsk. There is an isolated breeding population in northern Ukraine/southern Belarus associated with extensive peatlands in that region. The species is monotypic (Cramp & Simmons 1983). In winter, Greenshank move south where they occur at low densities across much of Africa south of the Sahara, along the shores of the Middle East, across much of India and south-east Asia, and the shores and coastal regions of Australia.

Within Britain, which lies at the extreme west of the breeding range, Greenshanks breed exclusively in the north Scotland and are most common in Sutherland, west Caithness, Wester Ross, west Inverness and the Western Isles (Nethersole-Thompson & Nethersole-Thompson 1979; Gibbons *et al.* 1993). Their distribution is closely associated with areas of high rainfall and poorly drained acidic peat soils (Nethersole-Thompson & Nethersole-Thompson 1979). Breeding densities are highest where feeding habitats (pool complexes, rivers) occur in close proximity. Greenshank rarely breed in Ireland. Although the British breeding population may represent only a small proportion of the biogeographic population, Greenshanks nesting in Scotland occur at some of the highest breeding densities in Europe (Hagemeyer & Blair 1997).

Greenshanks are highly site faithful, returning to the same territory each year (Nethersole-Thompson 1951; Nethersole-Thompson & Nethersole-Thompson 1979; Thompson & Thompson 1991).

#### 4. Population structure and trends

Four biogeographical populations of Redshank have been described (Rose & Scott 1997). Of these, two occur in Europe. The European/West African population breeds in northern Europe (including Britain) and winters in south-west Europe, north-west Africa and West Africa east to the Chad. The population is estimated at between 100,000–1,000,000 individuals. Birds that breed further east in western Siberia belong to the south-west Asia, Eastern and Southern Africa population (between 25,000–1,000,000 individuals). These winter mainly in the Middle East and eastern and southern Africa (Rose & Scott 1997). As Greenshanks have a continuous and wide breeding distribution in Russia, the separation of the two populations is not clear-cut.

Greenshanks breed at low densities over extensive areas, whilst most also spend the winter in inland areas. This makes it difficult to estimate the population size accurately since they do not concentrate at high densities in coastal areas, as do most other waders.

The breeding population in Europe excluding Russia has recently been estimated at 57,613–83,189 (Hagemeijer & Blair 1997). There is limited information regarding changes in the numbers and distribution of Greenshank. Overall, the European breeding population has been stable in recent decades (Tucker and Heath 1994; Rose & Scott 1997; based on Smit & Piersma 1989). There have been some local decreases in parts of European Russia, but the large breeding population in Fennoscandia appears to be relatively stable. The small breeding population in Belarus is reported to be increasing (Nikiforov & Mongin 1998).

During 1988–1991, 1,100–1,600 pairs of Greenshank were estimated to breed in Britain (Gibbons *et al.* 1993). A first national survey of this species in 1995 estimated a breeding population of 1,440 pairs, with 95% confidence limits of 1,100–1,790 (Hancock *et al.* 1997). In Scotland there have been a number of recorded declines owing to changes in breeding habitat, mainly due to afforestation (Nethersole-Thompson & Nethersole-Thompson 1979; Snow & Perrins 1998).

In the Flow Country of Caithness and Sutherland, numbers of Greenshank were estimated to have fallen by 17% due to the afforestation that occurred there after 1945 (Stroud *et al.* 1987). Elsewhere, a small forest-breeding population declined and contracted in range as the breeding habitat dried out and ground vegetation deteriorated owing to successional changes (Nethersole-Thompson & Nethersole-Thompson 1979). In an area of north-west Sutherland, numbers declined from the early 1980s as a consequence of damage inflicted by off-road vehicles (Thompson & Thompson 1991). Overall, there is little evidence of change in the Caithness and Sutherland peatlands, with one study showing a non-significant decline of 3% per annum during the period 1979–1994 (Whitfield 1997) and another study indicating stability between 1988 and 1995 (Hancock & Avery 1998). Numbers in the Western Isles of Lewis and Harris were stable during the period 1987–1995 (Whitfield 1997).

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Greenshank supports, on average, 408 pairs. This amounts to about 28% of the British breeding population. The suite contains about 0.7% of the international population. Greenshanks do not regularly breed in Northern Ireland. The SPA suite total is contained within two sites (Table 6.75.1) where breeding Greenshank have been listed as a qualifying species.

#### 6. Classification criteria

No sites in the UK hold more than 1% of the international population in the breeding season. A case for considering SPA selection using Stage 1.4 was made in view of the concentration of the population on a few sites of high nature conservation value, and the role of these areas in maintaining the southern limit to the European Greenshank range. Accordingly, two sites (the Caithness and Sutherland Peatlands; and the Lewis Peatlands) known to support large, relatively high density breeding populations were considered under Stage 1.4, and both were selected after consideration of Stage 2 judgements.

The sites are located in the core of the UK range of this species (Nethersole-Thompson & Nethersole-Thompson 1979; Hancock *et al.* 1997) and both sites in the suite have a high degree of naturalness

(Lindsay *et al.* 1988), and are multi-species SPAs of importance for many other breeding birds (Stroud *et al.* 1987, 1988). There is a very long recorded history of occupancy at both these sites (Harvie-Brown & Buckley 1887, 1888; Nethersole-Thompson 1951; Nethersole-Thompson & Nethersole-Thompson 1979; Holloway 1996).

Outwith the SPA suite, breeding Greenshanks have a scattered distribution in the British uplands.

Distribution map for breeding Greenshank SPA suite

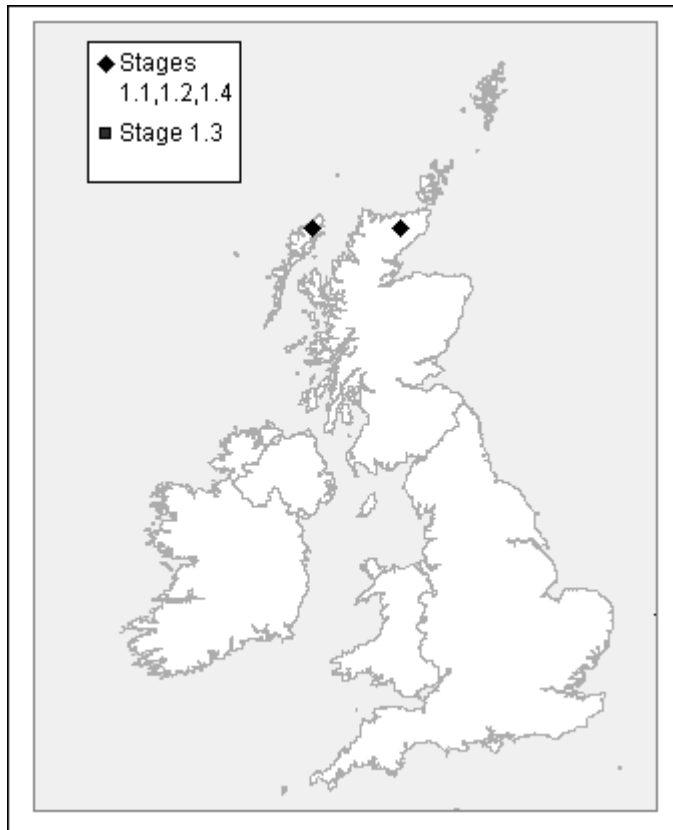


Table 6.75.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Caithness and Sutherland Peatlands	256	0.4	17.8	1.4
Lewis Peatlands	152	0.3	10.6	1.4
TOTALS	408	0.7%	28.3%	

## A6.76 Wood Sandpiper *Tringa glareola* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection Schedule 1(1)</b>	Species of European Conservation Concern <b>SPEC 3</b> Unfavourable conservation status ( <b>declining</b> ) but not concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Annex I Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	10	1	10 (100% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	298,800	2,988	10 (<0.1% of biogeographic population)

GB population source: SNH

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

Globally, breeding Wood Sandpipers occur throughout the northern Palearctic, mainly in the boreal and sub-Arctic (taiga) zones, although they become scarcer in the south. The species breeds from Scotland and Scandinavia in the west, across Fennoscandia, northern Russia, to Kamchatka and the shores of the Sea of Okhotsk. The species is monotypic. Wood Sandpipers are migratory, with those birds breeding in north-west Europe wintering throughout sub-Saharan Africa, and those breeding in eastern Europe and Siberia wintering in India, Indo-China, Malaysia and Australia (Cramp & Simmons 1983).

Within Europe, Wood Sandpipers breed in Scotland and Denmark in small numbers, but are mainly found throughout Scandinavia, the Baltic States and across northern Russia (Hagemeyer & Blair 1997; Cramp & Simmons 1983).

In Britain, they breed only in the Highlands of Scotland, and then at only a few widely scattered locations (Gibbons *et al.* 1993; Ogilvie & RBBP 1999a). Wood Sandpiper breeding habitat is primarily flark fens (fens of complex structure with many pools and *Sphagnum* hummocks), open mires, and pine bogs (Nikolaev 1998). In the southern part of the range, lakeshore meadows, and riverbanks in heather moorland, are also used for nesting (Hagemeyer & Blair 1997). In Britain, open boggy moorland with scattered pools, and marshy areas are favoured (Thom 1986; Nethersole-Thompson & Nethersole-Thompson 1986).

#### 4. Population structure and trends

Four biogeographical populations of Wood Sandpiper have been described (Rose & Scott 1997). Of these, two occur in Europe. The European/West African population breeds in northern Europe (including Britain) and winters locally in north Africa, and more continuously across western and central sub-Saharan Africa. The population is estimated at over 1,000,000 individuals. Birds that breed further east in western Siberia belong to the South-west Asia, Eastern and Southern African population (between 100,000–>1,000,000 individuals). These winter mainly in the Middle East and eastern and southern Africa (Rose & Scott 1997).

The total estimated European population is 298,842–412,474 pairs (Hagemeijer & Blair 1997). Within north-west Europe, the largest numbers occur in Finland, which holds an estimated 250,000 pairs. Sweden holds an estimated 75,000 pairs and Norway 30,000 pairs (Tucker & Heath 1994; Hagemeijer & Blair 1997). Smaller populations occur in Belarus (3,100 pairs) and Estonia (1,500 pairs), and very small, scattered populations occur in Iceland, northern Britain, and eastward from Denmark and northern Germany to the Baltic states (Tucker & Heath 1994; Hagemeijer & Blair 1997).

Since 1970, Wood Sandpipers have declined in Finland, and elsewhere where small populations occur along the southern extent of the species' range. However, the populations in Norway and Sweden are now thought to be stable. The main reasons for declining populations are thought to be loss of breeding habitat from wetland drainage, peat extraction and afforestation, and factors influencing winter survival in Africa (Cramp & Simmons 1983; Tucker & Heath 1994; Hagemeijer & Blair 1997).

In Britain, an average of 10 pairs has been recorded breeding annually between 1993 and 1997, although the population has fluctuated between two and fifteen pairs since 1987 (SNH unpublished; Ogilvie 1999). In the late nineteenth and early twentieth centuries, the species declined dramatically in southern Sweden, and became extremely rare in some parts of its southern range where it had once been more common.

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Wood Sandpiper supports, on average about 10 pairs<sup>25</sup>. This amounts to the whole of the British breeding population. Wood Sandpipers do not breed in Northern Ireland. The suite contains less than 0.1% of the international population (numbers in the UK are very small in comparison to those breeding in northern Scandinavia and Russia). The SPA suite total is contained within three sites (Table 6.76.1) where Wood Sandpiper has been listed as a qualifying species.

#### 6. Classification criteria

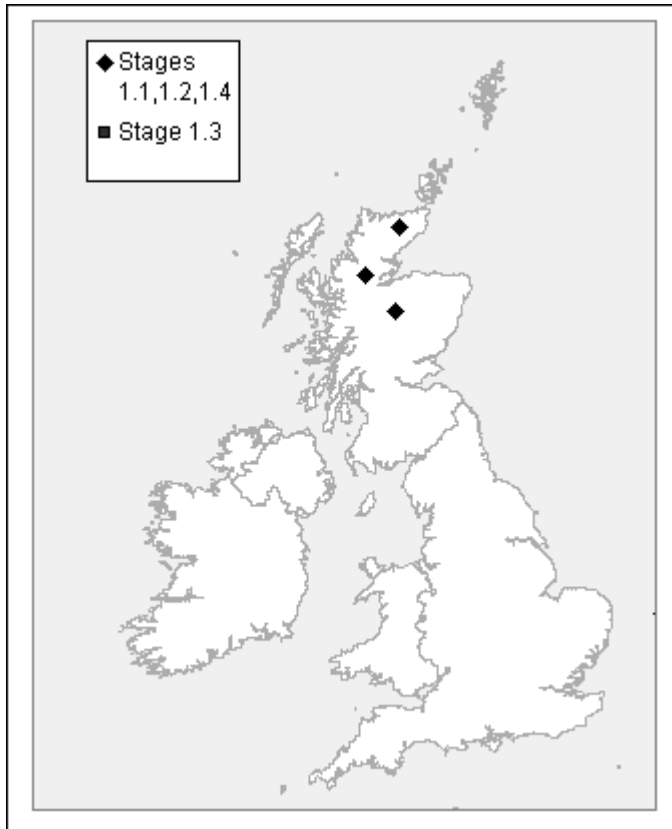
All sites regularly supporting more than 1% of the national breeding population of Wood Sandpiper were considered under Stage 1.1, and three sites in northern Scotland were selected after consideration of Stage 2 judgements.

All the sites in the suite have a high degree of naturalness, and the Caithness and Sutherland Peatlands and the River Spey – Insh Marshes are multi-species SPAs. Achanalt Marshes, however, has been selected solely for breeding Wood Sandpipers. Since the 1959 re-establishment of Wood Sandpipers in Scotland, the sites have a long history of occupation (Batten *et al.* 1990).

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<sup>25</sup> Calculation of site totals and population coverage for Wood Sandpipers is problematic. At any site, breeding is often difficult to confirm, and additionally, site and national totals vary considerably from year-to-year. The totals and proportions presented here should thus be regarded as indicative rather than exact.

Distribution map for breeding Wood Sandpiper SPA suite



**Table 6.76.1 – SPA suite**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Achanalt Marshes	3	<0.1	30	1.1
Caithness and Sutherland Peatlands	5	<0.1	50	1.1
River Spey – Insh Marshes	2	<0.1	20	1.1
<b>TOTALS</b>	<b>10</b>	<b>&lt;0.1%</b>	<b>100%</b>	

## A6.77 Turnstone *Arenaria interpres*

### 1. Status in UK

Biological status		Legal status		Conservation status
Breeding		Wildlife and Countryside Act 1981	<b>General Protection</b>	Species of European Conservation Concern
Migratory	✓	Wildlife (Northern Ireland) Order 1985	<b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering	✓	EC Birds Directive 1979	<b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	64,400	640	8,606 (13% of GB total)
<b>Ireland</b>	22,500	225	1,594 (7% of all-Ireland total)
<b>Biogeographic population</b>	67,000	700	10,200 (15% of biogeographic population)

*GB population source: Cayford & Waters 1996*  
*All-Ireland population source: Cranswick et al. 1999*  
*Biogeographic population source: Rose & Scott 1997*

### 3. Distribution

The Turnstone has a circumpolar breeding distribution. Through much of its range, the species is a high-Arctic breeder, occurring in the northernmost parts of Greenland, Russia and Canada. However, in Scandinavia it breeds further south, occurring at low densities along most of the coast of Norway and the inner parts of the Baltic, from Oland northwards (Hagemeijer & Blair 1997). The species is polytypic, with two described sub-species. The nominate *A. i. interpres* breeds from Ellesmere Island in north-eastern Canada, through north and east Greenland, across the whole of northern Eurasia (including Europe) to western Alaska. The race *A. i. morinella* breeds in the north Canadian Arctic (Cramp & Simmons 1983).

In winter, Turnstones are highly migratory, moving south to overwinter around the coasts of north-west Europe, Africa, the Arabian Peninsula, the Indian and south-east Asian sub-continent and Australasia. In these areas birds are generally but sparsely distributed along extensive shorelines (Rose & Scott 1997).

The UK wintering total is a component of the Western Palearctic wintering population, which comprises 67,000 individuals (Rose & Scott 1997). The UK non-breeding distribution includes the entire coastline of the UK, with concentrations on the coast of north-east England, the estuaries of north-west England, the north Kent coast, the east coast of Scotland, the Outer Hebrides, Orkney, and the east coast of Northern Ireland (Lack 1986). The preferred non-breeding habitat is shores that are rocky, stony, or covered with seaweed (Snow & Perrins 1998).

#### 4. Population structure and trends

Six biogeographical populations of Turnstone have been described (Rose & Scott 1997). Of these, three occur in Europe. The Western Palearctic population breeds in Ellesmere Island, and north and east Greenland, and winters on the coasts of north-west Europe (including Britain and Ireland). It is currently estimated to comprise 67,000 individuals (Rose & Scott 1997). The Western and Southern African population breeds in Scandinavia and north-east Russia (roughly east to Novaya Zemlya) and winters mainly in Western Africa. The population is estimated at about 32,000 individuals. These birds pass along the coasts of north-west Europe in spring and autumn. Birds that breed further east in western Siberia belong to the South-west Asia, Eastern Africa population (between 25,000–100,000 individuals). These winter mainly in the Middle East and eastern Africa (Rose & Scott 1997).

There is generally poor monitoring information on population trends in Europe given the low-density occurrence of non-breeding Turnstones along extensive lengths of rocky coastlines (Delany *et al.* 1999).

The annual population index for non-breeding Turnstones in the UK shows a downward trend, which reached its lowest point since 1982/83 in 1997/98 (Pollitt *et al.* 2000). The index only describes trends on Wetland Bird Survey sites (which tend largely to be estuarine in nature), but a similar pattern prevails for other coastal non-breeding areas. Preliminary analyses of the 1998 Non-estuarine Waterfowl Survey suggest a national decrease of 36% (from 26,123 to 16,623) on coastal sections since 1984/85 (Granswick *et al.* 1999). The causes of the decline are not apparent.

#### 5. Protection measures for population in UK

##### *SPA suite*

In the non-breeding season, the UK's SPA suite for Turnstone supports, on average, 10,200 individuals (calculated using WeBS January site totals for the period 1992/93 to 1996/97 – see section 4.4.1 and Appendix 2 for further explanation). This total amounts to about 13% of the British population, about 7% of the all-Ireland population, and about 15% of the East Atlantic flyway population. The suite comprises 13 sites at which Turnstone has been listed as a qualifying species (Table 6.77.1).

#### 6. Classification criteria

All 12 sites in the UK that were known to support more than 1% of the international population of Turnstone were considered under Stage 1.2. All were selected after consideration of Stage 2 judgements (Mersey Narrows and North Wirral Foreshore, Morecambe Bay; Northumbria Coast; East Sanday Coast; Firth of Forth; Outer Ards; Thanet Coast and Sandwich Bay; Stour and Orwell Estuaries; Belfast Lough; The Wash; Sleibhtean agus Cladach Thiriodh (Tiree Wetlands and Coast); and North Uist Machair and Islands). Strangford Lough was further considered and selected under Stage 1.3 (see section 5.3), with Turnstone identified as an important component of non-breeding waterbird assemblages at these localities.

The sites within the suite are distributed throughout the range of the population in the UK, on east and west coasts, from Sanday in the northern Orkneys, to sites in the Outer and Inner Hebrides, Northern Ireland, to sites on the west and east coasts of England. Most sites are multi-species SPAs, of importance also for a range of other waterbirds, although Thanet Coast and Sandwich Bay has been selected solely for Turnstones. There is a long recorded history of occupancy at most of these sites (Prater 1981).

As the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives comprehensive coverage of the range and moderate coverage of the population of this dispersed wintering species in the UK, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for Turnstone SPA suite

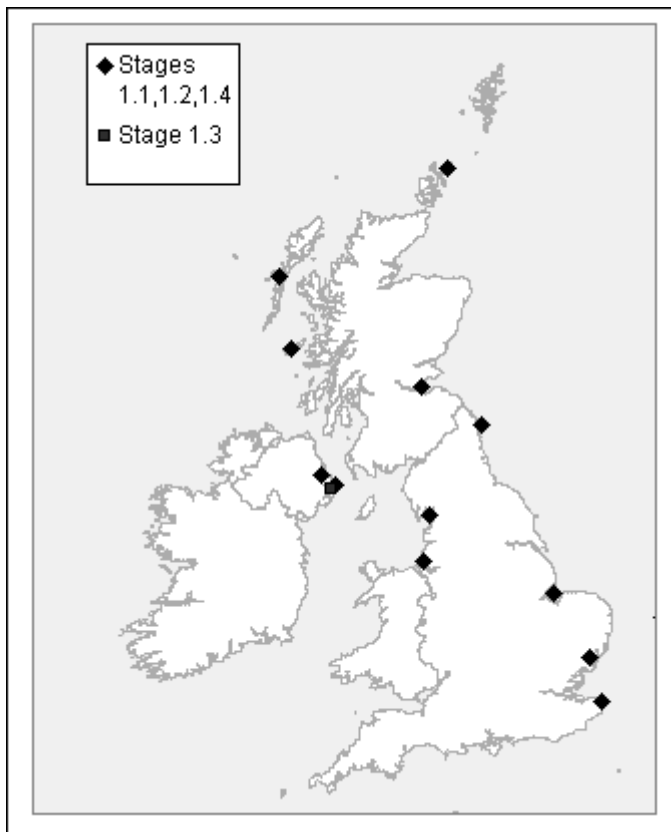


Table 6.77.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Belfast Lough	734	1.1	3.3 (Ire)	1.2
East Sanday Coast	1,400	2.1	2.2	1.2
Firth of Forth	1,286	1.9	2.0	1.2
Mersey Narrows and North Wirral Foreshore	1,138	1.6	1.8	1.2
Morecambe Bay	1,583	2.4	2.5	1.2
North Uist Machair and Islands	670	1.0	1.0	1.2
Northumbria Coast	1,456	2.2	2.3	1.2
Outer Ards	1,241	1.9	5.5 (Ire)	1.2
Stour and Orwell Estuaries	836	1.3	1.3	1.2
Strangford Lough	401	0.6	1.8 (Ire)	1.3
Thanet Coast and Sandwich Bay	940	1.4	1.5	1.2
The Wash	717	1.1	1.1	1.2
Sleibhtean agus Cladach Thiriodh (Tiree Wetlands and Coast)	700	1.0	1.1	1.2
<b>TOTALS</b>	<b>10,200 (in January)</b>	<b>14.6%</b>	<b>13.4% 7.1% (Ire)</b>	

## A6.78 Red-necked Phalarope *Phalaropus lobatus*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection Schedule 1(1)</b>	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection Schedule 1(1)</b>	(UK) Species of Conservation Importance <b>Table 2</b>
Wintering	EC Birds Directive 1979 <b>Annex I Migratory</b>	All-Ireland Vertebrate Red Data Book <b>Endangered</b>

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	36	1	30 (83% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	65,500	655	30 (<0.1% of biogeographic population)

GB population source: Stone et al. 1997

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The Red-necked Phalarope has a wide circumpolar breeding distribution in tundra habitats. It is absent from high Arctic areas of north and east Greenland, Svalbard, the Russian high Arctic islands and the Canadian Arctic archipelago. Red-necked Phalaropes otherwise occur in virtually all parts of the Arctic, as well as some areas of the sub-Arctic. It is monotypic (Cramp & Simmons 1983). Outside the breeding season, the species undertakes a lengthy migration to overwinter at sea in sub-tropical, shallow inshore waters. Birds breeding in Scandinavia (and possible also Iceland) migrate south-east to winter off the coast of the Arabian Peninsula, between Oman and Yemen (Cramp & Simmons 1983).

The European breeding range extends from Iceland, through Scandinavia and to northern Russia. Those that breed in the north of Britain lie at the extreme south of the European distribution (Hagemeyer & Blair 1997), and are amongst the most southerly breeding Red-necked Phalaropes in the world.

In Britain, almost the entire population has recently been found on the island of Fetlar, Shetland. Although formerly more abundant at wetlands in western and northern Scotland (Everett 1971; Parslow 1973; Holloway 1996), breeding now only occurs sporadically at sites in the Northern Isles, Hebrides and Highlands (Gibbons *et al.* 1993).

### 4. Population structure and trends

Two biogeographic populations have been described (Rose & Scott 1997); a Nearctic population of more than 2,000,000 individuals, and a Eurasian population, of which those breeding in the UK form

part, comprising between 100,000 to over 1,000,000 individuals (Rose & Scott 1997). Largest numbers in Europe breed in Iceland (c. 4,000 pairs), with between about 800–1,500 pairs in each of Sweden, Finland and Norway (Hagemeijer & Blair 1997).

The European population (used as the reference in this review) is estimated as between 65,536–94,301 pairs. The European population as a whole appears to be stable although there has been a decline in Iceland (Hagemeijer & Blair 1997).

The UK breeding population has declined in size and range since the 1950s with a loss of regular breeding sites in the Hebrides and the Highlands (Yates *et al.* 1983; Batten *et al.* 1990; Gibbons *et al.* 1993). Total UK numbers have declined from about 60 breeding males in 1950 to 36 in 1995 (Stone *et al.* 1997).

UK declines have been linked to loss of suitable habitat through vegetation succession, drainage and agricultural intensification, especially in the Hebrides and Highlands (Everett 1971). Robbing of nests by egg-collectors is still a substantial threat to Red-necked Phalaropes breeding on some of the more remote sites. In Britain, Red-necked Phalaropes appear to require a mosaic of open water, emergent vegetation and marsh for successful breeding (Yates *et al.* 1983) and the loss of any part of this mosaic may make a site unsuitable. On Fetlar, management to maintain and extend this mosaic of habitats on the RSPB reserve can be successful in increasing the breeding population (O'Brien *et al.* 1997).

## 5. Protection measures for population in UK

### *SPA suite*

In the breeding season, the UK's SPA suite for Red-necked Phalarope supports, on average about 30 pairs. This amounts to about 83% of the British breeding population. Red-necked Phalaropes do not breed in Northern Ireland. The suite contains less than 0.1% of the international population (numbers in the UK are very small in comparison to those breeding in Iceland, Scandinavia and Russia). The SPA suite comprises a single site (Table 6.78.1) where Red-necked Phalarope has been listed as a qualifying species.

### *Other measures*

A Biodiversity Action Plan has been published for this species (Biodiversity Steering Group 1998) and is being implemented as part of the UK's national response to the Biodiversity Convention.

## 6. Classification criteria

The only site (Fetlar) in the UK now known to regularly support more than 1% of the national breeding population was considered under Stage 1.1, and was selected after consideration of Stage 2 judgements. Consideration of additional coverage using Stage 1.4 was problematic since away from Fetlar, the occurrence of the Red-necked Phalarope was irregular in the early 1990s. Following the success of active wetland habitat management on Fetlar (O'Brien *et al.* 1997), however, and the application of these techniques to the restoration of sites of former importance elsewhere, this situation may change in the future.

Fetlar is a multi-species SPA with a very long recorded history of occupancy by Red-necked Phalaropes. The island has held most of Shetland's Red-necked Phalaropes since at least the beginning of the twentieth century (Venables & Venables 1955; Everett 1971).

Distribution map for Red-necked Phalarope SPA suite

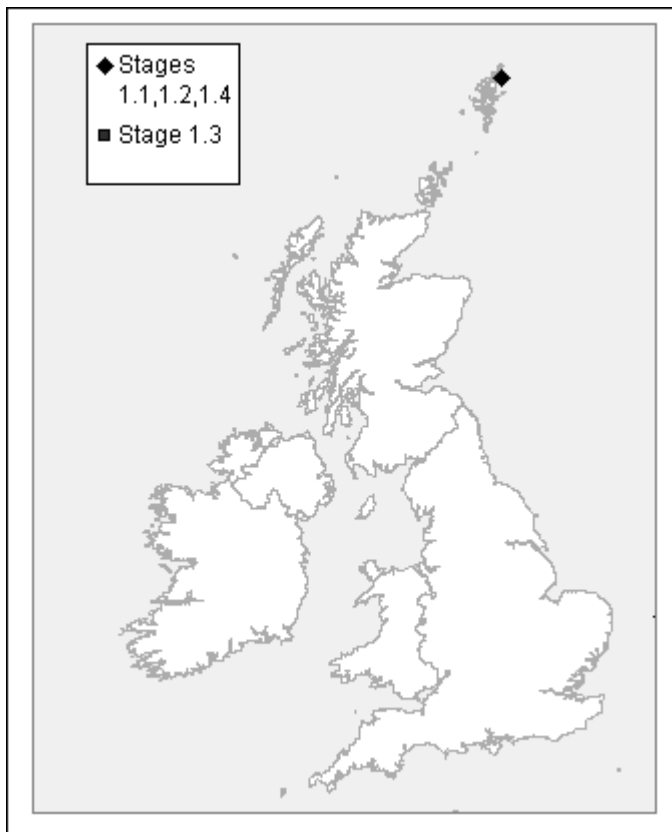


Table 6.78.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Fetlar	30	<0.1%	83%	1.1
TOTALS	30	<0.1%	83%	

## A6.79 Arctic Skua *Stercorarius parasiticus* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	3,200	32	780 (24% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	30,000	300	780 (3% of biogeographic population)

*GB population source: Walsh et al. 1995*

*Biogeographic population source: Lloyd et al. 1991*

### 3. Distribution

Arctic Skuas have a circumpolar distribution, breeding on tundra and coastal moors between 82°N and 56°N. Within this distribution, the species is absent only from the very high Arctic and parts of east Greenland (Cramp & Simmons 1983; Furness 1987). The largest populations are found in Russia, Iceland, Svalbard, Norway and Sweden (Hagemeyer & Blair 1997). In the southern parts of its range the species is coastal, whilst in the Arctic it occurs as a widespread predator of the tundra. It is monotypic.

In Europe, Arctic Skuas breed in Iceland, along the northern coasts of Scandinavia south from the White Sea, and locally along parts of the northern coasts of the Baltic.

In Britain and Ireland, breeding Arctic Skuas are restricted to Scotland, particularly the Northern Isles, where they nest in colonies, being present from April to August. In the Orkney and Shetland archipelagos, Arctic Skuas are widely distributed, but further south they breed more locally at sites with a traditional history of occupancy. Sites in the Inner Hebrides are the most southerly in the Palearctic range of the species, and amongst the most southerly in the world. Birds breeding in Scotland are an important component of the North Atlantic range of Arctic Skua.

During the breeding season (April–July/August) Arctic Skuas occur in northern waters around Scotland, generally close to the nesting colonies. At the end of the breeding season (August–October), they move south to inshore waters along British and Irish coasts (Stone *et al.* 1995) before migrating to the southern hemisphere, with some wintering off the coasts of South America and South Africa (Lloyd *et al.* 1991).

#### 4. Population structure and trends

Because large numbers of Arctic Skuas nest in remote and relatively inaccessible parts of Russia, Canada and Alaska, the size of the world population is poorly known. However, the North-East Atlantic biogeographical population is known to comprise about 30,000 pairs, with the largest numbers in Norway (8,000 pairs) and Iceland (4,000 pairs). About 10% of the population (*i.e.* 3,200 pairs) nests in Scotland (Lloyd *et al.* 1996).

Some Arctic Skuas in Scotland nest on inland moors and heaths, but a lack of survey data for these areas prior to 1985\_1987 makes it impossible to describe the historic population trend in UK. However, an analysis comparing total numbers from 1974\_1975 and 1985–1986 in Shetland (where about 60% of the UK population nests) indicated little change over this period (Ewins *et al.* 1988). Sears *et al.* (1995) again found no change in a more recent census in 1992. However, colonies monitored by the UK Seabird Monitoring Programme have revealed consistent declines in breeding numbers since 1992 (*e.g.* Walsh *et al.* 1995; Thompson *et al.* 1999). These declines may be linked to a period of poor reproductive output during the late 1980s and early 1990s when the Shetland sandeel stock was very low. Arctic Skuas rely largely on stealing food from other seabirds.

Arctic Skuas have also been displaced from some breeding areas by the expansion of the Great Skua population. Elsewhere in the North Atlantic, the population on the Faeroes is believed to have declined (Furness 1987) due partly to human interference.

#### 5. Protection measures for population in UK

##### *SPA suite*

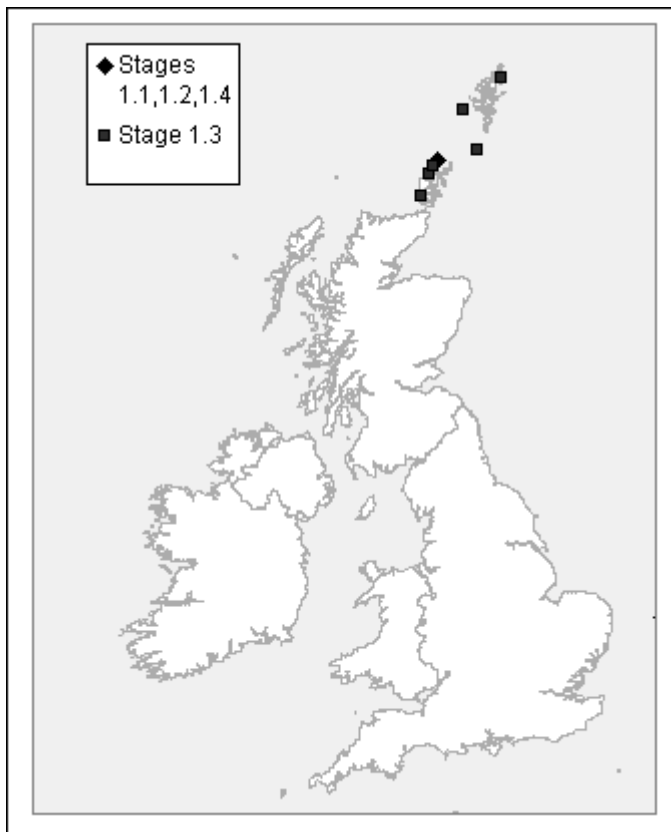
In the breeding season, the UK's SPA suite for Arctic Skua supports, on average, 780 pairs. This amounts to about 24% of the British breeding population, and about 3% of the international population. Arctic Skuas do not breed in Northern Ireland. The SPA suite contains seven sites (Table 6.79.1) where Arctic Skua has been listed as a qualifying species.

#### 6. Classification criteria

No site in the UK holds more than 1% of the international population of Arctic Skua; thus no sites were selected under Stage 1.2. At six sites (Rousay; Fetlar; Foula; West Westray; Fair Isle; Hoy) Arctic Skua was identified as an important component of the breeding seabird assemblages at these localities. After consideration of Stage 2 judgements, all these sites were selected under Stage 1.3 (see section 5.3).

An additional 14 sites were assessed under Stage 1.4 to provide additional coverage of population size and range. Of these, the highest-density breeding colony in Britain (Papa Westray) was included in the SPA suite. A further ten sites in the Northern Isles, as well as colonies on the Lewis Peatlands, Handa and Coll, were not selected as these supported smaller or less dense populations..

Distribution map for breeding Arctic Skua SPA suite



**Table 6.79.1 – SPA suite**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Fair Isle	74	0.3	2.3	1.3
Fetlar	130	0.4	4.1	1.3
Foula	125	0.4	3.9	1.3
Hoy	59	0.2	1.8	1.3
Papa Westray (North Hill and Holm)	135	0.5	4.2	1.4
Rousay	180	0.6	5.6	1.3
West Westray	77	0.3	2.4	1.3
<b>TOTALS</b>	<b>780</b>	<b>2.6%</b>	<b>24.4%</b>	

## A6.80 Great Skua *Catharacta skua* (breeding)

### 1. Status in UK

Biological status		Legal status		Conservation status
Breeding	✓	Wildlife and Countryside Act 1981	<b>General Protection</b>	Species of European Conservation Concern <b>SPEC 4</b> Favourable conservation status ( <b>secure</b> ) but concentrated in Europe
Migratory	✓	Wildlife (Northern Ireland) Order 1985	<b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering	✓	EC Birds Directive 1979	<b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	8,500	85	6,262 (74% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	13,600	136	6,262 (46% of biogeographic population)

GB population source: Walsh *et al.* 1995

Biogeographic population source: Lloyd *et al.* 1991

### 3. Distribution

The taxonomy of the Great Skua is complex, but it is considered to be polytypic with four sub-species described. The nominate race *Catharacta skua skua* is the only sub-species to occur in the northern hemisphere and is endemic to Europe. The other three sub-species occur throughout the southern oceans, breeding within sub-Antarctic and Antarctic island groups. In Europe, Great Skuas have a localised breeding distribution and are present in just a few countries, with the main population centres being in Iceland, Scotland and the Faroe Islands (Cramp & Simmons 1983; Furness 1987; Lloyd *et al.* 1991).

In the UK, the species occurs mainly in Orkney and Shetland, with smaller numbers at a few sites in the Outer Hebrides and the mainland of north-west Scotland (Lloyd *et al.* 1991). It nests colonially and is present at its colonies from April to August. During this period, it forages in inshore waters around the northern islands (Stone *et al.* 1995), feeding by stealing food from other seabirds.

Outside the breeding season, Great Skuas move southwards as far as the north coast of South America and West Africa (Cramp & Simmons 1983), but with relatively large numbers in the Bay of Biscay (Stone *et al.* 1995). However, the species can occur widely in the North Atlantic.

### 4. Population structure and trends

The world population of the nominate sub-species of Great Skua is estimated at about 13,600 pairs (Lloyd *et al.* 1991), and as the sub-species has a distinct biogeographical range, this is the population

estimate used for the current review. Over 60% of this population (8,500 pairs) nests in Scotland (Walsh *et al.* 1995).

It seems likely that the species colonised the northern hemisphere relatively recently, probably just before the sixteenth century (Furness 1987). The earliest Scottish records refer to a few pairs nesting in Shetland in the eighteenth century. In the late nineteenth century, the skins of Great Skuas became prized by bird collectors, and the species was virtually exterminated in Scotland. It was partly helped back from the brink by the employment of a full-time warden on Hermaness from 1891 onwards – possibly the first wildlife protection warden in Scotland.

Since the low point in the 1890s, the UK population approximately doubled every ten years until the 1970s (Furness 1987). This rate of increase probably slowed after 1970, but is difficult to measure precisely as some pairs now nest inland in areas that had not been surveyed prior to 1985–1987. This makes it impossible to describe precisely the overall population trend in the UK. However, numbers in Shetland will have benefited in recent years from the abundance of whitefish discarded as undersized catches (Hudson & Furness 1988; Furness 1997). In contrast, the failure of sandeel recruitment in the late 1980s and early 1990s had a negative effect on the population, in particular, reducing recruitment at Foula (Hamer *et al.* 1991).

An analysis comparing total numbers in 1974–1975 and 1985–1986 in mainland Shetland indicated a 9% per annum increase over this period, whereas on Foula (the stronghold of the species, see below) the increase was much less, giving an overall figure for Shetland of only 1.3% per annum (Ewins *et al.* 1988). Sears *et al.* (1995) reported a similar situation in a 1992 census. Colonies in Shetland monitored by the UK Seabird Monitoring Programme continued to increase in size after 1992 (*e.g.* Walsh *et al.* 1995; Thompson *et al.* 1999). Elsewhere in the North Atlantic, the population on the Faroes is believed to have increased, but not as significantly as in Scotland (Furness 1987).

## 5. Protection measures for population in UK

### *SPA suite*

In the breeding season, the UK's SPA suite for Great Skua supports, on average about 6,262 pairs. This amounts to about 74% of the British breeding population. Great Skuas do not breed in Northern Ireland. The suite contains about 46% of the international (world) population. The SPA suite contains nine sites (Table 6.80.1) where Great Skua has been listed as a qualifying species.

## 6. Classification criteria

All six sites in the UK that support more than 1% of the international breeding population of Great Skuas were considered under Stage 1.2. All (Hermaness, Saxa Vord and Valla Field; Fetlar; Noss; Foula; Hoy; and St Kilda) were selected after consideration of Stage 2 judgements. Additionally, three sites (Ronas Hill – North Roe and Tingon; Fair Isle; and Handa) were selected under Stage 1.3 (see section 5.3), with Great Skua identified as an important component of the breeding seabird assemblages at these localities.

Given that the selection of sites under Stages 1.1 and 1.3 resulted in a suite which gives comprehensive coverage of Great Skua population and range in the UK, it was not considered necessary to select additional sites using Stage 1.4.

All sites selected are multi-species SPAs, important for a range of other seabirds.

The distribution of SPAs covers the range of Great Skua in the UK, from the north of Shetland, west to St Kilda. Its core distribution is in Shetland (six sites), including the largest colony in the world in Foula. Some UK SPAs for this species have a very long recorded history of occupancy. For example, Saxa Vord was the site where Great Skuas were first recorded as a breeding species in Britain (Low 1879) although breeding had occurred there from the early 1770s (Furness 1987). There are also 18th century records from Foula, Hermaness, and Ronas Hill (which was colonised in the 1820s) (Furness 1981, 1987; Holloway 1996). Other sites were colonised in the early years of the 20th century: Fetlar (1900–1909), Noss (1910), and Hoy (1914) (Furness 1987; Meek *et al.* 1985). St Kilda was occupied more recently (1962).

Distribution map for Great Skua SPA suite

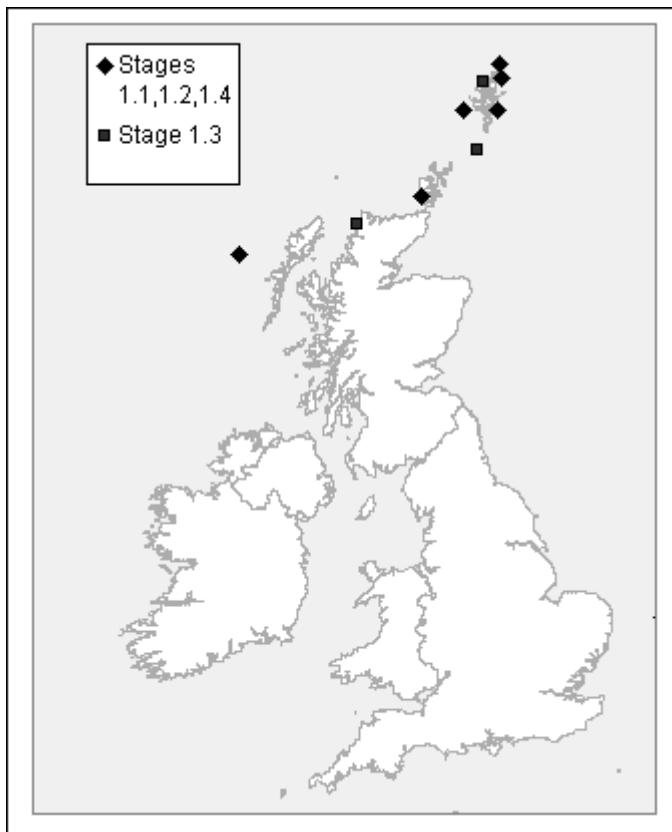


Table 6.80.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Fair Isle	130	1.0	1.5	1.3
Fetlar	512	3.8	6.0	1.2
Foula	2,170	16.0	25.5	1.2
Handa	110	0.8	1.3	1.3
Hermaness, Saxa Vord and Valla Field	630	4.6	7.4	1.2
Hoy	1,900	14.0	22.4	1.2
Noss	410	3.0	4.8	1.2
Ronas Hill – North Roe and Tingon	130	1.0	1.5	1.3
St Kilda	270	2.0	3.2	1.2
<b>TOTALS</b>	<b>6,262</b>	<b>46.0%</b>	<b>73.7%</b>	

## A6.81 Mediterranean Gull *Larus melanocephalus* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection Schedule 1(1)</b>	Species of European Conservation Concern <b>SPEC 4</b> Favourable conservation status ( <b>secure</b> ) but concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Annex I Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	31	1	23 (74% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	184,000	1,840	23 (<0.1% of biogeographical population)

GB population source: Ogilvie et al. 1996

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The global distribution of Mediterranean Gull is highly restricted, with breeding limited to just a few localities in Europe, particularly along the northern coast of the Black Sea, from the Danube Delta in the west to the Gulf of Sivash in the east. Breeding occurs very locally elsewhere: some parts of inland Russia, Turkey, the north coast of the Mediterranean including the Aegean and Adriatic Seas, The Netherlands, Britain, and locally in the Baltic. The species is monotypic.

In the UK, which is at the north-western limit of the species' world range, breeding first occurred as recently as 1968 on the south coast of England (Lloyd *et al.* 1991).

It is not known where the birds that breed in England spend the non-breeding season, but it seems likely that they use coastal areas near to the nesting colonies in south-east and south England. The few records from the Seabirds at Sea survey programme all come from the English Channel (Stone *et al.* 1995).

### 4. Population structure and trends

The European population is estimated at between 183,925–339,963 pairs. This comprises most of the world population with just a further 600–18,300 pairs occurring in Russia and Turkey (Hagemeyer & Blair 1997; Siokhin *et al.* 1988). Most of the world population breeds around the Black Sea and spends the winter in the Mediterranean.

The Mediterranean Gull was first recorded breeding in Britain in 1968 (Taverner 1970), and since 1979, pairs have bred successfully each year, reaching a current peak of 31 pairs. This expansion to Britain was a natural progression from a spread in range and increase in numbers across central and western Europe from the species' stronghold. There are no obvious causes of this spread and increase in population, though climate change must be an obvious possible factor. There is every indication that the expansion is set to continue.

## 5. Protection measures for population in UK

### *SPA suite*

During the breeding season, the UK's SPA suite for Mediterranean Gulls supports, on average, 23 pairs. This amounts to about 74% of the British breeding population, and less than 0.1% of the international population. The species does not regularly breed in Northern Ireland. The SPA suite contains five sites (Table 6.81.1) where Mediterranean Gull has been listed as a qualifying species.

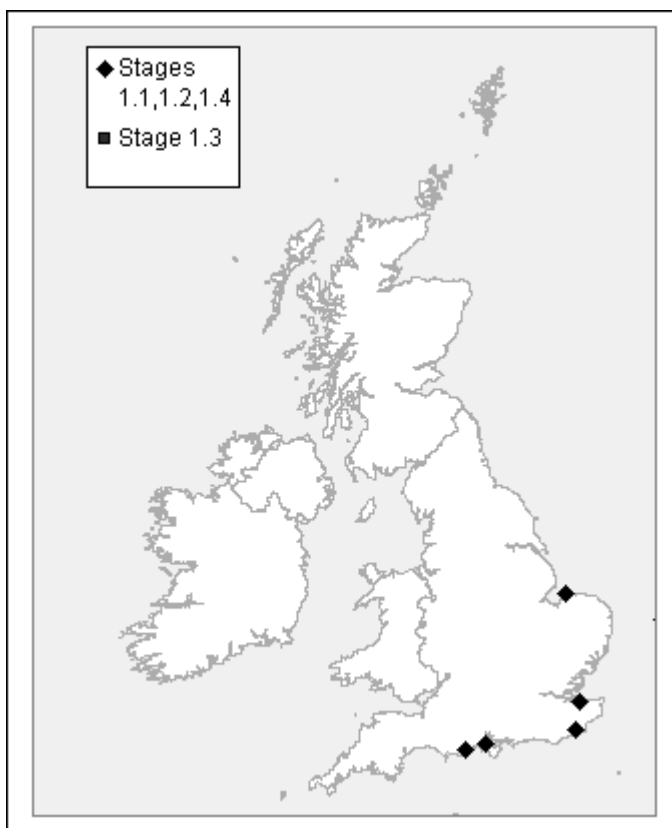
## 6. Classification criteria

All sites in the UK that were known to support more than 1% of the national Mediterranean Gull breeding population were considered under Stage 1.1, and all (The Swale; Poole Harbour; Dungeness to Pett Level; Solent and Southampton Water; and North Norfolk Coast) were selected after consideration of Stage 2 judgements.

The sites within the suite include all regular breeding localities in the UK, including sites on the south and east coasts of England. All these sites are multi-species SPAs, of importance also for a range of other breeding seabirds.

As the selection of sites under Stage 1.1 resulted in a suite which gives very good coverage of the population and breeding range Mediterranean Gulls in the UK, there was no need to consider additional sites for selection under Stage 1.4.

## Distribution map for Mediterranean Gull SPA suite



**Table 6.81.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Dungeness to Pett Level	2	<0.1	6	1.1
North Norfolk Coast	2	<0.1	6	1.1
Poole Harbour	5	<0.1	16	1.1
Solent and Southampton Water	2	<0.1	6	1.1
The Swale	12	<0.1	39	1.1
<b>TOTALS</b>	<b>23</b>	<b>&lt;0.1%</b>	<b>74%</b>	

## A6.82 Black-headed Gull *Larus ridibundus* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	167,000	1,670	15,582 (9% of GB population)
<b>Ireland</b>	53,800	538	33,000 (61% of all-Ireland population)
<b>Biogeographic population</b>	1,650,000	16,500	48,582 (3% of biogeographic population)

GB population source: Lloyd *et al.* 1991

Ireland population source: Gibbons *et al.* 1987

Biogeographic population source: Lloyd *et al.* 1991

### 3. Distribution

The Black-headed Gull has a global breeding range that extends from about 35°–65°N throughout the Palearctic from the Kamchatka Peninsula in the east, to the Atlantic seaboard in the west (Cramp & Simmons 1983). The species is monotypic.

In Europe, many colonies occur along the north-western coasts as well as a few areas around the Mediterranean. The largest coastal colonies are found in Sweden, Denmark, The Netherlands and Britain (Cramp *et al.* 1983). However, Black-headed Gulls also have an extensive inland breeding distribution, occurring in most European countries.

In Britain, coastal colonies are largest in southern and south-eastern England and along the Irish Sea, including a large colony in the Ribble estuary (20,000 pairs in 1985) (Lloyd *et al.* 1991). As elsewhere, inland colonies are more numerous than coastal sites, especially in north-west Ireland, Wales, north-west England and most of Scotland. These include some significant concentrations such as 33,000 nests in 1987 at Lough Neagh, Northern Ireland and 25,000 pairs at Sunbiggin Tarn in Cumbria (Lloyd *et al.* 1991).

Throughout the range, typical Black-headed Gull breeding habitats include bogs, marshes and man-made ponds. Dry sites next to water are also selected, such as heath-covered moorland, coastal sand-dunes, rocky islets and industrial waste dumps.

Outside the breeding season Black-headed Gulls range widely, occurring both at sea, as well as inland in much of western Europe (as far south as Spain). The species occurs through the Mediterranean as

well as in coastal and inshore areas of much of the north-east Atlantic (Cramp & Simmons 1983; Stone *et al.* 1995).

#### 4. Population structure and trends

There are six described biogeographic populations of Black-headed Gulls (Rose & Scott 1997), of which two occur in Europe (Mediterranean and North-western European populations). As most Black-headed Gulls breed inland throughout their global range, the species' breeding distribution and abundance in most countries is not precisely known. Coastal and inland breeding colonies in Britain and Ireland held at least 220,800 pairs in 1985–1987, or about 22% of the European total.

There has been a marked spread in northern Europe since the early 20th century and the recent colonisation of Italy (1960), Spain (1960), Greenland (1969) and Newfoundland (1977) would suggest this expansion is continuing. British and Irish populations have also reflected the increases that started during the 1900s (Cramp *et al.* 1983). More recent population changes have only been adequately documented for coastal sites, and these showed a slight increase of about 7% between 1969–1970 and 1985–1987 for Britain and Ireland as a whole (Lloyd *et al.* 1991). English coastal colonies showed an overall increase of more than 30%, whereas over the same period, a 55% decrease was recorded on Scottish coasts (particularly south-east Scotland). Coastal populations in Wales also declined.

In Ireland, numbers on the north-east coast increased by 70%, but elsewhere there were no clear trends. In some areas dramatic variations may occur, for example, a tenfold increase in east and west Sussex sites from 260 to 2,900 pairs between the two census dates (Gibbons *et al.* 1993). Such phenomena may, however, merely reflect movements between colonies. Inter-colony movements by breeding birds are known to occur inland (Gribble 1976), at least, in response to factors such as disturbance or fluctuations in water levels.

The most notable recent changes are the apparent loss of colonies in Scotland (probably a consequence of agricultural drainage) and north-west Ireland (Gibbons *et al.* 1993). The latter loss may be due in part to changes in census coverage but the decline in Scotland is unclear. There has not been any apparent increase in the amount of predation, flooding or other factors that have adversely affected coastal birds so the reason for the decline remains unknown.

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Black-headed Gulls supports, on average, 48,582 pairs. This amounts to about 9% of the British breeding population, 61% of the all-Ireland population, and about 3% of the international population. The SPA suite total is contained within four sites (Table 6.82.1) where Black-headed Gull has been listed as a qualifying species.

#### 6. Classification criteria

The single Black-headed Gull colony in the UK that supports more than 1% of the international breeding population (Lough Neagh and Lough Beg) was considered under Stage 1.2, and was selected after consideration of Stage 2 judgements. Additionally, the Alde – Ore Estuary, Coquet Island and the Ribble and Alt Estuaries were selected under Stage 1.3 (see section 5.3), since Black-headed Gulls were identified at those sites as an important component of a wider breeding seabird assemblage. All these sites are multi-species SPAs, important for a range of other seabirds.

The suite encompasses sites in Northern Ireland, and north and east England. Black-headed Gull has a wide distribution in the UK and is a very successful species. Accordingly, as the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives adequate coverage of the population and breeding range in the UK, there was no case to select additional sites using Stage 1.4.

Distribution map for breeding Black-headed Gull SPA suite

**Table 6.82.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Alde – Ore Estuary	1,582	0.1	1.0	1.3
Coquet Island	2,100	0.1	1.3	1.3
Lough Neagh and Lough Beg	33,000	2.0	61.3 (Ire)	1.2
Ribble and Alt Estuaries	11,900	0.7	7.1	1.3
<b>TOTALS</b>	<b>48,582</b>	<b>2.9%</b>	<b>9.3%</b> <b>61.3% (Ire)</b>	

## A6.83 Common Gull *Larus canus* (breeding)

### 1. Status in UK

Biological status		Legal status		Conservation status
Breeding	✓	Wildlife and Countryside Act 1981	<b>General Protection</b>	Species of European Conservation Concern <b>SPEC 2</b> Unfavourable conservation status ( <b>declining</b> ) and concentrated in Europe
Migratory	✓	Wildlife (Northern Ireland) Order 1985	<b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering	✓	EC Birds Directive 1979	<b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	68,000	680	18,264 (26% of GB population)
<b>Ireland</b>	3,600	36	264 (7% of all-Ireland population)
<b>Biogeographic population</b>	124,000	1,240	18,264 (15% of biogeographic population)

GB population source: Lloyd et al. 1991

All-Ireland population source: Gibbons et al. 1988

Biogeographic population source: Lloyd et al. 1991

### 3. Distribution

The Common Gull has a wide global distribution, breeding in temperate and sub-Arctic areas throughout the Palearctic (from Iceland, Britain and Ireland in the west, to the coasts of the Bering Sea in the east) as well as in north-west North America. The Common Gull is a polytypic species. Two sub-species occur in Europe: the nominate race *L. c. canus*, which is found from north-west Europe east to the White Sea, and *L. c. heinei* which breeds from the Kanin Peninsula, east to the Lena River. Two other races occur in other parts of the world range (*L. c. kamtchatschensis* in north-east Siberia and *L. c. brachyrhynchus* in north-west North America) (Cramp & Simmons 1983).

In Europe, the Common Gull only breeds in northern regions. In the Low Countries, Denmark, Germany and Poland, its breeding distribution is scattered and localised. In more northerly regions, such as Scotland and Scandinavia, Common Gull breeding distribution is more continuous. In Europe, the largest numbers of the nominate sub-species are in Norway and Sweden where most colonies are on, or near, the coast. Each of these countries holds about 14,000 pairs.

Within Britain and Ireland, the Common Gull is very much a breeding bird of the north and west, with only a few colonies being found in England and Wales. Over 90% occur in Scotland with a large proportion of these in Shetland and Orkney (Lloyd et al. 1991). Overall in Britain and Ireland, only about a fifth of Common Gulls breed on the coast, with the rest nesting inland. They are widely but sparsely distributed through inland Scotland, especially in the north, and there are many sites in north-west Ireland, as well as a few in the north of England.

Outside the breeding season, Common Gulls occur mainly at sea, as well as locally inland in parts of central Europe (Snow & Perrins 1998). There are particular concentrations in inshore waters of the southern North Sea, especially the international Wadden Sea and other parts of the Danish coast – notably the Kattegat (Stone *et al.* 1995).

#### 4. Population structure and trends

Lloyd *et al.* (1991) estimated the world population at between 578,000–585,000 pairs, although this seems to be a significant underestimate, since Hagemeyer & Blair (1997) estimated between 416,157–558,316 pairs in Europe alone. The biogeographic population used in this review is that of North-west and Central Europe, the Atlantic and the Mediterranean which amounts to 124,000 pairs.

During 1985–1987, the British Common Gull population was estimated at about 68,000 pairs, of which 53,000 occurred inland. For Ireland, the figure was 3,600 pairs and of these 2,700 were inland (Lloyd *et al.* 1991). Together the British and Irish populations comprise some 15% of the overall European population.

The Common Gull showed a marked population expansion in most parts of its range during the 20th century. This increase would appear to have slowed in some countries, whilst others, such as Denmark, have recently begun to show a decline. In Britain and Ireland, there has been an increase and spread since 1900. Cramp *et al.* (1974) mention new breeding sites at Scolt Head, Norfolk and an increase in numbers at Dungeness, Kent as evidence of the species continuing to extend its range southwards. Birds breeding in south-east England are believed to derive from the European continental population that migrates to Britain in the winter (Sharrock 1976).

Lack of complete census data from previous years makes it difficult to assess any likely changes in populations. Colonies for which past counts or estimates are available appear to show an increased or stable population since the mid-1970s. One colony on the Correen Hills (Tips of Corsemaul) was thought to hold 4,000–5,000 pairs of Common Gulls in 1976 (Bourne *et al.* 1978), whilst a more detailed survey in 1987 gave an estimate of 13,599–24,000 pairs (Tasker *et al.* 1991). Nearby, a large colony in the Mortlach Hills (Tom Mor) where 1,300 pairs were found in 1978 (A.F.G. Douse in Knox & Bell 1979), held between 5,000–6,700 pairs in 1988 (Tasker *et al.* 1991). In contrast, a survey of inland Common Gull colonies in the west of Ireland in 1977–1978, partially resurveyed in 1983, indicated a stable population (Whilde 1978, 1983).

Generally, there are insufficient data available to assess population trends since inland sites have received little survey attention in recent years. Gibbons *et al.* (1993), for example, found only a small change in the population since 1968–1972. The only comprehensive data available were for the coastal population of Britain and Ireland that had increased from 13,000 to 15,700 between 1969–1970 and 1985–1987 (Lloyd *et al.* 1991). As this population only constitutes 20% of the overall total of the British and Irish population, the significance of this change is not known.

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Common Gulls supports, on average, 18,264 pairs. This amounts to about 26% of the British breeding population, and about 7% of the all-Ireland population. The suite contains about 15% of the international population, and comprises three sites (Table 6.83.1) where Common Gull has been listed as a qualifying species.

#### 6. Classification criteria

The single Common Gull colony in the UK that supports more than 1% of the international breeding population (Tips of Corsemaul and Tom Mor) was considered under Stage 1.2, and was selected after consideration of Stage 2 judgements. This site is the largest known Common Gull breeding colony in the world and has a very long recorded history of occupancy, being known from at least the end of the 19th century (Buckland *et al.* 1990).

Additionally, Lough Neagh and Lough Beg, and Rathlin Island were selected under Stage 1.3 (see section 5.3), since Common Gulls were identified at those sites as forming an important component of a wider breeding seabird assemblage. Lough Neagh and Lough Beg, and Rathlin Island are both multi-

species SPAs, important for a range of other seabirds, although Tips of Corsemaul and Tom Mor has been selected solely on the basis of its importance for Common Gulls.

The suite encompasses sites in Northern Ireland and Scotland. Common Gulls elsewhere occur at relatively low densities in the UK and are widely dispersed. Accordingly, and as the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives adequate coverage of the population and breeding range in the UK, there was no case to select additional sites using Stage 1.4.

Distribution map for breeding Common Gull SPA suite

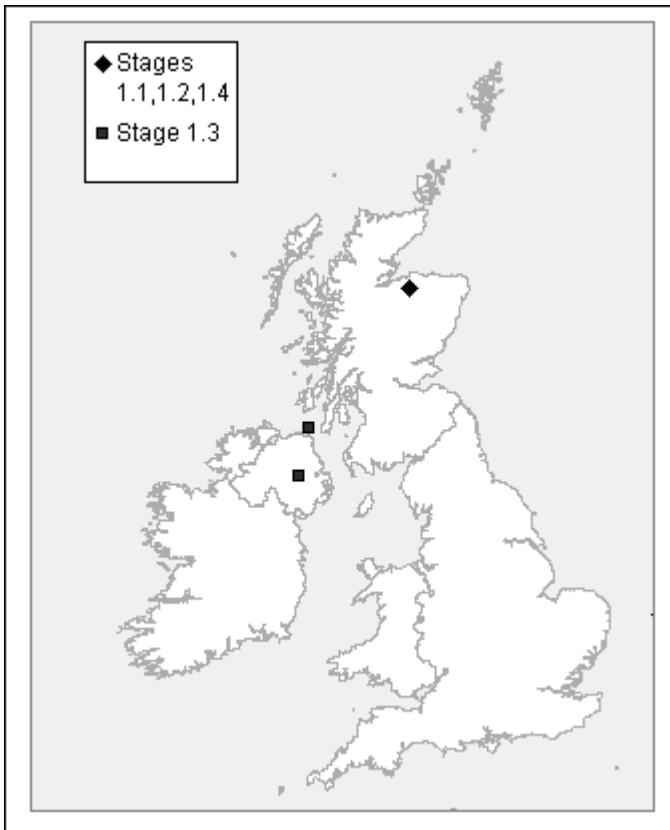


Table 6.83.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Lough Neagh and Lough Beg	200	0.2	5.6 (Ire)	1.3
Rathlin Island	64	<0.1	1.8 (Ire)	1.3
Tips of Corsemaul and Tom Mor (formerly Correen/Mortlach Hills)	18,000	14.5	26.5	1.2
<b>TOTALS</b>	<b>18,264</b>	<b>14.7%</b>	<b>26.5%</b> <b>7.3% (Ire)</b>	

## A6.84 Lesser Black-backed Gull *Larus fuscus*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern <b>SPEC 4</b> Favourable conservation status ( <b>secure</b> ) but concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	83,000	830	88,028 (c. 100% of GB population)
<b>Ireland</b>	5,200	52	605 (12% of all-Ireland population)
<b>Biogeographic population</b>	124,000	1,240	88,633 (71% of biogeographic population)

GB population source: Lloyd et al. 1991

All-Ireland population source: Gibbons et al. 1989

Biogeographic population source: Lloyd et al. 1991

### 3. Distribution

The Lesser Black-backed Gull has a restricted global breeding range that extends from Iceland east to the Taimyr peninsula and south to Portugal. In the eastern part of the range, the Lesser Black-backed Gull is an Arctic breeding bird, occurring largely in inland areas above the Arctic Circle and especially along major river valleys (Rogačeva 1992). Further west, breeding occurs south to about 40°N on the coast of Portugal. In western Europe, Lesser Black-backed Gulls have a largely coastal breeding distribution with colonies occurring only short distances from the coast.

The species is polytypic, with five sub-species described, of which four occur in Europe. The nominate race *L. f. fuscus* breeds in northern Norway, Sweden and the western part of the Kola Peninsula. All the birds that breed in Britain and Ireland belong to the race *L. f. graellsii* whose range also includes Iceland, France and north-west Spain. The sub-species *L. f. intermedius* breeds in The Netherlands and Denmark, whilst *L. f. heuglini* breeds from the southern Kola Peninsula to the Yenisey. A further race is found further east in Russia breeding from the Yenisey east to the Taimyr (Cramp & Simmons 1983).

Other than in Finland and around the White Sea, the European distribution of Lesser Black-backed Gulls is largely restricted to coastal areas.

The species is widespread throughout Britain and Ireland with possibly a more southerly distribution than the closely related Herring Gull. The west coasts of England and Wales hold upwards of 58% of the coastal breeding population and there is another marked concentration of colonies in central Scotland. In Ireland, far more birds breed inland than on the coast, especially in the west of the country (Lloyd et

*al.* 1991). Lesser Black-backed Gulls share many colonies with Herring Gulls, though the former tend to favour more vegetated breeding habitats.

Lesser Black-backed Gulls are highly migratory, and outside the breeding season birds move south along the west coasts of Europe and Africa. Coastal wintering birds occur as far as the coast of Nigeria, and there is some evidence from ringing recoveries of birds wintering inland in the Inner Niger Delta (Cramp & Simmons 1983). At least some birds remain in northern waters, with sightings of birds at sea around Britain and Ireland in all months of the year (Stone *et al.* 1995).

#### 4. Population structure and trends

The European population of Lesser Black-backed Gulls has been estimated at between 212,377–229,522 pairs (Hagemeijer & Blair 1997), although this total includes birds of several subspecies as noted above. The total *L. f. graellsii* population amounts to about 124,000 pairs (Lloyd *et al.* 1991) and this is the biogeographic population used in this review. In 1985–1987, there were 88,200 Lesser Black-backed Gulls breeding in Britain and Ireland – about 71% of total *L. f. graellsii* numbers.

Like many other seabird species, the Lesser Black-backed Gull has expanded its range and abundance during much of the 20th century. The species first bred in Iceland, The Netherlands and Germany during the 1920s and 1930s. It also recolonised northern France over the same period. In another expansion episode, Spain and Portugal were colonised in the 1970s (Cramp *et al.* 1983). More recently, some populations have been showing signs of decline (Finland, Sweden and Denmark) (Lloyd *et al.* 1991), though in Britain and Ireland numbers increased by about 25% between 1969–1970 and 1985–1987.

The census of 1985–1987 found most Lesser Black-backed Gull colonies to be located in the west of England and Wales, between Cumbria and the Isles of Scilly. Nearly 79% of the total bred in 17 major colonies, each holding over 500 pairs. The largest coastal sites were at Skomer Island (13,205 pairs) and South Walney in Cumbria (10,000). The latter site has more recently been abandoned with birds moving to the Bowland Fells. Other large colonies with more than 2,000 pairs were found at Little Cumbrae in the Firth of Clyde (3,000) (now in decline), and at Orfordness, Suffolk (5,000) (Lloyd *et al.* 1991). As noted above, there have been significant changes in numbers at many of the formerly important breeding colonies, often with birds re-locating to other sites.

Breeding Lesser Black-backed Gull numbers in 1969–1970 in coastal Britain and Ireland were assessed at 50,100 pairs, although increases over many areas had, by 1985–1987, brought the total to an estimated 64,500. Coastal colonies in England between 1969–1970 and 1985–1987 remained stable, but increases were recorded in Scotland (55%), in Wales (65%) and Ireland (29%) (Lloyd *et al.* 1991). Problems with the census techniques make interpretation of the data difficult for some areas but there was a general upward trend in breeding numbers between 1969–1970 and 1985–1987. A highly significant increase in the number of gulls breeding on the shingle spit of Orfordness, Suffolk was recorded. The first pairs of Lesser Black-backed Gulls became established in the mid-1960s on then Ministry of Defence land. By 1986, the colony had grown to 5,000 pairs (Thomas *et al.* 1982) and by 1997 the figure was 19,700 (Cormack & Lohar 1999). It was concluded by Thomas *et al.* (1982) that such increases in gull numbers could only have occurred by the immigration of birds into the colony but it was not known from which sources.

Birds nesting inland or at urban sites have not been included in recent seabird surveys, and a number of the inland sites have been culled in recent years, generally on human health grounds. Lloyd (1991) estimated the total inland breeding population of Lesser Black-backed Gulls in Britain in the 1980s to be about 20,000 pairs.

In Ireland, far more birds breed inland than on the coast, particularly in the west of the country. Some 200 pairs were located on the islands of Upper and Lower Lough Erne in 1986. An earlier survey in 1978 found 2,500 pairs in the west of Ireland, mainly on Lough Corrib, Galway (Whilde 1978). A repeat survey in 1983 suggested little change had occurred (Whilde 1983).

## 5. Protection measures for population in UK

### SPA suite

In the breeding season, the UK's SPA suite for Lesser Black-backed Gulls supports, on average, 88,633 pairs. This is virtually the whole of the British breeding population, and about 12% of the all-Ireland population. The suite contains about 71% of the international population (total numbers of *L. f. graellsii*), and comprises ten sites (Table 6.84.1) where Lesser Black-backed Gull has been listed as a qualifying species.

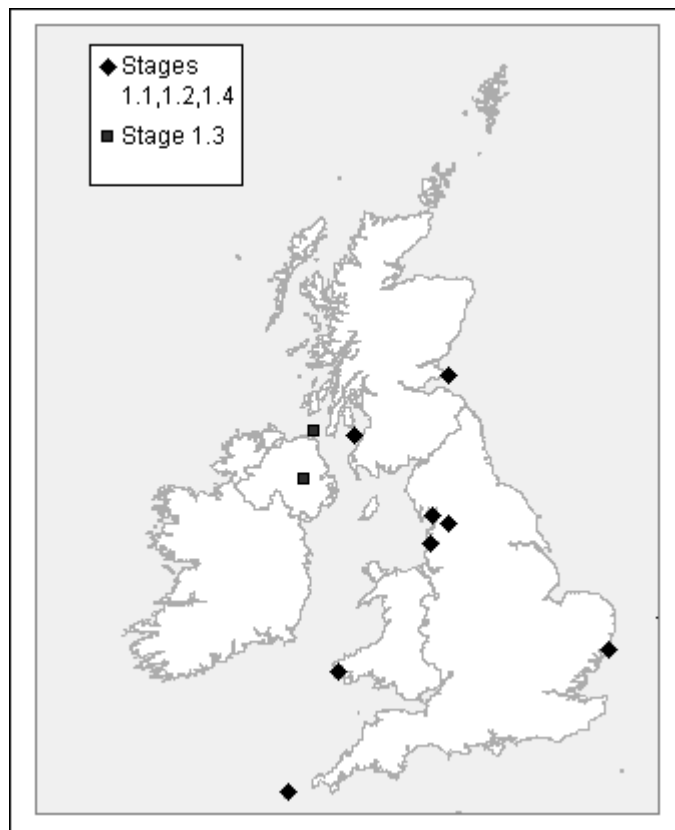
## 6. Classification criteria

The eight Lesser Black-backed Gulls colonies in the UK that support more than 1% of the international breeding population (Ailsa Craig; Alde – Ore Estuary; Bowland Fells; Firth of Forth Islands; Isles of Scilly; Morecambe Bay; Ribble and Alt Estuaries; and Skomer and Skokholm) were considered under Stage 1.2, and all were selected after consideration of Stage 2 judgements. Additionally, Lough Neagh and Lough Beg, and Rathlin Island were both selected under Stage 1.3 (see section 5.3), with Lesser Black-backed Gull identified as an important component of wider breeding seabird assemblages at these localities.

All the sites selected are multi-species SPAs, important for a range of other birds.

The suite encompasses ten sites in Northern Ireland, England, Wales and Scotland. As the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives adequate coverage of the population and breeding range in the UK, it was not considered necessary to select additional sites using Stage 1.4.

### Distribution map for breeding Lesser Black-backed Gull SPA suite



**Table 6.84.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Ailsa Craig	1,800	1.5	2.2	1.2
Alde – Ore Estuary	21,700	17.5	26.1	1.2
Bowland Fells	13,900	11.2	16.8	1.2
Firth of Forth Islands	2,920	2.4	3.5	1.2
Isles of Scilly	3,608	2.9	4.4	1.2
Lough Neagh and Lough Beg	450	0.4	8.7 (Ire)	1.3
Morecambe Bay	22,000	17.7	26.5	1.2
Rathlin Island	155	0.1	3.0 (Ire)	1.3
Ribble and Alt Estuaries	1,800	1.5	2.2	1.2
Skomer and Skokholm	20,300	16.4	24.5	1.2
<b>TOTALS</b>	<b>88,633</b>	<b>71.4%</b>	<b>100%</b> <b>11.6% (Ire)</b>	

## A6.85 Herring Gull *Larus argentatus* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	160,000	1,600	50,613 (32% of GB population)
<b>Ireland</b>	44,700	447	4,037 (9% of all-Ireland population)
<b>Biogeographic population</b>	940,000	9,400	54,650 (6% of biogeographic population)

GB population source: Lloyd et al. 1991

All-Ireland population source: Gibbons et al. 1993

Biogeographic population source: Lloyd et al. 1991

### 3. Distribution

The Herring Gull has a wide and complex distribution through the northern hemisphere, with three main centres: north-west Europe, including Iceland; eastern Arctic Russia from the eastern part of the Taimyr to the Bering Sea; and the northern part of North America. Herring Gull is a polytypic species with an extremely complex taxonomy<sup>26</sup>. The north-west European Herring Gulls are of two subspecies. The nominate race *L. a. argentatus* breeds from Denmark, through Scandinavia to the White Sea and Kola Peninsula. Birds breeding elsewhere in Europe (mainly France, Britain, Ireland, Iceland and the Low Countries) belong to the race *L. a. argenteus*. Each of the two other centres of distribution is occupied by other races of Herring Gull (Cramp & Simmons 1983).

Through most of its European range, the Herring Gull is largely a coastal breeder, although in some Baltic countries and especially in Finland and north-western Russia (Kola Peninsula) it has an extensive inland breeding distribution. The species breeds around most of the coast of the UK, being absent only from a few areas in eastern England (Gibbons *et al.* 1993).

The Herring Gull is a very adaptable and successful species. It breeds in a wide variety of habitats including steep cliffs, scree slopes, rocky outcrops and small islands, as well as beaches and inland sites such as moorland and, more recently, buildings (Cramp & Simmons 1983). The main centres of

<sup>26</sup> "Systematics of the Herring Gull and its close relatives represent one of the most complex challenges in ornithology, and typify the discord between evolution, biogeography, reproductive isolation, and taxonomy" del Hoyo *et al.* 1996.

the breeding population are found in north-east Caithness and on the western seaboard in Argyll, Bute, Cumbria, and Down in Northern Ireland. In 1985–1987, colonies holding 4,000 or more breeding pairs were found on Inchkeith in the Firth of Forth (4,100 pairs) and, on the east coast of Ireland, on Rathlin Island (4,000 pairs), the Copeland Islands (7,000 pairs), and Lambay (5,500 pairs).

Outside the breeding season, Herring Gulls range widely in the seas around northern Europe, especially in inshore waters around the southern North Sea (including the English Channel) and the Kattegat (Stone *et al.* 1995).

#### 4. Population structure and trends

The Herring Gull is the most numerous of the larger gulls breeding in Britain and Ireland. The European breeding population (of both *L. a. argentatus* and *L. a. argenteus*) amounts to 757,945–830,567 pairs (Hagemeijer & Blair 1997).

Within north-west Europe, Britain and Ireland has the greatest number of breeding Herring Gulls, with over 178,000 pairs or about 20% of the birds breeding in Europe (Hagemeijer & Blair 1997). Large numbers also occur in Norway (*c.* 175,000 pairs). Numbers on the coasts of the Barents and White Seas are not known but are probably between 100,000 and 200,000 (Golovkin 1984). The world population is probably almost 2 million pairs.

Overall, numbers of Herring Gulls increased in Britain at an estimated 10–13% per year from the 1940s until the mid-1970s. Many existing colonies expanded and new ones were established, and the species colonised many inland and urban sites during this period. The Herring Gull's success, like many other gull species, has been attributed to the relaxation of human persecution and new food resources such as fishing boats, rubbish tips, sewage outfalls, and fish factories. Overwinter survival may have been enhanced (Harris 1970) and some birds that fed at rubbish tips and fish docks may have bred more successfully (Davis 1974). In many areas, the availability of abundant discarded fish at sea will have resulted in increases in numbers (Hudson & Furness 1988; Camphuysen *et al.* 1995).

Lloyd *et al.* (1991) estimated that 204,000 pairs of Herring Gulls bred in Britain in 1985–1987. About half of these bred in Scotland and over 20% in England. Herring Gull numbers declined throughout all areas of Britain and Ireland between the two population censuses of 1969–1970 (which found 335,000 pairs) and 1985–1987. The major declines appeared to be in colonies in the west where numbers were estimated to have more than halved in north and west Scotland, the south-east and south-west of Ireland, Wales and south-west England (Lloyd *et al.* 1991).

In the west of Scotland, Lloyd *et al.* (1991) found the species' status to be less clear; some colonies increased after 1969 whilst others declined. By 1985–1987 however, there had been an overall decrease of between 20% and 25% in the number of pairs breeding. In the south-west of Scotland all the colonies that had held over 500 pairs in 1969–1970 either remained stable or had declined, *e.g.* Treshnish Islands, west Jura, Inchmarnock Island. Only Little Cumbrae in the Firth of Clyde had expanded from 700 pairs in 1969–1970 to 3,500 pairs in 1985–1987.

In contrast, a survey of gulls nesting in urban areas (Monaghan & Coulson 1977) found 3,000 pairs of Herring Gulls on buildings in Britain. Numbers had increased by 17% since 1969 and other records would seem to indicate that this increase continued into the 1980s. The situation is clearly complex, for there are also inland sites that show declines.

Only a few sites ran counter to the downward trend between 1969–1970 and 1985–1987. At Orfordness in Suffolk numbers grew from 150 pairs in 1969 to nearly 1,400 in 1973 (Lloyd *et al.* 1991). The colony remained more or less stable until 1981 and increased again to 3,390 pairs in 1986. A census in 1993 found 3,691 pairs present (Crewe 1994) which by 1999 had reached 4,750 pairs (Cormack & Lohor 1999). The only other places where Herring Gulls were seen to increase between 1969–1970 and 1985–1987 were in south-west Scotland (Isle of Skye to Kyle and Carrick) and on the adjacent coast of Northern Ireland. The increase in Ireland was due mainly to several large colonies on islands off the coast of Down. These increases occurred against a general decline in all other Irish colonies.

## 5. Protection measures for populations in UK

### SPA suite

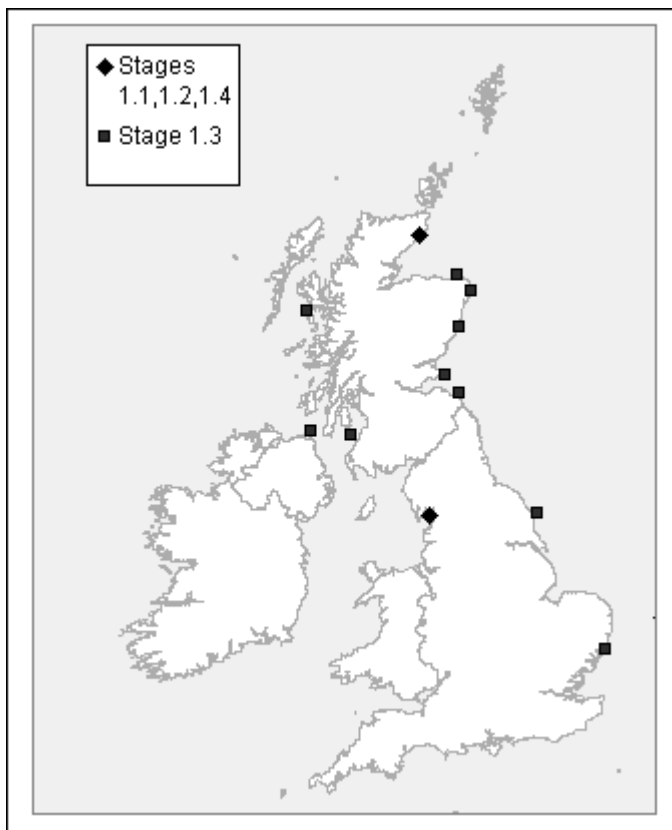
In the breeding season, the UK's SPA suite for Herring Gulls supports, on average, 54,650 pairs. This amounts to about 32% of the British breeding population and 9% of the all-Ireland population. The suite contains about 6% of the international population within 12 sites (Table 6.85.1) where Herring Gull has been listed as a qualifying species.

## 6. Classification criteria

The two Herring Gull colonies in the UK that support more than 1% of the international breeding population (East Caithness Cliffs and Morecambe Bay) were considered under Stage 1.2, and both were selected after consideration of Stage 2 judgements. At an additional ten sites (Ailsa Craig; Alde – Ore Estuary; Buchan Ness to Collieston Coast; Canna and Sanday; Firth of Forth Islands; Flamborough Head and Bempton Cliffs; Fowlsheugh; Rathlin Island; St Abb's Head to Fast Castle; and Troup, Pennan and Lion's Head), Herring Gull was identified as an important component of a wider breeding seabird assemblage. Accordingly, these sites were selected under Stage 1.3 (see section 5.3), after consideration of Stage 2 judgements. All sites selected are multi-species SPAs, important for a range of other seabirds.

The suite encompasses sites in Northern Ireland, both the west and east coasts of Scotland, as well as western and eastern England. Herring Gulls have a wide breeding distribution in the UK and, as the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives adequate coverage of the population and breeding range in the UK, it was not considered necessary to select additional sites using Stage 1.4.

### Distribution map for breeding Herring Gull SPA suite



**Table 6.85.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Ailsa Craig	2,250	0.2	1.4	1.3
Alde – Ore Estuary	6,050	0.6	3.8	1.3
Buchan Ness to Collieston Coast	4,292	0.5	2.7	1.3
Canna and Sanday	1,391	0.2	0.9	1.3
East Caithness Cliffs	9,370	1.0	5.9	1.2
Firth of Forth Islands	6,600	0.7	4.1	1.3
Flamborough Head and Bempton Cliffs	1,110	0.1	0.7	1.3
Fowlsheugh	3,190	0.3	2.0	1.3
Morecambe Bay	11,000	1.2	6.9	1.2
Rathlin Island	4,037 <sup>27</sup>	0.4	9.0 (Ire)	1.3
St Abb’s Head to Fast Castle	1,160	0.1	0.7	1.3
Troup, Pennan and Lion’s Heads	4,200	0.5	2.6	1.3
<b>TOTALS</b>	<b>54,650</b>	<b>5.8%</b>	<b>31.7%</b> <b>9.0% (Ire)</b>	

27 Surveys in 1999 found a massive decline in numbers at this site with just 14 breeding pairs present.

## A6.86 Great Black-backed Gull *Larus marinus* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern <b>SPEC 4</b> Favourable conservation status ( <b>secure</b> ) but concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	19,000	190	4,457 (23% of GB population)
<b>Ireland</b>	4,500	45	No SPAs selected in Northern Ireland
<b>Biogeographic population</b>	95,546	955	4,457 (5% of biogeographic population)

*GB population source: Lloyd et al. 1991*

*All-Ireland population source: Gibbons et al. 1993*

*Biogeographic population source: Hagemeyer & Blair 1997*

### 3. Distribution

The Great Black-backed Gull is the largest and most maritime of the six *Larus* gulls that breed regularly in Britain and Ireland. Its global breeding range extends around the coasts of the North Atlantic: from Chesapeake Bay on the east coast of the USA, up the eastern coast of Canada, Greenland, Iceland, Svalbard, and the coasts of Scandinavia and the Baltic through to the White Sea. In the east Atlantic, the range extends south to include Britain, Ireland and France. The species is monotypic.

In Europe, Great Black-backed Gulls breed in Brittany and on the west coasts of Britain and Ireland. They are largely absent from southern and western coasts of the North Sea, but breed around the Baltic Sea from Estonia almost continuously to the White Sea (Cramp & Simmons 1983).

Great Black-backed Gulls breed around much of the UK coastline, from the Solent to Shetland. They are largely absent in the breeding season from the east coast of England and Scotland. In 1985–1987 around 70% of the total coastal population bred in Scotland (Lloyd *et al.* 1991). The majority of these colonies were found in Orkney, Shetland and the Western Isles. North Rona (733 pairs) was the only Scottish island outside Orkney to hold over 200 pairs (Gibbons *et al.* 1993). The remainder of the population occurred in England – mainly the south-west (7%), and Wales (2%). Only two of the Irish colonies recorded in 1985–1987 held over 200 pairs: Duvillaun Islands off Mayo and a site in the Basket Islands off Kerry. Other smaller colonies were found in Donegal, Dublin, Cork, Galway and Wexford.

Great Black-backed Gulls are generally coastal breeders nesting on islands or on top of rocky stacks. A small number of gulls nest inland on moorland or beside lochs.

Outside the breeding season, Great Black-backed Gulls range widely in the seas around northern Europe, especially inshore waters around the North Sea (Stone *et al.* 1995).

#### 4. Population structure and trends

The European breeding population of Great Black-backed Gulls is estimated at between 95,546–121,233 pairs (Hagemeijer & Blair 1997). As the species is monotypic the minimum figure of this range is considered as the biogeographical population for the purposes of this review.

The total breeding numbers of Great Black-backed Gulls in Russia and Iceland are not known with any precision, but the world population was estimated by Lloyd *et al.* 1991 as between 120,000–240,000 pairs. In 1985–1987, the British population was estimated at 19,000 pairs and the Irish population at 4,500 pairs (Lloyd *et al.* 1991). The combined British and Irish total of 23,500 pairs represents about 25% of the estimated European population and around 10% of the world population.

From near elimination in the 19th century, there was a strong and widespread increase in the British and Irish populations. The trend began around 1880 and continued for most of the 20th century (Parslow 1967). This reflected a more general spread and increase during the 20th century over most of the species' range on both sides of the Atlantic, although the breeding populations of Britain and Ireland appeared to be stable by the 1970s and 1980s (Cramp *et al.* 1983). Great Black-backed Gulls colonised Svalbard, Denmark and France in the 1920s and 1930s and have recently spread north to the North West Territories of Canada (Brown & Nettleship 1984). One large increase occurred at the colony on Ainov Island in the Barents Sea which grew tenfold between 1958 and 1984 to 6,000 pairs (Golovkin 1984). The largest North American colony, off Long Island, New York, held over 2,000 pairs in 1983 (Buckley & Buckley 1984). By comparison, the largest Great Black-backed Gull colony in Britain and Ireland was the Calf of Eday, Orkney with 800 pairs in 1986.

The reasons for this expansion are unclear but there could be a number of factors, including the enactment of bird protection measures at the end of the 19th century which helped to ease the persecution and egg collecting that had formerly kept numbers of Great Black-backed Gulls and other seabirds low. The greater availability of discarded fish and offal at sea (Hudson & Furness 1988; Camphuysen *et al.* 1995) and access to food at landfill sites have probably also helped cause the increase.

Great Black-backed Gull numbers in Britain and Ireland appeared to have altered little between 1969–1970 (22,500 pairs) and 1985–1987 (23,300 pairs) although the latter total includes a possible census error (Lloyd *et al.* 1991). Small declines occurred in the north of Scotland and the Channel Islands, whereas there were small increases in Northern Ireland, Cumbria and the Isle of Man. The few colonies in north-west Ireland counted in both 1969–1972 and 1986–1987 showed increases of 60–70%, but this figure is based on a very incomplete set of data. Breeding pairs on the Isles of Scilly varied from 1,200 to 1,600 pairs between 1969 and 1983, but declined to 1,000 pairs by 1987 (Birkin & Smith 1987). The small Welsh breeding population declined by more than half between 1969 and 1983. The main losses were in the colonies of Midland, Skomer and St Margaret's; each had over 100 pairs in 1969 but these had reduced to between 20–40 pairs in 1985–1987 (Lloyd *et al.* 1991).

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Great Black-backed Gulls supports, on average, 4,457 pairs. This amounts to about 23% of the British breeding population, and about 5% of the international population. Within an all-Ireland context, there have been no SPAs selected in Northern Ireland. The SPA suite contains six sites (Table 6.86.1) where Great Black-backed Gull has been listed as a qualifying species.

#### 6. Classification criteria

No Great Black-backed Gull colonies in the UK hold more than 1% of the international breeding population. At six sites (Calf of Eday; Copinsay; East Caithness Cliffs; Hoy; Isles of Scilly; North Rona

and Sula Sgeir) however, Great Black-backed Gull occurs as an important component of a wider breeding seabird assemblage. Accordingly, these six sites were selected under Stage 1.3 (see section 5.3), after consideration of Stage 2 judgements. By definition, all these sites are multi-species SPAs, important for a range of other seabirds. There is a very long history of occupation at some of the selected SPAs (Holloway 1996), with written records for some colonies dating from the 19th century.

The suite encompasses sites in northern Scotland as well as south-west England. Outside the SPA suite, Great Black-backed Gulls generally occur at low densities and are widely distributed. Accordingly, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for breeding Great Black-backed Gull SPA suite

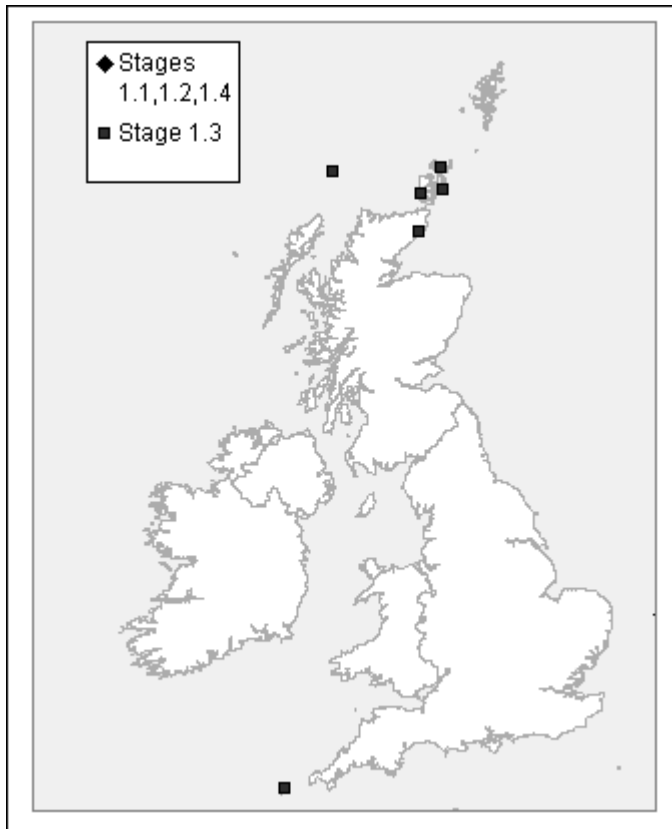


Table 6.86.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Calf of Eday	938	0.9	4.9	1.3
Copinsay	600	0.6	3.2	1.3
East Caithness Cliffs	850	0.9	4.5	1.3
Hoy	570	0.6	3.0	1.3
Isles of Scilly	766	0.8	4.0	1.3
North Rona and Sula Sgeir	733	0.8	3.9	1.3
<b>TOTALS</b>	<b>4,457</b>	<b>4.7%</b>	<b>23.5%</b>	

## A6.87 Kittiwake *Rissa tridactyla* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	490,000	4,900	383,775 (78% of GB population)
<b>Ireland</b>	50,200	502	6,822 (14% of all-Ireland population)
<b>Biogeographic population</b>	3,170,000	31,700	390,597 (12% of biogeographic population)

GB population source: Lloyd et al. 1991

All-Ireland population source: Gibbons et al. 1993

Biogeographic population source: Lloyd et al. 1991

### 3. Distribution

The Kittiwake has a circumpolar distribution throughout the temperate and Arctic zones of the northern hemisphere. Breeding colonies are found on both sides of the Atlantic from the Gulf of St. Lawrence to Portugal, from the southern Kuril Islands to Greenland and the high Arctic islands of the Arctic Ocean. Kittiwakes are polytypic, with two sub-species described. The nominate race *R. t. tridactyla* occurs in its North Atlantic range, whilst another sub-species occurs throughout the North Pacific.

The Kittiwake is a colonial breeding seabird and occurs discontinuously along the shores of north-west Europe, from the coasts of Portugal and Galicia (north-west Spain) in the south, through Brittany (France), Ireland and Britain, Iceland and along Scandinavian coasts to the Kola Peninsula. In the UK, Kittiwakes occur on most coasts, although there are few colonies on the south and east coasts of England.

The steep sea cliffs favoured for nesting are often shared with other seabirds, particularly Guillemot, and include some of the most impressive seabird colonies in Britain. Hence, a high percentage of the British Kittiwake population nests in northern Scotland and along the North Sea coast south to East Yorkshire. Smaller colonies are widespread but are often separated by long stretches of unoccupied coast. From Lincolnshire around to Dorset, there are few colonies, generally reflecting a shortage of suitable cliff sites. At Lowestoft, Suffolk, old buildings and a pier are used as nesting sites. At Sizewell, another Suffolk site, birds have colonised the offshore rigs associated with the cooling system of the nearby nuclear power station (Crewe 1998).

Outside the breeding season, Kittiwakes range widely in the seas around northern Europe. Between November and March they occur especially in offshore areas, although at other times of the year they move closer inshore to feed (Stone *et al.* 1995).

#### 4. Population structure and trends

A total of 540,200 pairs breed in Britain and Ireland (50,200 in Ireland, 490,000 in Britain). This combined total represents about 31% of total numbers in Europe. In many parts of the Kittiwake's range, precise breeding numbers are unknown, but it seems likely that at least half the world population breed in Svalbard, Iceland and the Faeroe Islands (Lloyd *et al.* 1991). Together, these areas probably support three million breeding pairs with a further 1,250,000 breeding in Alaska.

The Bempton-Flamborough cliffs hold possibly the largest colony (83,700 pairs in 1986) in the North Atlantic (Lloyd *et al.* 1991). Other colonies holding over 10,000 breeding pairs include Handa (Sutherland), Fair Isle (Shetland), St Abb's Head (Borders) and Fowlsheugh (Grampian).

Along with many other seabird species, the Kittiwake began to expand its range after protection measures came into force at the beginning of the 20th century. There was a range extension southwards between the late 1930s and the 1970s. Over this period, Kittiwakes colonised Denmark, Sweden and more recently Spain and Portugal. They have recolonised Helgoland (Germany) and spread south into France (Cramp *et al.* 1983). Breeding numbers have probably increased throughout the species' range during the 20th century though there are signs that this is slowing in Alaska, Denmark, the Faeroe Islands, Britain and Ireland (Lloyd *et al.* 1991).

The first complete census of Kittiwakes was made in 1969–1970 and the results showed that the total population for Britain and Ireland was in excess of 400,000 pairs with 75% of these birds nesting on the east coast and in Shetland and Orkney (Cramp *et al.* 1974). In that period the large Bempton-Flamborough, Yorkshire colonies held 30,800 pairs.

The second complete census of Kittiwakes was in 1985–1987. An outline of the census results is given by (Lloyd *et al.* 1991). Then 540,000 Kittiwakes were nesting in Britain and Ireland. Of these, 70% bred in Scotland and about 25% in England, Wales, the Channel Islands and the Isle of Man. Less than 10% were found in Ireland. Overall, the entire breeding population had increased by about 20% between 1969 and 1987 with major changes only in limited areas. Numbers in Scotland remained stable overall because declines in places like Orkney, the Moray Firth, and Dumfries and Galloway were offset by increases in all other areas. In Ireland, some coastline in Donegal was not surveyed in 1985–1987, but allowing for this, numbers still showed a decline in north-west Ireland between 1969–1970 and 1985–1987. In contrast, on the east coast and particularly Antrim, colonies showed an increase, so that the overall situation in Ireland was a stable population. In England, the huge Bempton-Flamborough colonies showed little growth with an increase of only 2% per annum being recorded – the slowest since 1950. Other colonies in England and Wales, however, showed growth of about 8% a year over the same period.

Coulson (1983) suggested that food availability during the breeding season was probably the most likely factor behind regional fluctuations in population status. The implication was that food stocks were highest on the North Sea coast but even here, changes in fish stocks may be having an adverse affect on Kittiwakes. A North Shields colony studied by Coulson & Thomas (1985) recorded a gradual decline in Kittiwake numbers, breeding success and adult survival, which paralleled a decline in North Sea herring stocks. In Shetland, there is strong evidence that Kittiwake decline is linked to sandeel availability (Monaghan 1992; Hamer *et al.* 1993), although skua predation is also a significant factor (Heubeck *et al.* 1999).

#### 5. Protection measures for population in UK

##### *SPA suite*

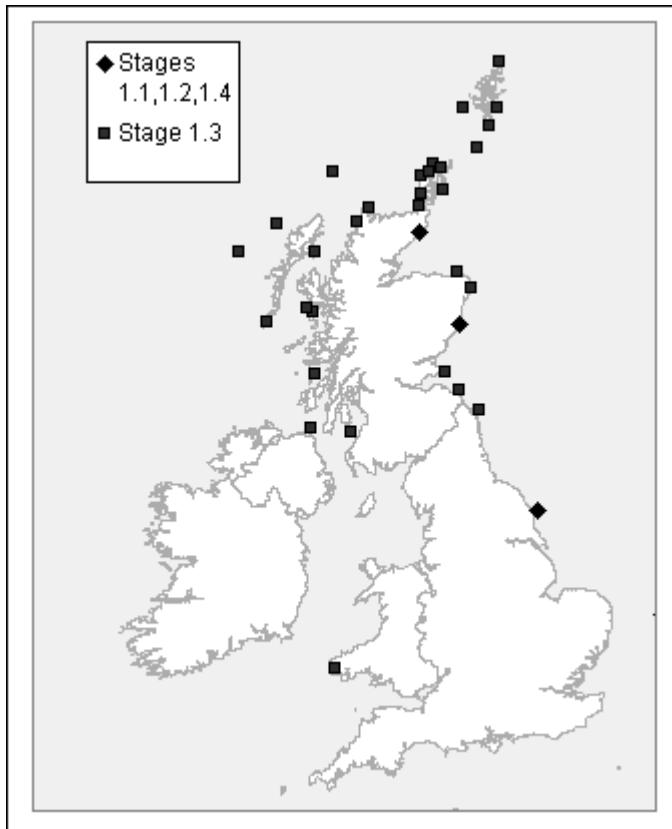
In the breeding season, the UK's SPA suite for Kittiwake supports, on average, 390,597 pairs. This amounts to about 78% of the British breeding population, and about 14% of the all-Ireland population. The suite contains about 12% of the international (North Atlantic) population. The SPA suite total is contained within 33 sites (Table 6.87.1) where Kittiwakes are a qualifying species.

## 6. Classification criteria

The three Kittiwake colonies in the UK that support more than 1% of the international breeding population (East Caithness Cliffs; Flamborough Head and Bempton Cliffs; and Fowlsheugh) were considered under Stage 1.2, and all were selected after consideration of Stage 2 judgements. At an additional 30 sites (Table 6.87), Kittiwake was identified as an important component of a wider breeding seabird assemblage. Accordingly, all these sites were selected under Stage 1.3 (see section 5.3), after consideration of Stage 2 judgements. All sites selected are multi-species SPAs, important for a range of other seabirds. A number have a very long history of occupancy with written records from at least the latter part of the 19th century (Holloway 1996).

The suite encompasses sites in Northern Ireland, the west, north and east coasts of Scotland, as well as south-west Wales and eastern England, and thus spread throughout the breeding range of the Kittiwake. As the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives adequate coverage of the population and breeding range in the UK, it was not considered necessary to select additional sites using Stage 1.4.

### Distribution map for breeding Kittiwake SPA suite



**Table 6.87.1 – SPA suite**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Ailsa Craig	3,100	0.1	0.6	1.3
Buchan Ness to Collieston Coast	30,452	0.96	6.2	1.3
Calf of Eday	1,717	<0.1	0.4	1.3
Canna and Sanday	1,193	<0.1	0.2	1.3
Cape Wrath	9,660	0.3	2.0	1.3
Copinsay	3,610	0.1	0.7	1.3
East Caithness Cliffs	31,930	1.0	6.5	1.2
Fair Isle	9,660	0.3	2.0	1.3
Farne Islands	6,236	0.2	1.3	1.3
Firth of Forth Islands	9,380	0.3	1.9	1.3
Flamborough Head and Bempton Cliffs	83,370	2.6	17.0	1.2
Flannan Isles	2,800	<0.1	0.6	1.3
Foula	3,840	0.1	0.8	1.3
Fowlsheugh	34,870	1.1	7.1	1.2
Handa	7,420	0.2	1.5	1.3
Hermaness, Saxa Vord and Valla Field	1,710	<0.1	0.4	1.3
Hoy	3,000	<0.1	0.6	1.3
Marwick Head	7,110	0.2	1.5	1.3
Mingulay and Berneray	8,610	0.3	1.8	1.3
North Caithness Cliffs	15,650	0.5	3.2	1.3
North Colonsay and Western Cliffs	4,512	0.1	0.9	1.3
North Rona and Sula Sgeir	5,040	0.2	1.0	1.3
Noss	4,270	0.1	0.9	1.3
Rathlin Island	6,822	0.2	13.6 (Ire)	1.3
Rousay	4,900	0.2	1.0	1.3
Rum	1,500	<0.1	0.3	1.3
Shiant Isles	1,850	<0.1	0.4	1.3
Skomer and Skokholm	1,959	<0.1	0.4	1.3
St Abb's Head to Fast Castle	19,600	0.6	4.0	1.3
St Kilda	7,800	0.3	1.6	1.3
Sumburgh Head	1,366	<0.1	0.3	1.3
Troup, Pennan and Lion's Heads	31,660	1.0	6.5	1.3
West Westray	24,000	0.8	4.9	1.3
<b>TOTALS</b>	<b>390,597</b>	<b>12.3%</b>	<b>78.3%</b> <b>13.6% (Ire)</b>	

## A6.88a Sandwich Tern *Sterna sandvicensis* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern <b>SPEC 3</b> Unfavourable conservation status ( <b>declining</b> ) and concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection Schedule 1(1)</b>	(UK) Species of Conservation Importance
Wintering	EC Birds Directive 1979 <b>Annex I Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	14,000	140	10,107 (72% of GB population)
<b>Ireland</b>	4,400	44	1,333 (30% of all-Ireland population)
<b>Biogeographic population</b>	132,000	1,320	11,440 (9% of biogeographic population)

GB population source: Lloyd et al. 1991

All-Ireland population source: Gibbons et al. 1993

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The Sandwich Tern has a restricted global distribution encompassing Europe (including the Caspian Sea), the east coast of North America, the Caribbean and eastern South America. The species is polytypic, and of the three races recognised, only the nominate sub-species *S. s. sandvicensis* occurs in Europe (Cramp *et al.* 1974).

The European breeding distribution of Sandwich Tern stretches from north-west Europe from western France to the Baltic, as well as in scattered traditional localities around the coasts of the northern Mediterranean, Black and Caspian Seas (Hagemeyer & Blair 1997). After the end of the breeding season, European breeding Sandwich Terns move south to winter along the western and southern coasts of Africa, and the southern coasts of East Africa.

British colonies are very scattered and mostly confined to coastal shingle beaches, sand dunes and offshore islets. In a few places, small islets in coastal freshwater bodies are used. The largest colonies are on the east coast of Britain, especially north-east England and East Anglia, with smaller but important colonies in north Wales, north-west England, north-east Scotland and Northern Ireland (Ratcliffe *et al.* 2000). Migration between more southerly wintering areas and UK breeding colonies occurs in spring and autumn with significant numbers of birds passing through inshore waters and some estuarine areas (Stone *et al.* 1995; see also section A6.88b).

Feeding takes place mainly in inshore coastal waters and within a few kilometres of the colonies, but much longer distances may be travelled, up to 70 km (Cramp *et al.* 1974).

#### 4. Population structure and trends

The Great Britain population of Sandwich Terns is 14,000 pairs with a further 4,400 pairs around the whole of Ireland (Ratcliffe *et al.* 2000). They breed in colonies varying from less than 10 to c. 4,000 pairs. These populations form part of the European biogeographic population of 132,000 pairs (Hagemerijer & Blair 1997).

Assessing trends in the numbers of breeding Sandwich Terns and the reasons for any changes is made harder by the occurrence of marked fluctuations in numbers at individual colonies, as well as the desertion of some sites and the establishment of new ones. In common with other terns, the colonies of this species appear to fluctuate significantly, apparently linked to changes in numbers at adjacent colonies (Lloyd *et al.* 1991). The main identifiable causes of colony change appear to be loss of habitat – when nesting beaches or islets are washed away – and predation, especially persistent predation, by Foxes *Vulpes vulpes* for example. Some of the newly formed colonies have been established on nature reserves, especially those where predator control is exercised.

The two national seabird censuses, in 1969–1970 and 1985–1987, covering Britain and Ireland, were considered reasonably complete for this species and found 12,000 pairs and 18,400 pairs respectively (Cramp *et al.* 1974; Lloyd *et al.* 1991). Most recent data since the 1985–1987 survey indicate continuing declines at many sites over the last ten years (Thompson *et al.* 1999). Cramp *et al.* (1974) considered that the population in 1969–1970 was higher than at any time in the previous 70 years, with a marked overall increase since the first available counts in 1920.

Between 1969–1970 and 1985–1987, colonies on the south and east coast of Britain increased, while those in the north and west decreased. Changes since 1985–1987 have continued that general trend and have involved the complete desertion of former large colonies in the north, and further declines in Northern Ireland, with some further growth elsewhere (Thompson *et al.* 1999).

It is clear from limited data that numbers in other countries of Europe also fluctuate greatly. Evidence from ringing indicates movement of birds between different parts of the range with first-time breeders regularly nesting at considerable distances from their natal colony and experienced breeders changing colony site (Cramp 1985).

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Sandwich Terns supports, on average, 11,440 pairs. This amounts to about 72% of the British breeding population, about 30% of the all-Ireland population and about 9% of the international population. The SPA suite contains 16 sites (Table 6.88a.1) where Sandwich Terns are a qualifying species.

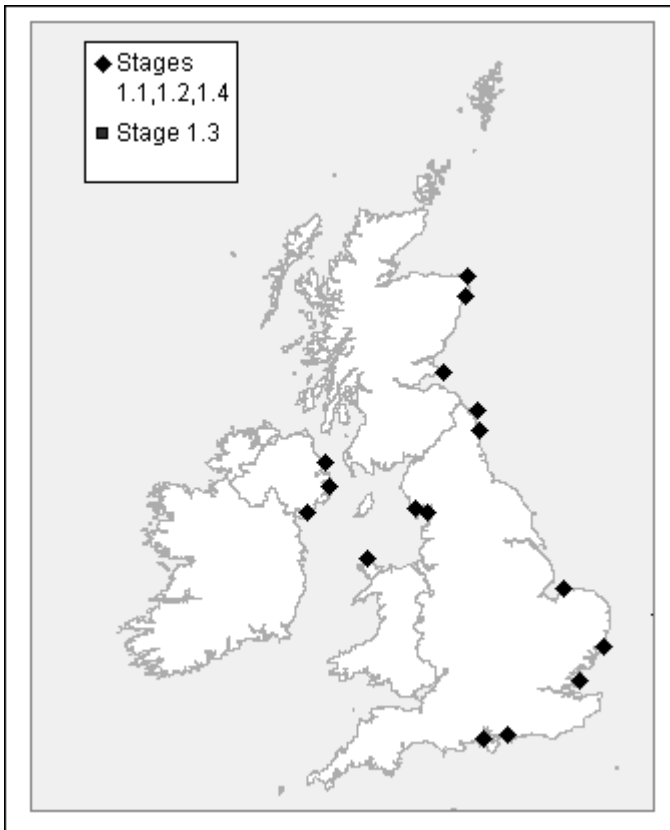
#### 6. Classification criteria

All sites in the UK that were known to support more than 1% of the national Sandwich Tern breeding population were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements.

The sites within the suite are distributed throughout the breeding range of the population in the UK, and cover major population centres, from sites on the east coast of Scotland, to the west, east and south coasts of England, and three sites in Northern Ireland. All sites are multi-species SPAs, of importance also for a range of other breeding seabirds. There is a very long recorded history of occupancy at some of these SPAs with records from the 19th century for a few sites (Holloway 1996). However, the historical impacts of disturbance, habitat change and, in the 19th century, persecution, mean that the exact locations of many colonies have changed.

As the selection of sites under Stage 1.1 resulted in a suite of SPAs which includes the main population centres of breeding Sandwich Terns throughout their UK distribution, there was no need to consider additional sites for selection under Stage 1.4

### Distribution map for breeding Sandwich Tern SPA suite



**Table 6.88a.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Alde – Ore Estuary	169	0.1	1.2	1.1
Carlingford Lough	575	0.4	13.1 (Ire)	1.1
Chichester and Langstone Harbours	158	0.1	1.1	1.1
Coquet Island	1,590	1.2	11.4	1.1
Duddon Estuary	210	0.2	1.5	1.1
Farne Islands	2,070	1.6	14.8	1.1
Firth of Forth Islands	22	<0.1	0.2	1.1
Foulness	320	0.2	2.3	1.1
Larne Lough	165	0.1	3.8 (Ire)	1.1
Loch of Strathbeg	530	0.4	3.8	1.1
Morecambe Bay	290	0.2	2.1	1.1
North Norfolk Coast	3,457	2.6	24.7	1.1
Solent and Southampton Water	231	0.2	1.7	1.1
Strangford Lough	593	0.5	13.5 (Ire)	1.1
Ynys Feurig, Cemlyn Bay and The Skerries	460	0.4	3.3	1.1
Ythan Estuary, Sands of Forvie and Meikle Loch	600	0.5	4.3	1.1
<b>TOTALS</b>	<b>11,440</b>	<b>8.7%</b>	<b>72.2% 30.3% (Ire)</b>	

## A6.88b Sandwich Tern *Sterna sandvicensis* (passage)

### 1. Status in UK

See section A6.88a.

### 2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	42,000	420	4,619 (11% of GB population)
<b>Ireland</b>	13,200	132	No SPAs selected in Northern Ireland
<b>Biogeographic population</b>	396,000	3,960	4,619 (1% of biogeographic population)

*GB population source: derived from Lloyd et al. 1991*

*All-Ireland population source: derived from Gibbons et al. 1993*

*Biogeographic population source: derived from Hagemeyer & Blair 1997*

### 3. Distribution

See section A6.88a.

### 4. Population structure and trends

The number of Sandwich Terns occurring on passage in Britain and Ireland in the immediate post-breeding period – late July and August – depends first on breeding success, which shows marked annual variations, and secondly on the degree of movement between Britain and Ireland and other parts of the biogeographic range. Ringing has shown that on leaving the breeding colonies, birds move both south and north within Britain and Ireland and that there is also interchange between British and Dutch colonies (Cramp *et al.* 1990). Migration proper starts in September.

In spring, northward migration occurs through British and Irish waters, although there are fewer data for this period. In March and April, Sandwich Terns are particularly concentrated along the shores of the southern North Sea (Stone *et al.* 1995)

There are no data with which to assess trends in the numbers of passage Sandwich Terns. Counts away from the breeding colonies have only been made since 1994, when the species was included in the WeBS counts, with data available up to 1998 (Pollitt *et al.* 2000). A late summer peak count of *c.* 8,000 was reached in each of the first three seasons, falling to 5,700 in 1997 and rising to 6,900 in 1998.

There are no relevant data from elsewhere in the range.

### 5. Protection measures for population in UK

#### *SPA suite*

In the post-breeding season, the UK's SPA suite for Sandwich Terns supports, on average, 4,619 individuals. This amounts to about 11% of the British post-breeding population, and about 1% of the international population – although estimation of relative proportions in migration periods is always problematic owing to the high degree of turnover at sites (Moser & Carrier 1983; Frederiksen *et al.* 2001). In an all-Ireland context, no sites have been identified for Sandwich Terns during passage periods. The SPA suite contains three sites (Table 6.88b.1) where Sandwich Tern has been listed as a qualifying species.

## 6. Classification criteria

All of the sites in the UK that are currently known to support more than 1% of the national Sandwich Tern post-breeding population were considered under Stage 1.1, and all (Firth of Forth; Teesmouth and Cleveland Coast; and The Dee Estuary) were selected after consideration of Stage 2 judgements. As noted in section 5.6.5, knowledge of numbers of terns and other waterbirds is generally poor for migration periods and it is possible that additional sites of importance have yet to be identified.

Distribution map for passage Sandwich Tern SPA suite

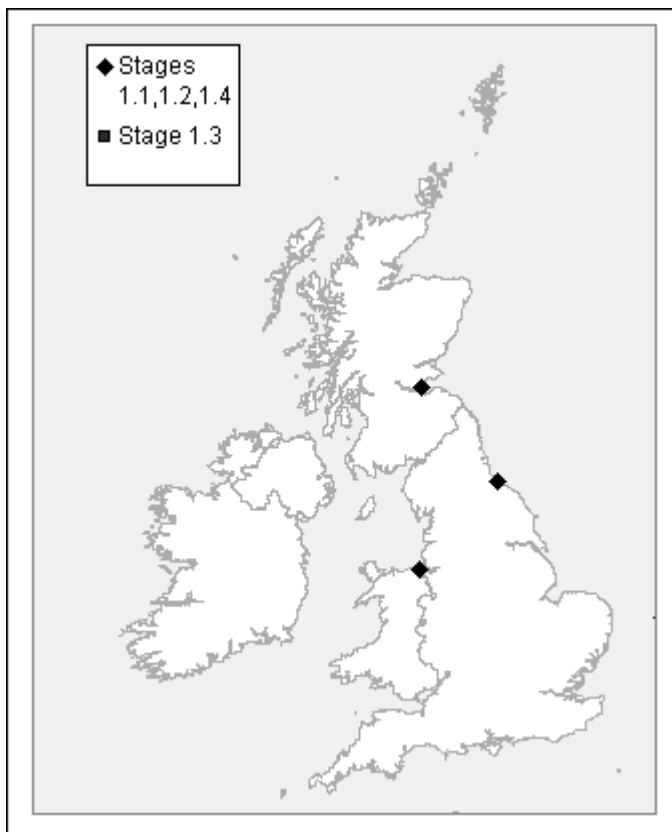


Table 6.88b.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Firth of Forth	1,611	0.4	3.8	1.1
Teesmouth and Cleveland Coast	2,190	0.6	5.2	1.1
The Dee Estuary	818	0.2	1.9	1.1
<b>TOTALS</b>	<b>4,619</b>	<b>1.2%</b>	<b>11.0%</b>	

## A6.89 Roseate Tern *Sterna dougallii*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection Schedule 1(1)</b>	Species of European Conservation Concern <b>SPEC 3</b> Unfavourable conservation status ( <b>endangered</b> ) but not concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection Schedule 1(1)</b>	(UK) Species of Conservation Importance <b>Table 2</b>
Wintering	EC Birds Directive 1979 <b>Annex I Migratory</b>	All-Ireland Vertebrate Red Data Book <b>Endangered</b>

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	64	1	50 (88% of GB population)
<b>Ireland</b>	400	4	6 (1% of all-Ireland population)
<b>Biogeographic population</b>	1,770	18	56 (3% of biogeographic population)

GB population source: Stone et al. 1997

All-Ireland population source: Gibbons et al. 1993

Biogeographic population source: Lloyd et al. 1991

### 3. Distribution

The global distribution of Roseate Tern comprises a number of discrete ranges, with breeding occurring around the edges of the North Atlantic, Indian and south-west Pacific Oceans. The species is polytypic with five described races (Rose & Scott 1997). The nominate sub-species *S. d. dougallii* breeds around the Atlantic Ocean and Caribbean, from the eastern USA to western European coasts and including a discrete population in South Africa. The other four sub-species occur in the Indian and Pacific Oceans (Cramp 1985; Rose & Scott 1997).

In Europe, the breeding population is confined to Britain, Ireland and France (Brittany), as well as the Azores (del Nevo *et al.* 1993). After nesting these birds move south to winter off the coast of western Africa as far as the Gulf of Guinea (Cramp 1985), an area that has enormous resources of small fish and so attracts large numbers of terns during the northern winter.

Currently, the main British colonies are in eastern Scotland, north-eastern England, and north Wales. The Irish colonies are all now on the east coast, from Northern Ireland to the extreme south-east of the Irish Republic. Thirty years ago, the species was more widespread, with colonies in Orkney, western Scotland, southern England and south-west and north-west Ireland.

Breeding takes place on the coast, with colonies established on sand-spits and dunes, shingle beaches and low rocky islets. Inshore waters are used for feeding on small fish.

#### 4. Population structure and trends

Eight biogeographical populations of Roseate Terns have been described (Rose & Scott 1997). Those occurring in Britain belong to the European breeding population (which overwinters along the coast of the Gulf of Guinea).

The breeding population in Britain and Ireland was close to elimination at the beginning of the 19th century, but protection, especially against killing for the millinery trade, brought about a recovery to an estimated peak population of *c.* 3,500 pairs in the mid-1960s (Avery & del Nevo 1991). The population then went into decline and by the time of the first census, in 1969–1970, a total of 2,392 pairs was counted: 691 in Great Britain and 1,701 in Ireland (Cramp *et al.* 1974). The second census, in 1985–1987, revealed a total of only 470, with 133 in Great Britain and 337 in Ireland (Lloyd *et al.* 1991). Since then, the decline in Great Britain has continued, but there has been some recovery in Ireland, the latest available total being 661 pairs in 1998 (Thompson *et al.* 1999).

Similar long-term declines have also taken place at French breeding colonies, as well as in the Azores, where numbers have declined from 1,120 pairs to 750 pairs (Hagemeyer & Blair 1997). There is evidence from ringing in Britain, Ireland and France that a proportion of Roseate Terns move between colonies, breeding at sites other than those at which they were reared (Avery & del Nevo 1991).

The single largest cause of the sharp decline in numbers in Britain and Ireland was the disappearance, following storms in the 1970s, of a sandy island in Wexford Harbour, south-east Ireland, where up to 2,000 pairs nested. Only some of these birds appeared to relocate, to a new colony in Lady's Island Lake. The underlying reasons for the continued decline, however, have been more widespread problems of predation and disturbance at the colonies, and – probably of even greater importance – the killing of large numbers on the wintering grounds in West Africa (Everett *et al.* 1987).

#### 5. Protection measures for population in the UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Roseate Terns supports, on average, 56 pairs. This amounts to about 88% of the British breeding population, about 1% of the all-Ireland population, and about 3% of the international population. The SPA suite contains seven sites (Table 6.89.1) where Roseate Tern has been listed as a qualifying species.

##### *Other measures*

International action is being taken to conserve the species at breeding colonies in Ireland, France and the Azores and on the wintering grounds in West Africa (Avery & del Nevo 1991). A Biodiversity Action Plan has been published for this species (Biodiversity Steering Group 1998) and is being implemented as part of the UK's national response to the Biodiversity Convention.

#### 6. Classification criteria

All seven sites in the UK that were known to support more than 1% of the national Roseate Tern breeding population were considered under Stage 1.1, and all (Coquet Island; Farne Islands; Firth of Forth Islands; Larne Lough; North Norfolk Coast; Solent and Southampton Water; and Ynys Feurig, Cemlyn Bay and The Skerries) were selected after consideration of Stage 2 judgements.

The sites within the suite include most regular breeding localities in the UK, including all major sites in Northern Ireland, north Wales, Scotland, and England. All these sites are multi-species SPAs, of importance also for a range of other breeding seabirds. There is a very long recorded history of occupancy at many of these sites with some records dating from the 19th century (Holloway 1996).

As the selection of sites under Stage 1.1 resulted in a suite of SPAs which includes all the main population centres of breeding Roseate Terns in the UK, there was no need to consider additional sites for selection under Stage 1.4.

Distribution map for Roseate Tern SPA suite

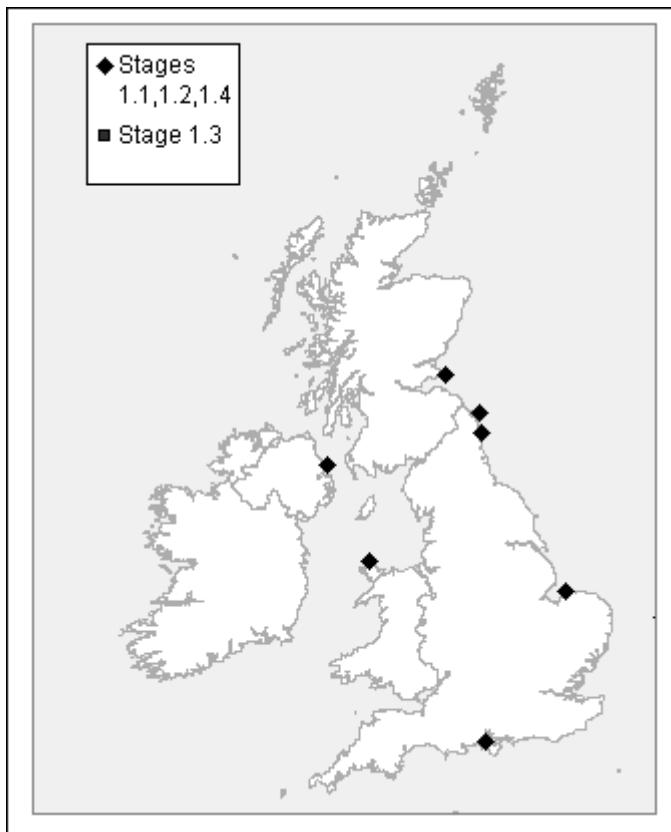


Table 6.89.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Coquet Island	31	1.8	48.4	1.1
Farne Islands	3	0.2	4.7	1.1
Firth of Forth Islands	9	0.5	14.1	1.1
Larne Lough	6	0.3	1.5 (Ire)	1.1
North Norfolk Coast	2	0.1	3.1	1.1
Solent and Southampton Water	2	0.1	3.1	1.1
Ynys Feurig, Cemlyn Bay and The Skerries	3	0.2	4.7	1.1
<b>TOTALS</b>	<b>56</b>	<b>3.2%</b>	<b>88%</b> <b>1.4% (Ire)</b>	

## A6.90 Common Tern *Sterna hirundo*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection Schedule 1(1)</b>	(UK) Species of Conservation Importance
Wintering	EC Birds Directive 1979 <b>Annex I Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	12,300	123	5,686 (46% of GB population)
<b>Ireland</b>	3,100	31	1,307 (42% of all-Ireland population)
<b>Biogeographic population</b>	195,105	1,950	6,993 (4% of biogeographic population)

*GB population source: Gibbons et al. 1993*

*All-Ireland population source: Gibbons et al. 1993*

*Biogeographic population source: Hagemeyer & Blair 1997*

### 3. Distribution

The Common Tern is a common and widespread breeding species of both coastal and inland regions in the northern hemisphere, especially at temperate and boreal latitudes. Its range extends south almost to the equator in West Africa and northern South America. The Common Tern is a long-distance migrant and winters mainly in the southern hemisphere. The species is polytypic and four sub-species have been described. Birds breeding in Europe belong to the nominate race *S. h. hirundo*, the range of which extends from eastern North America to western Siberia. Three other sub-species occur in Asia (Cramp 1985).

The European distribution of Common Tern is very scattered in the west, but much more continuous in Russia, Ukraine and Belarus. It breeds in virtually all countries (other than Portugal), with the inland distribution generally confined to major river systems.

A significant proportion of the British population breeds in Scotland, particularly in the northern and western Isles and on the west coast, but with sizeable colonies also along the east coast firths. Common Terns also commonly breed inland on riverine shingle and islands, not only in Scotland but also in England. Coastal colonies in England are mainly concentrated in the north-east, East Anglia, at a few localities along the south coast, and in the north-west. The only Welsh colonies are on Anglesey. Inland breeding takes place mainly in eastern Scotland and in central, eastern and southern England. Colonies in Ireland are well spread around the coasts, with scattered inland breeding through the midlands.

Common Terns breed around coasts and beside inland freshwater bodies. Coastal sites are mainly small rocky islets, shingle beaches, sand-spits and dunes, as well as among short vegetation (occasionally more scrubby growth). Inland sites include shingle banks in rivers, islands in lakes and gravel pits, marshes and shallow lagoons. More artificial sites, including waste ground, specially made floating rafts and even gravel-covered flat-roofs, are occasionally used.

Most feeding takes place within 3–10 km of the colony, but greater distances, up to 37 km or even "some scores" of km have been recorded (Cramp *et al.* 1974).

#### 4. Population structure and trends

The European breeding population of Common Terns is estimated at between 195,105–227,250 pairs (Hagemeijer & Blair 1997), and the minimum of this range is the biogeographic population used in this review. The British population of 12,300 pairs is spread over 200 colonies ranging in size from under ten pairs to over 1,000. There are more than 50 further colonies in Ireland, totalling 3,100 pairs.

Information on numbers of Common Terns breeding in Britain and Ireland prior to the first census in 1969–1970 is very patchy and restricted to counts at a few colonies, which show no clear trend, though there is some evidence for a population peak in the 1930s (Cramp *et al.* 1974). In 1969–1970, there were an estimated 14,900 pairs breeding in Britain and Ireland, of which 10,800 were in Great Britain and 4,100 in the whole of Ireland. The total in the second census in 1985–1987 was very similar at 14,700, though the country totals were different, with 12,000 in Great Britain and 2,700 in Ireland (Lloyd *et al.* 1991). Within Britain, there had been a shift northwards with numbers in Scotland increasing from 4,300 to 6,200 pairs while numbers in England and Wales declined from 6,500 to 5,750. The other change during this period was an increase in inland nesting, both in Great Britain and in Ireland.

Limited information from elsewhere in the biogeographic range suggests some declines, *e.g.* in The Netherlands attributed partly to organochlorine pollution of the Rhine (Hagemeijer & Blair 1977), but otherwise fairly stable populations. Ringing suggests only limited interchange between colonies, and then probably by first-time breeders over short distances. Adults are very faithful to their breeding colonies (Cramp 1985).

Declines in specific colonies in Britain and Ireland, with some complete losses, can mostly be put down to habitat changes, *e.g.* coastal developments and increased disturbance, especially recreational, although as with all terns birds can desert breeding colonies for behavioural reasons, resettling again after a period of time. Riverine management has destroyed many former nesting sites on ephemeral shingle banks, but such inland sites have more than been replaced by gravel pits etc. Use of gravel pits, however, is affected by the often transitory nature of suitable habitats. Predation is a problem in some areas, especially where North American Mink *Mustela vison* have become well established, *e.g.* western Scotland (Craik 1995, 1997).

#### 5. Protection measures for population in the UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Common Terns supports, on average, 6,993 pairs. This amounts to about 46% of the British breeding population, and about 42% of the all-Ireland population. The suite of 22 sites (Table 6.90.1) contains about 4% of the international population.

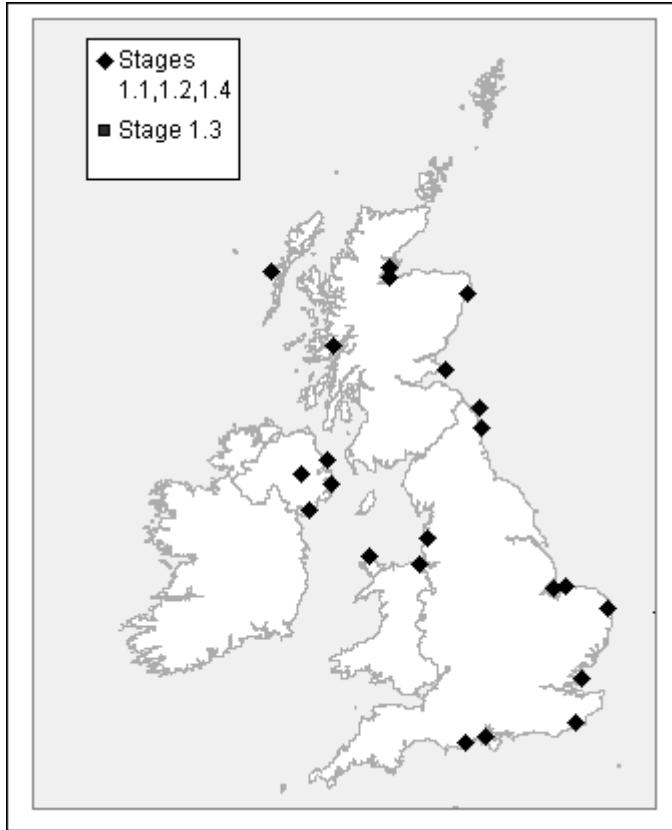
#### 6. Classification criteria

All sites in the UK that were known to support more than 1% of the national Common Tern breeding population were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements.

The sites within the suite are distributed throughout the UK breeding range and cover the major population centres, including sites in Northern Ireland, North Wales, both the west and east coasts of Scotland, as well as the west, east and south coasts of England. Most sites are multi-species SPAs, of importance also for a range of other breeding seabirds, although Glas Eileanan in the Sound of Mull has been selected solely for its importance for breeding Common Terns. There is a very long recorded history of occupancy at many of these SPAs with records from the 19th century for many sites (Holloway 1996).

As the selection of sites under Stage 1.1 resulted in a suite of SPAs which includes the main population centres of breeding Common Terns throughout their UK distribution, there was no need to consider additional sites for selection under Stage 1.4

Distribution map for breeding Common Tern SPA suite



**Table 6.90.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Breydon Water	155	0.1	1.3	1.1
Carlingford Lough	339	0.2	10.9 (Ire)	1.1
Coquet Island	740	0.4	6.0	1.1
Cromarty Firth	294	0.2	2.4	1.1
Dungeness to Pett Level	266	0.1	2.2	1.1
Farne Islands	230	0.1	1.9	1.1
Firth of Forth Islands	800	0.4	6.5	1.1
Foulness	220	0.1	1.8	1.1
Glas Eileanan	530	0.3	4.3	1.1
Inner Moray Firth	310	0.2	2.5	1.1
Larne Lough	180	0.1	5.8 (Ire)	1.1
Lough Neagh and Lough Beg	185	0.1	6.0 (Ire)	1.1
Monach Isles	194	0.1	1.6	1.1
North Norfolk Coast	460	0.2	3.7	1.1
Poole Harbour	155	0.1	1.3	1.1
Ribble and Alt Estuaries	182	0.1	1.5	1.1
Solent and Southampton Water	267	0.1	2.2	1.1
Strangford Lough	603	0.3	19.5 (Ire)	1.1
The Dee Estuary	277	0.1	2.3	1.1
The Wash	152	0.1	1.2	1.1
Ynys Feurig, Cemlyn Bay and The Skerries	189	0.1	1.5	1.1
Ythan Estuary, Sands of Forvie and Meikle Loch	265	0.1	2.2	1.1
<b>TOTALS</b>	<b>6,993</b>	<b>3.6%</b>	<b>46.2%</b> <b>42.2% (Ire)</b>	

## A6.91 Arctic Tern *Sterna paradisaea*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985	(UK) Species of Conservation Importance
Wintering	EC Birds Directive 1979	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	44,000	440	16,707 (38% of GB population)
<b>Ireland</b>	2,500	25	417 (17% of all-Ireland population)
<b>Biogeographic population</b>	900,000	9,000	17,124 (2% of biogeographic population)

*GB population source: Gibbons et al. 1993*

*All-Ireland population source: Gibbons et al. 1993*

*Biogeographic population source: Lloyd et al. 1991*

### 3. Distribution

The monotypic Arctic Tern is an abundant circumpolar breeding species of the Arctic and northern temperate zones of the northern hemisphere. It is one of the world's longest distance migrants, with birds travelling huge distances to overwinter around the coasts of the Southern Ocean, including Antarctica (Cramp 1985).

The species' European distribution is essentially northern, with birds breeding in Britain and Ireland being the south-westerly component of a population. The range of Arctic Terns extends north from Britain and Ireland to Iceland and Greenland, and north-west along the coasts of the Baltic and Scandinavia, into Siberia.

Nearly 90% of the Arctic Terns breeding in Britain and Ireland are found in Scotland, Orkney and Shetland and throughout the Outer and Inner Hebrides. There are also some colonies on the east and north coasts. In England, they are found mainly in the north-east and the north-west, with very small numbers in north Norfolk and along the south coast. The only Arctic Terns nesting in Wales are found on Anglesey. In Ireland, they occur on all coasts, but with a preponderance in the west.

In Britain and Ireland, the Arctic Tern is almost exclusively a coastal breeder, usually nesting on the immediate shoreline and virtually never more than 10 km from the coast. Elsewhere in its range (for instance, in Russia (Rogačeva 1992) and Canada) it breeds along rivers hundreds of kilometres from the sea. Colonies are located on shingle and sand beaches as well as on rocky islets. Away from the immediate shore, nesting may occur in short vegetation, especially on heathland and unimproved pasture (Bullock & Gomersall 1981).

Most feeding takes place within 3 km of the colony, exceptionally up to 10 km (Cramp *et al.* 1974).

#### 4. Population structure and trends

The biogeographic population (Europe and the North Atlantic) has been estimated at c. 900,000 pairs. The population of Great Britain is estimated at 44,000 pairs with a further 2,500 pairs in the whole of Ireland. The British and Irish birds breed in 250–300 colonies ranging in size from just a few pairs to nearly 2,000 (Lloyd *et al.* 1991).

Historical data for Arctic Terns nesting in Britain and Ireland are scant prior to the first census in 1969–1970, although serious declines were reported from Ireland in the 1950s and 1960s (Cramp *et al.* 1974). The 1969–1970 census reported at least 30,773 pairs (Cramp *et al.* 1974), but this was revised upwards to 52,300 pairs by Lloyd *et al.* (1991), who found 80,200 pairs in 1985–1987<sup>28</sup>. Using the revised figures, the Scottish total increased from 46,400 to 72,400 pairs, the English and Welsh total from 4,940 to 5,280 pairs, and the all-Ireland total from 970 to 2,500 pairs.

The major increase between the two censuses preceded a massive decline in numbers in Orkney and Shetland, which held 64,900 pairs (81% of the British and Irish total) in 1985–1987. In 1989, sampled colonies in both archipelagos fell by 55% in Shetland and 45% in Orkney (Avery *et al.* 1993). Further declines have taken place since, and breeding success has been very low almost throughout the 1990s. A census of Orkney and Shetland in 1994 found only 32,400 pairs, an overall decline of 27% since 1989 (Brindley *et al.* 1999). A population model showed that this decline could be explained by observed poor natal recruitment following breeding failures on Shetland between 1985 and 1990 (Brindley *et al.* 1999). The results of these recent analyses strongly suggest that terns move between Orkney and Shetland indicating that these island populations are components of a larger meta-population (Brindley *et al.* 1999).

There have been some recent declines elsewhere in Europe, including in Finland, where predation by North American Mink *Mustela vison* is suspected to be the main cause, Estonia, The Netherlands and Germany (Hagemeijer & Blair 1997). Ringing has shown breeding in colonies other than the natal colony to be relatively common among first-time breeders, with movements up to several hundred kilometres (Cramp 1985).

The major declines in Orkney and Shetland have been attributed to breeding failures consequent upon a lack of their principal food, sandeels *Ammodytes* sp. (Monaghan *et al.* 1989, 1992), possibly due to overfishing by man, although bad weather has also played a part in recent years. Other threats include nest predation by introduced Hedgehog *Erinaceous europaeus* (Uttley *et al.* 1989) and North American Mink (Craik 1995), together with coastal development and disturbance, especially recreational disturbance.

#### 5. Protection measures for population in the UK

##### *SPA suite*

During the breeding season, the UK's SPA suite for Arctic Terns supports, on average, 17,124 pairs. This amounts to about 38% of the British breeding population, and 17% of the all-Ireland population. The suite of 17 sites (Table 6.91.1) contains about 2% of the international population.

#### 6. Classification criteria

All sites in the UK that were known to support more than 1% of the national breeding population were considered under Stage 1.1, and all but two were selected after consideration of Stage 2 judgements. As terns can be sporadic in their use of sites, particular emphasis was laid on the identification of sites that support other qualifying species. Accordingly, Flotta (Orkney) and Fladda Chuain (Skye) were not selected as these areas supported comparatively small populations with no other qualifying interests. Data for Fladda Chuain derives from a single count, and in the absence of routine monitoring, it is not possible to assess whether this site is used regularly. Of the 33,100 pairs estimated to breed in Orkney

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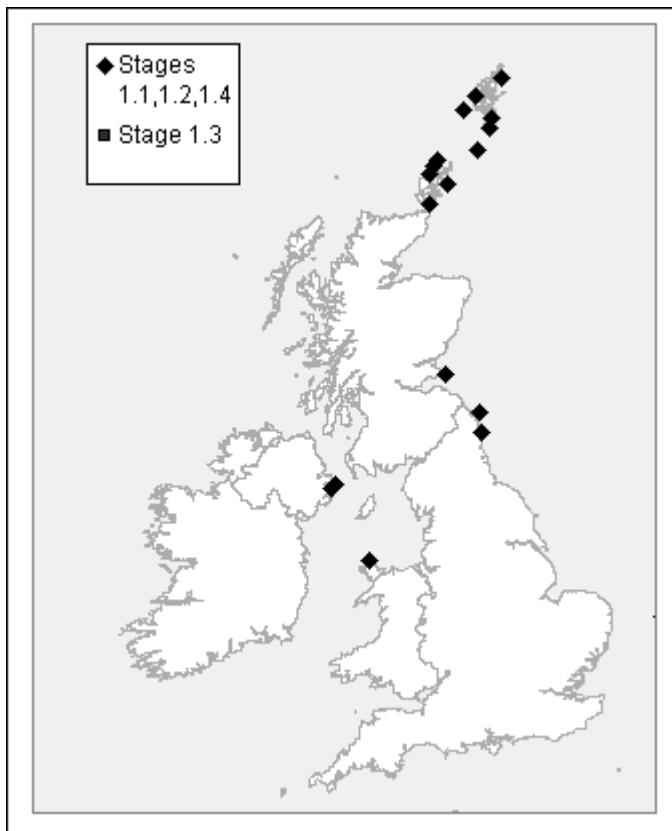
<sup>28</sup> Although 64,900 of this total was 1980 data from Orkney and Shetland owing to the lack of census coverage in 1985–1987.

(Lloyd *et al.* 1991), 6,130 (18%) are contained within the five selected SPAs there. The addition of Flotta, holding 530 pairs, was not considered to add substantially to this proportional coverage.

The SPAs within the suite are distributed throughout the UK breeding range, including sites in Northern Ireland, North Wales, north-east England, Orkney and Shetland. Most sites are multi-species SPAs, of importance also for a range of other breeding seabirds, although Sumburgh Head and the Pentland Firth Islands have been selected solely for their importance for breeding Arctic Terns. There is a very long recorded history of occupancy at many of these sites, including records dating from the 19th century (Holloway 1996).

As the selection of sites under Stage 1.1 resulted in a suite of SPAs which includes the main population centres of breeding Arctic Terns throughout their UK distribution, additional sites considered under Stage 1.4 were not selected.

#### Distribution map for Arctic Tern SPA suite



**Table 6.91.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Auskerry	780	0.1	1.8	1.1
Coquet Island	700	0.1	1.6	1.1
Fair Isle	1,120	0.1	2.6	1.1
Farne Islands	2,840	0.3	6.5	1.1
Fetlar	520	<0.1	1.2	1.1
Firth of Forth Islands	540	<0.1	1.2	1.1
Foula	1,100	0.1	2.5	1.1
Mousa	767	<0.1	1.7	1.1
Outer Ards	207	<0.1	8.3 (Ire)	1.1
Papa Stour	1,000	0.1	2.3	1.1
Papa Westray (North Hill and Holm)	1,950	0.2	4.4	1.1
Pentland Firth Islands	1,200	0.1	2.7	1.1
Rousay	1,000	0.1	2.3	1.1
Strangford Lough	210	<0.1	8.4 (Ire)	1.1
Sumburgh Head	700	<0.1	1.6	1.1
West Westray	1,200	0.1	2.7	1.1
Ynys Feurig, Cemlyn Bay and The Skerries	1,290	0.1	2.9	1.1
<b>TOTALS</b>	<b>17,124</b>	<b>1.9%</b>	<b>37.9%</b> <b>16.7% (Ire)</b>	

## A6.92 Little Tern *Sterna albifrons*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981	Species of European Conservation Concern
	<b>General Protection Schedule 1(1)</b>	<b>SPEC 3</b> Unfavourable conservation status ( <b>declining</b> ) but not concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985	(UK) Species of Conservation Importance
	<b>General Protection Schedule 1(1)</b>	<b>Table 4</b>
Wintering	EC Birds Directive 1979	All-Ireland Vertebrate Red Data Book
	<b>Annex I Migratory</b>	<b>Vulnerable</b>

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	2,400	24	1,616 (67% of GB population)
<b>Ireland</b>	390	4	No SPAs selected in Northern Ireland
<b>Biogeographic population</b>	20,643	206	1,616 (8% of biogeographic population)

GB population source: Lloyd et al. 1991

All-Ireland population source: Gibbons et al. 1993

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The Little Tern has a widely scattered global distribution. It breeds at middle and lower latitudes of North America, Eurasia and Australia, as well as in the sub-tropics and tropics in the Caribbean, West Africa, southern India and Sri Lanka, and south-west Asia. In much of this area, its distribution is essentially coastal, although it also occurs along major rivers such as the Niger, the Mississippi and the Danube. Seven subspecies have been described. Of these, only the nominate race *S. a. albifrons* occurs in Europe, part of a range that also extends to coastal North Africa and the Middle East, to northern Pakistan and India (Cramp 1985).

The European breeding distribution is discontinuous, but extends from the Gulf of Bothnia to the coasts of the Mediterranean and North Africa. Through much of this area, the species is restricted to the coast, although it breeds along a number of major river systems, in particular the Guadalquivir, Loire, Po, Danube, Dnepr, Volga and Vistula (Snow & Perrins 1998).

Breeding occurs at scattered colonies around much of the coast of Britain and Ireland, from the north of Scotland to the south coast of England. All British and Irish Little Terns nest on the coast, utilising sand and shingle beaches and spits, as well as tiny islets of sand or rock close inshore. The greater part of the population occurs in south and east England from Hampshire to Norfolk (Lloyd *et al.* 1991). There are small, scattered colonies on the coasts of north-east and north-west England, eastern Scotland, the Outer and Inner Hebrides, and in Wales. The Irish population is mainly found on the west and south-east coasts.

Feeding takes place close to the colony, to a maximum distance of 6 km, but not more than 1.5 km offshore (Cramp *et al.* 1974).

European breeding Little Terns move south to winter off the coast of western Africa, possibly as far as South Africa (Cramp 1985). However, most probably winter in the Gulf of Guinea, an area that has enormous resources of small fish and so attracts large numbers of terns during the northern winter.

#### 4. Population structure and trends

Birds breeding in Britain and Ireland are part of the European biogeographic population, estimated to be 20,643–22,799 pairs (Hagemeijer & Blair 1997). The British population numbers 2,400 pairs with a further 390 pairs in the whole of Ireland (Ratcliffe *et al.* 2000). Lloyd *et al.* (1991) reported up to 70 colonies in Britain, ranging from less than ten pairs to 360 pairs (Foulness/Maplin Bank in Essex), together with about 30, mostly rather small, colonies in Ireland. Average colony size is about 30 pairs (Sears & Avery 1993).

It is believed that Little Terns declined at many British colonies during the latter part of the 19th century, but then recovered to reach a peak in the 1920s or early 1930s. Thereafter, a renewed decline set in which, while not quantifiable, was nevertheless regarded as very serious when a survey in 1967 and the subsequent census of 1969–1970 found no more than 2,000 pairs in the whole of Britain and Ireland (Cramp *et al.* 1974).

The next census took place in 1985–1987 when the total had increased to 2,430 pairs in Great Britain and 390 pairs in the whole of Ireland. The increase was unevenly spread through the range, with almost no change in Scotland (310 pairs and 370 pairs respectively), whilst the England and Wales total had increased from 1,320 pairs to 2,060 pairs. Much of the increase in England was concentrated in East Anglia and Hampshire, though some other localities on the south coast, as well as in northern England, had continued to decline. Numbers in Ireland increased from 310 to 390 pairs between the two censuses with much of this increase at a single colony in Dublin Bay (Lloyd *et al.* 1991). The population trend in Britain between 1969 and 1989, as well as changes in productivity, are examined in detail by Sears & Avery (1993). They found that there was no consistent trend in productivity over time, nor any apparent relationship between productivity and population trends. Productivity is not related to colony size and some Little Tern colonies are consistently more productive than others.

Elsewhere in Europe, the pattern has followed that in Britain, with a long-term decline until the 1970s. Since then, there has been some recovery, especially in France and Belgium, though there have been continued local declines in The Netherlands, Germany, Denmark and around the Baltic (Hagemeijer & Blair 1997). Ringing has shown fairly extensive interchange between colonies, at least by first-time breeders, with birds reared in British colonies breeding in Denmark and Germany, and a German-ringed bird breeding in England (Cramp 1985).

The greatest threat to Little Tern colonies is from human disturbance. The concentration of the largest colonies on beaches in south-east England coincides with the highest density of people living in Britain and wanting to use those same beaches. The period of greatest decline, from the 1930s to the 1960s, coincided with a great boom in numbers of people making trips to the seaside, with only a short respite during the war years. Once alerted by the 1967 census to the seriousness of the situation, protection measures, including wardening, signs and fencing, have had remarkable success in safeguarding a number of colonies, with considerable increases in numbers of nesting pairs at several sites in both Britain and Ireland. Predation is a factor at some colonies and fencing is widely used to keep out Red Foxes *Vulpes vulpes*. High summer tides (especially storm-surges) regularly flood some colonies, but nests have successfully been moved up the beach in some places. Blown sand is also a significant factor causing nest losses.

#### 5. Protection measures for population in the UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Little Terns supports, on average, 1,676 pairs. This amounts to about 67% of the British breeding population, and about 8% of the international population. The species does not regularly breed in significant numbers in Northern Ireland. The SPA suite contains 27 sites (Table 6.92.1) where Little Tern has been listed as a qualifying species.

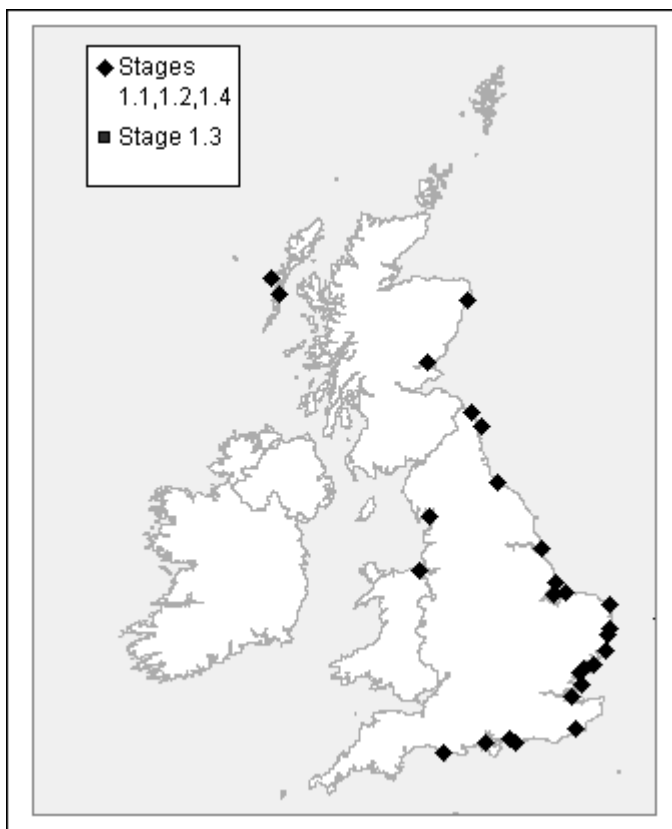
## 6. Classification criteria

All sites in the UK that were known to support more than 1% of the national Little Tern breeding population were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements.

The sites within the suite are distributed throughout the UK breeding range, from sites on the east coast of Scotland, to the west, east and south coasts of England. Most sites are multi-species SPAs, of importance also for a range of other breeding seabirds, although Great Yarmouth North Denes has been selected solely for its importance for breeding Little Terns. The colony breeding at Pagham Harbour has a long history of occupation, occurs in natural habitat and forms part of the core range of Little Terns on the south coast of England. It has suffered recent declines owing to disturbance, high spring tides and possible predation. To ensure continued protection of the habitat supporting this breeding colony, Pagham Harbour was selected under Stage 1.4.

There is a very long recorded history of occupancy at some of these SPAs with records from the 19th century for a few sites (Holloway 1996). However, the historical impacts of disturbance, habitat change and past persecution mean that the locations of many colonies have changed.

### Distribution map for Little Tern SPA suite



**Table 6.92.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Alde – Ore Estuary	48	0.2	2.0	1.1
Benacre to Easton Bavents	53	0.3	2.2	1.1
Blackwater Estuary	36	0.2	1.5	1.1
Chesil Beach and The Fleet	55	0.3	2.3	1.1
Chichester and Langstone Harbours	100	0.5	4.2	1.1
Colne Estuary	38	0.2	1.6	1.1
Dungeness to Pett Level	35	0.2	1.5	1.1
Firth of Tay and Eden Estuary	44	0.2	1.8	1.1
Foulness	24	0.1	1.0	1.1
Gibraltar Point	23	0.1	1.0	1.1
Great Yarmouth North Denes	220	1.1	9.2	1.1
Hamford Water	55	0.3	2.3	1.1
Humber Flats, Marshes and Coast	63	0.3	2.6	1.1
Lindisfarne	38	0.2	1.6	1.1
Medway Estuary and Marshes	28	0.1	1.2	1.1
Minsmere – Walberswick	28	0.1	1.2	1.1
Monach Isles	26	0.1	1.1	1.1
Morecambe Bay	26	0.1	1.1	1.1
North Norfolk Coast	377	1.8	15.7	1.1
Northumbria Coast	40	0.2	1.7	1.1
Pagham Harbour	12	<0.1	0.5	1.4
Solent and Southampton Water	49	0.2	2.0	1.1
South Uist Machair and Lochs	31	0.2	1.3	1.1
Teesmouth and Cleveland Coast	37	0.2	1.5	1.1
The Dee Estuary	56	0.3	2.3	1.1
The Wash	33	0.2	1.4	1.1
Ythan Estuary, Sands of Forvie and Meikle Loch	41	0.2	1.7	1.1
<b>TOTALS</b>	<b>1,616</b>	<b>7.8%</b>	<b>67.3%</b>	

## A6.93 Guillemot *Uria aalge* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	703,500	7,035	665,056 (95% of GB population)
<b>Ireland</b>	102,510	1,025	28,064 (27% of all-Ireland population)
<b>Biogeographic population</b>	2,250,000	22,500	693,120 (31% of biogeographic population)

GB population source: Lloyd *et al.* 1991

All-Ireland population source: Gibbons *et al.* 1993

Biogeographic population source: Lloyd *et al.* 1991

### 3. Distribution

Guillemots have a circumpolar global breeding range. They are found in the North Atlantic, North Pacific and Arctic Oceans, occurring mainly in boreal and low Arctic zones, but extending south into temperate regions and north to the high Arctic (Cramp 1985). They are highly colonial and the exact distribution of breeding colonies within this range is determined by the presence of suitable cliffs on which to nest as well as patterns of abundance of their marine food. Four sub-species have been described, of which two occur in Europe (and Britain). The nominate sub-species *U. a. aalge*, breeds in Iceland, the Faeroes, Scotland (north of *c.* 55° 39'N), the Baltic and Norway (north to 69°N), whilst *U. a. albionis* breeds in Britain south of *c.* 55°39'N, Ireland, Helgoland (Germany), Brittany (France) and western Iberia (Cramp 1985; Lloyd *et al.* 1991).

In the east Atlantic (and Europe), largest numbers occur in Iceland. The greatest number of Guillemot colonies are found in Britain and Ireland, with significant numbers also along the coasts of Norway and Russia, and to a lesser extent around the Baltic (Sweden and Denmark), and on the Atlantic coasts of France (Brittany), Spain (Galicia) and Portugal.

The main concentration of breeding Guillemots in the UK in 1985–1987 was in the north of Scotland (Lloyd *et al.* 1991). Here, the largest numbers were found in Orkney, Shetland, Caithness, the Western Isles, Sutherland (the island of Handa) and Kincardine and Deeside (Fowlsheugh). The principal breeding area in Northern Ireland was Rathlin Island (Antrim). In comparison, colony sizes were smaller in England and Wales, with the largest colonies in Humberside (Bempton-Flamborough), Northumberland and Devon, with Gwynedd (Carreg y Llam) and Dyfed holding the largest proportion

of the Welsh population (Lloyd *et al.* 1991). Guillemots are absent from the low coastlines of south-east England, with no colonies between Bempton-Flamborough in Yorkshire and the Isle of Wight on the south coast.

Guillemots are coastal, cliff-nesting species differing from other North Atlantic alcids (except Brännich's Guillemot *U. lomvia*) in that they will use open nest-sites (Cramp 1985). Breeding adults are extremely site-faithful (Harris & Wanless 1988; Harris *et al.* 1996). At sea, Guillemots prefer continental-shelf waters of 51–100 m depth (Stone *et al.* 1995).

Outside the breeding season, Guillemots occur widely in the seas off north-west Europe. In July, chicks leave the colonies before they can fly and swim out to sea to fledge. In the period July to September, major concentrations occur in inshore areas. In midwinter, Guillemots are more widely distributed in the North Sea, the English Channel and the Western Approaches, reflecting a general southward movement of most northerly breeding birds (Stone *et al.* 1995). In spring, they again move northwards to the vicinity of their breeding colonies.

#### 4. Population structure and trends

Birds breeding in the UK belong to the North Atlantic population of 2,250,000 pairs (Lloyd *et al.* 1991).

There were few records of Guillemot numbers at colonies in Britain and Ireland before Operation Seafarer in 1969. Accordingly, few firm conclusions can be drawn about changes in populations, a problem compounded by the difficulty of estimating numbers at large colonies (Lloyd *et al.* 1991). Cramp *et al.* (1974) however, suggested – on the basis of counts at a few colonies for which good early counts had been made – that Guillemots had declined in England, Wales and south-west Scotland, whilst elsewhere in the UK numbers had increased. In the absence of good data, however, this remains largely speculative.

The population estimates from the Seabird Colony Register surveys (1985–1987) showed that the British and Irish Guillemot population had approximately doubled since the 1969–1970 estimate of 576,915 birds (Harris 1993) to a total of 1,203,100 birds. Between the 1969–1970 survey and that in 1985–1987, numbers of breeding Guillemots increased by over 50% in all regions of the country. Regions where particularly notable changes were recorded included south-west and north-west Scotland, Shetland, north-east England and Wales where there were increases of 381%, 141%, 121%, 224% and 130% respectively (Lloyd *et al.* 1991).

Regular monitoring counts show regional differences in patterns of change. Numbers in the north and east peaked in the late 1970s and early 1980s before stabilising or slightly declining (Lloyd *et al.* 1991; Harris 1993). At a few colonies in south-west Britain declines between 2%–10% were recorded between 1975 and 1982 (Rothery *et al.* 1988). Elsewhere in the south and west, however, numbers increased throughout the 1970s until the mid-1980s. Subsequently, the trend was reversed in the south, although increases continued around the Irish Sea (Harris 1991).

Detailed data are lacking, but population changes in Britain and Ireland do not appear to have been affected by changes elsewhere in Europe. There is insufficient information to assess the status of Guillemot in Iceland although there is little compelling evidence to indicate any recent large population change (Nettleship & Evans 1985). Declines in many Norwegian colonies have been evident for the last 30–40 years. On Vedøy, in the Røst archipelago, there was a 93% decline in the number of pairs between 1960–1963 and 1990 (Anker-Nilssen & Barrett 1991). Much of this decline occurred before a crash in Barents Sea Capelin (*Mallotus villosus*) stocks that further decimated Guillemot (*U. a. hyperborea*) colonies. The small colonies in France, Spain and Portugal have all declined in recent decades to the point of becoming endangered (Harris 1997).

Elsewhere in Europe, small populations have experienced recent increases. In Germany, the single colony on Helgoland has increased from c. 1,000 pairs in the 1950s to 2,400 pairs in the 1990's (Cramp 1985; Harris 1997). The Danish, Swedish and Finnish Baltic population increased from 8,800 pairs in the mid-1970s to 13,000 pairs in the mid-1980s because of breeding season protection (Lyngs 1992).

The factors causing Guillemot population changes are not always clear. It has been suggested that the most important reason for the decline on Vedøy, Norway was the annual mortality of many thousands or tens of thousands of birds caught in fishing nets which compounded the effect of poor breeding success resulting from food shortages (Anker-Nilssen & Barrett 1991). Mead (1989) identified drowning in fishing nets, as the biggest threat to Guillemots in north-west European seas. Oiling, chemical poisoning and disease are other causes of mortality that may be critical (Harris 1997). Linking the large regional and

temporal differences in the causes of mortality to widespread increases and some subsequent declines is difficult (Mead 1989). A direct relationship has been found, however, between changes in food availability and Guillemot numbers. There is a strong negative correlation between Sprat *Sprattus sprattus* numbers in the North Sea and first-winter mortality of Guillemots (Harris 1997).

## 5. Protection measures for population in UK

### SPA suite

During the breeding season, the UK's SPA suite for Guillemots supports, on average, 693,120 pairs. This amounts to about 95% of the British breeding population, about 27% of the all-Ireland population and about 31% of the international population. The suite comprises 34 sites (Table 6.93.1) where Guillemot has been listed as a qualifying species.

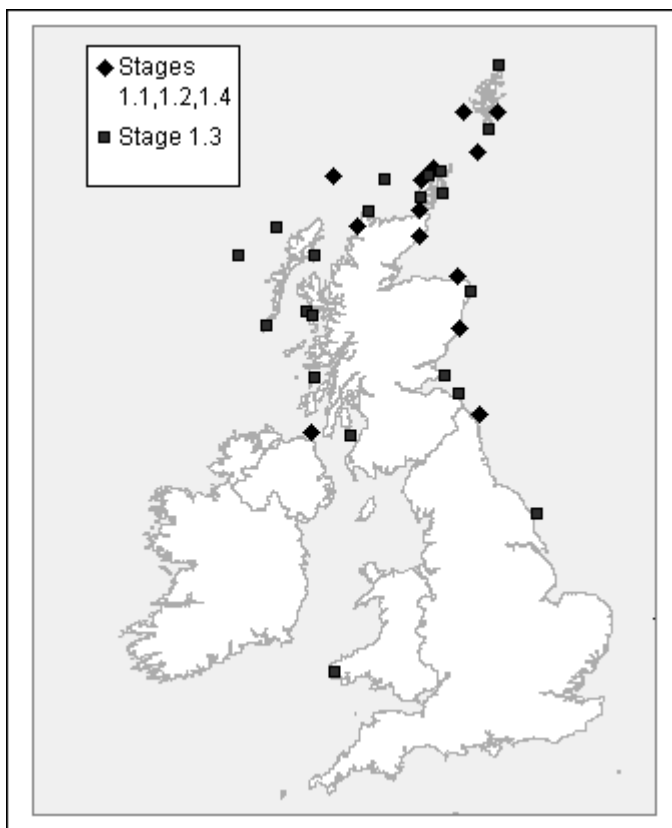
## 6. Classification criteria

The 13 Guillemot colonies in the UK that support more than 1% of the international breeding population (East Caithness Cliffs; Fair Isle; Farne Islands; Foula; Fowlsheugh; Handa; Marwick Head; North Caithness Cliffs; North Rona and Sula Sgeir; Noss; Rathlin Island; Troup, Pennan and Lion's Heads; and West Westray) were considered under Stage 1.2, and all were selected after consideration of Stage 2 judgements. An additional 21 sites were selected under Stage 1.3 (see section 5.3), with Guillemot being identified as an important component of wider breeding seabird assemblages at these localities.

All the sites selected are multi-species SPAs, important for a range of other seabirds. Many have a very long recorded history of occupancy, with written records from at least the latter part of the 19th century (Holloway 1996).

The suite encompasses sites in Northern Ireland, northern England, Wales and Scotland. As the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives adequate coverage of the range and numbers of this highly colonial species in the UK, it was not considered necessary to select additional sites using Stage 1.4

### Distribution map for breeding Guillemot SPA suite



**Table 6.93.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Ailsa Craig	3,350	0.2	0.5	1.3
Buchan Ness to Collieston Coast	8,640	0.4	1.2	1.3
Calf of Eday	8,241	0.4	1.2	1.3
Canna and Sanday	3,858	0.2	0.6	1.3
Cape Wrath	9,159	0.4	1.3	1.3
Copinsay	13,333	0.6	1.9	1.3
East Caithness Cliffs	71,509	3.2	10.2	1.2
Fair Isle	25,165	1.1	3.6	1.2
Farne Islands	23,499	1.0	3.3	1.2
Firth of Forth Islands	22,452	1.0	3.2	1.3
Flamborough Head and Bempton Cliffs	16,150	0.7	2.3	1.3
Flannan Isles	14,693	0.7	2.1	1.3
Foula	25,125	1.1	3.6	1.2
Fowlsheugh	40,140	1.8	5.7	1.2
Handa	76,105	3.4	10.8	1.2
Hermaness, Saxa Vord and Valla Field	11,363	0.5	1.6	1.3
Hoy	13,400	0.6	1.9	1.3
Marwick Head	24,388	1.1	3.5	1.2
Mingulay and Berneray	20,703	0.9	2.9	1.3
North Caithness Cliffs	26,994	1.2	3.8	1.2
North Colonsay and Western Cliffs	6,656	0.3	1.0	1.3
North Rona and Sula Sgeir	28,944	1.3	4.1	1.2
Noss	30,619	1.4	4.4	1.2
Rathlin Island	28,064	1.3	27.4% (Ire)	1.2
Rousay	7,102	0.3	1.0	1.3
Rum	2,680	0.1	0.4	1.3
Shiant Isles	12,315	0.6	1.8	1.3
Skomer and Skokholm	7,067	0.3	1.0	1.3
St Abb's Head to Fast Castle	20,971	0.9	3.0	1.3
St Kilda	15,209	0.7	2.2	1.3
Sule Skerry and Sule Stack	6,298	0.3	0.9	1.3
Sumburgh Head	10,752	0.5	1.5	1.3
Troup, Pennan and Lion's Heads	29,902	1.3	4.3	1.2
West Westray	28,274	1.3	4.0	1.2
<b>TOTALS</b>	<b>693,120</b>	<b>30.8%</b>	<b>94.5%</b> <b>27.4% (Ire)</b>	

## A6.94 Razorbill *Alca torda* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern <b>SPEC 4</b> Favourable conservation status ( <b>secure</b> ) but concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	99,160	991	75,357 (76% of GB population)
<b>Ireland</b>	22,780	228	5,978 (26% of all-Ireland population)
<b>Biogeographic population</b>	575,000	5,750	81,335 (14% of biogeographic population)

GB population source: Lloyd *et al.* 1991

All-Ireland population source: Gibbons *et al.* 1993

Biogeographic population source: Lloyd *et al.* 1991

### 3. Distribution

Razorbills have a restricted global distribution, being endemic to the temperate and boreal coasts of the North Atlantic and associated seas. The population is centred on Iceland where over half the world population nests. The Razorbill is a polytypic species with two sub-species described: *A. t. islandica* and *A. t. torda*. The nominate sub-species occurs in north-east America and Greenland in the west, Bear Island in the north, and Denmark, Norway and the Kola Peninsula in the east (Cramp 1985). Birds nesting in Britain and Ireland belong to *A. t. islandica*, which has a more southerly distribution. This sub-species also breeds in Iceland, the Faeroes, Germany (Helgoland) and France (Brittany) (Cramp 1985).

The European distribution ranges from the Kola Peninsula in the north-east to Brittany in the south. In the UK, the principal breeding sites are in northern Scotland, including the Western Isles, Shetland, Caithness and Sutherland (Lloyd *et al.* 1991). The three largest Scottish concentrations (in 1985–1987) were Handa, Berneray and the Shiant. The principal breeding areas in England and Wales were Bempton (Humberside) and Skomer (Dyfed). The main breeding area in Northern Ireland was Rathlin Island (Antrim).

Nests are located on cliff ledges or in crevices in cliffs, boulders or scree slopes, sometimes in the absence of cliffs (Cramp 1985). At sea, Razorbills prefer continental-shelf waters of 51–100 m depth (Stone *et al.* 1995).

Outside the breeding season, Razorbills occur widely in coastal waters off western Britain and Ireland, and in the North Sea. In July, chicks leave the colonies before they can fly and swim out to sea to fledge. In the period July to September, major concentrations occur in inshore areas, especially off the east coast of Scotland. In mid-winter, Razorbills are more widely distributed in the southern North Sea and the Western Approaches, reflecting a general southward movement of most northerly breeding birds (Stone *et al.* 1995). In spring, they again move northwards towards the vicinity of the breeding colonies.

#### 4. Population structure and trends

The size of the *A. t. islandica* population (the biogeographical population used for this review) is estimated at 575,000 pairs, with the largest colonies outside Iceland occurring in Britain (Lloyd *et al.* 1991).

Prior to the Operation Seafarer surveys of 1969–1970, there was very little information about the numbers of breeding Razorbills in the UK. Limited data suggested that decreases might have occurred in some colonies in south-west England (Cramp *et al.* 1974). Although differences in count methodology between the 1969–1970 and 1985–1987 (Seabird Colony Register) surveys make it impossible to assess regional and national population trends (Lloyd *et al.* 1991), there was relatively little change in distribution between the two surveys (Harris 1993).

Standardised census of many individual colonies during the national surveys showed that most had increased, particularly in Shetland, north-east Scotland and north-east England. A few in north and west Scotland showed trends that are more variable. Overall, colonies in southern Britain were stable (Lloyd *et al.* 1991). Monitoring plots have shown that Razorbill numbers in the Northern Isles and at some sites in eastern Scotland increased from the late 1960s up to the beginning of the 1980s, but then stabilised or declined. In southern England and Wales numbers have remained stable or declined (Lloyd *et al.* 1991).

Elsewhere in the international range of *A. t. islandica*, population trends are poorly known although past records indicate no recent large-scale changes in range (Nettleship & Evans 1985). In Iceland, the population is apparently increasing although many large colonies remain uncounted. The Faeroes population is apparently stable following large decreases early in the last century. Decreases have been noted for the breeding populations of France and Ireland (Hildén & Tasker 1997).

The exact reasons for recent increases in Razorbill numbers are unknown but food availability is an important influence on population changes (Lloyd *et al.* 1991). Mortality may be caused by either chemical or oil pollution (the latter possibly responsible for decreases of breeding numbers in Brittany), or by drowning in fishing nets (Hildén & Tasker 1997). Deaths in nets have increased in recent years (Mead 1989) and are, perhaps, responsible for breeding population decreases in Norway and south and west Ireland (Harris 1993; Hildén & Tasker 1997).

#### 5. Protection measures for population in UK

##### *SPA suite*

During the breeding season, the UK's SPA suite for Razorbill supports, on average, 81,335 pairs. This amounts to about 76% of the British breeding population, about 26% of the all-Ireland population and about 14% of the international population. The SPA suite contains 19 sites (Table 6.94.1) where Razorbill has been listed as a qualifying species.

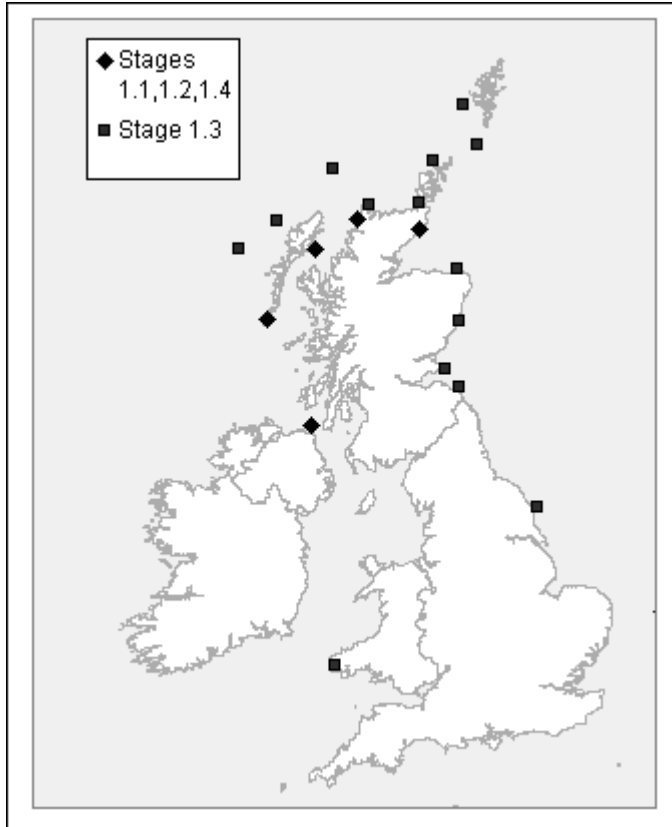
#### 6. Classification criteria

The five Razorbill colonies in the UK that support more than 1% of the international breeding population (East Caithness Cliffs; Handa; Mingulay and Berneray; Rathlin Island; and Shiant Isles) were considered under Stage 1.2, and all were selected after consideration of Stage 2 judgements. An additional 14 sites were selected under Stage 1.3 (see section 5.3), with Razorbill identified as an important component of breeding seabird assemblages at these localities.

All the sites selected are multi-species SPAs, important for a range of other seabirds. Many have a very long recorded history of occupancy, with written records from at least the latter part of the 19th century (Holloway 1996).

The suite encompasses sites in Northern Ireland, England, Wales and Scotland. As the selection of sites under Stages 1.2 and 1.3 resulted in adequate coverage of the range and numbers of this colonial species in the UK, it was not considered necessary to select additional sites using Stage 1.4.

#### Distribution map for breeding Razorbill SPA suite



**Table 6.94.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Cape Wrath	1,206	0.2	1.2	1.3
East Caithness Cliffs	9,259	1.6	9.3	1.2
Fair Isle	2,044	0.4	2.1	1.3
Firth of Forth Islands	2,693	0.5	2.7	1.3
Flamborough Head and Bempton Cliffs	5,133	0.9	5.2	1.3
Flannan Isles	2,117	0.4	2.1	1.3
Foula	4,154	0.7	4.2	1.3
Fowlsheugh	4,576	0.8	4.6	1.3
Handa	10,432	1.8	10.5	1.2
Mingulay and Berneray	11,323	2.0	11.4	1.2
North Caithness Cliffs	2,212	0.4	2.2	1.3
North Rona and Sula Sgeir	1,541	0.3	1.6	1.3
Rathlin Island	5,978	1.0	26.2 (Ire)	1.2
Shiant Isles	7,337	1.3	7.4	1.2
Skomer and Skokholm	2,854	0.5	2.9	1.3
St Abb's Head to Fast Castle	1,407	0.2	1.4	1.3
St Kilda	2,546	0.4	2.6	1.3
Troup, Pennan and Lion's Heads	3,216	0.6	3.2	1.3
West Westray	1,307	0.2	1.3	1.3
<b>TOTALS</b>	<b>81,335</b>	<b>14.2%</b>	<b>76.0%</b> <b>26.2% (Ire)</b>	

## A6.95 Puffin *Fratercula arctica* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern <b>SPEC 2</b> Unfavourable conservation status ( <b>vulnerable</b> ) and concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Migratory</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	449,000	4,490	467,886 (c. 100% of GB population)
<b>Ireland</b>	20,500	205	2,398 (12% of all-Ireland population)
<b>Biogeographic population</b>	901,000	9,010	470,284 (52% of biogeographic population)

GB population source: Lloyd et al. 1991

All-Ireland population source: Gibbons et al. 1993

Biogeographic population source: Lloyd et al. 1991

### 3. Distribution

The Puffin is endemic to the North Atlantic and associated seas (Harris 1984). Its range extends from the eastern seaboard of North America in Newfoundland, across the islands of the North Atlantic (Greenland, Iceland, Britain and Ireland, Svalbard) to the west coast of Novaya Zemlya (Cramp 1995). The species is polytypic, with three described sub-species, all of which occur in European waters. The nominate race *F. a. arctica* breeds at mid-latitudes, from eastern North America to southern Novaya Zemlya. *F. a. naumanni* breeds further north in high Arctic waters in north-west and eastern Greenland, Svalbard and northern Novaya Zemlya. *F. a. grabae* has the most southerly distribution and breeds in Britain, Ireland, the Faeroes, Channel Islands, France and southern Norway (Cramp 1985).

In mainland Europe, breeding is confined to the coasts of Brittany, Norway and Russia (Kola peninsula).

The vast majority of the British and Irish population breed in Scotland with the St. Kilda archipelago holding the largest colony (Lloyd et al. 1991). Other principal breeding areas include Shetland (particularly Fair Isle and Foula), Orkney, Sule Skerry, the Isle of May and the Western Isles including the Shiant Islands. The main breeding area in England lies in the north-east, with large colonies on the Farne Islands, Coquet Island and on the Bempton-Flamborough cliffs. Principal breeding areas in Wales include Skomer, Skokholm (both in Dyfed) and Ynys Gwylans (Gwynedd). Rathlin Island (Antrim) is the only major breeding location in Northern Ireland (Lloyd et al. 1991).

Puffins nest on exposed coasts and islands facing the ocean (Cramp 1985). At high latitudes, nests are located in crevices in steep and inaccessible cliffs of large islands, scree slopes or amongst rocks. The nest site preference at lower latitudes is for grass-covered, peaty turf on small islands or low coastal cliffs, or higher cliff terraces (Cramp 1985). It is the most marine of the British breeding auks, and, although there is a preference for continental shelf waters of 51–100 m depth, Puffins will use deeper waters than other auk species (Stone *et al.* 1995).

During the breeding season, Puffins feed in the waters around their breeding colonies. Outside the breeding season, they disperse more widely. In August and September there are particular concentrations off the east coast of Scotland, whilst by February and March, there has been a general movement southwards in the North Sea. In late winter, the main concentrations occur off the north-east coast of England (Stone *et al.* 1995).

#### 4. Population structure and trends

The total population of *F. a. grabae* (which is used as the biogeographical population for this review) is estimated at 901,000 pairs (Cramp 1985; Lloyd *et al.* 1991). The combined British and Irish population of 469,500 pairs (1985–1987) makes up 52.1% of this biogeographical population (Stone *et al.* 1997).

Cramp *et al.* (1974) indicated dramatic declines at some British colonies, particularly on the west coast, during the early- and mid-20th century. For example, on Skomer the number of breeding pairs decreased from 50,000 in 1946 to 7,000 in 1969–1970. Lloyd *et al.* (1991) suggested that caution is needed with early records due to counting difficulties, together with normal variation in colony numbers. In addition, Harris (1984) concluded that the declines, although substantial as on St. Kilda, had been less marked than previously supposed. Differences in methodology make it difficult to assess how much Puffin numbers changed between the two national surveys of 1969–1970 and 1985–1987 (Lloyd *et al.* 1991).

Reliable population trend information is available for some colonies with long-term monitoring of burrow densities in sample plots (Harris 1984). These monitored colonies, located in St Kilda, the Shiant Islands, the Isle of May and in the Shetland archipelago, mostly showed stable numbers between the early 1970s and late 1980s, although numbers fluctuated at Dun, St. Kilda (Lloyd *et al.* 1991). An exception was the Isle of May where there was an annual increase of 22% in numbers between 1973 and 1981. This rate of increase would have been impossible without immigration from other colonies. After 1981, the rate of increase slowed abruptly with no increase during 1985–1991 (Harris & Wanless 1991). Census counts conducted at some colonies showed numbers increasing in north-east England with 6,800 pairs on the Farne Islands in 1969 and 20,700 pairs in 1984. Similarly, on nearby Coquet Island, numbers rose from 400 in 1969 to 3,300 in 1984 (Lloyd *et al.* 1991). The rate of increase in north-east England has now declined (Harris 1997). Census data for six colonies in south and south-west England showed that numbers fluctuated, with one Cornish colony being abandoned in 1980. In Antrim, Puffin numbers doubled between 1969 and 1985 (Lloyd *et al.* 1991).

Despite difficulties with assessing trends, declines in Puffin numbers have been noted since the 1960s in the Faeroes, France and the Channel Islands, but recently these trends have been halted (Harris 1997). The main French population on Sept Îles, off Brittany, declined from 10,000 pairs in 1912 to 250 pairs in 1982, and has since increased slightly or remained stable (Harris 1997). Puffin populations in south-western Norway remained stable during the 1980s in contrast to northern populations where large declines have occurred (Anker-Nilssen & Barrett 1991).

Food availability appears to be a major factor influencing population change. The cessation of increase in the Isle of May colony coincided with a reduction in the numbers of Sprats *Sprattus sprattus* in the North Sea and a doubling of the annual mortality rate of breeding adults (Harris & Wanless 1991). The large decrease in the northern Norway population in the 1970s and 1980s was linked to a crash in Atlantic/Scandinavian Herring *Clupea harengus* stocks (Anker-Nilssen & Barrett 1991). Declines have often been exacerbated by local factors such as oiling or mammalian predation (Harris 1997). Conditions in the wintering areas also appear to be critical for Puffins (Harris 1993).

## 5. Protection measures for population in UK

### SPA suite

During the breeding season, the UK's SPA suite for Puffin supports, on average, 470,284 pairs. This amounts to virtually the whole of the British breeding population, about 12% of the all-Ireland population and about 52% of the international population. The SPA suite contains 21 sites (Table 6.95.1) where Puffin has been listed as a qualifying species.

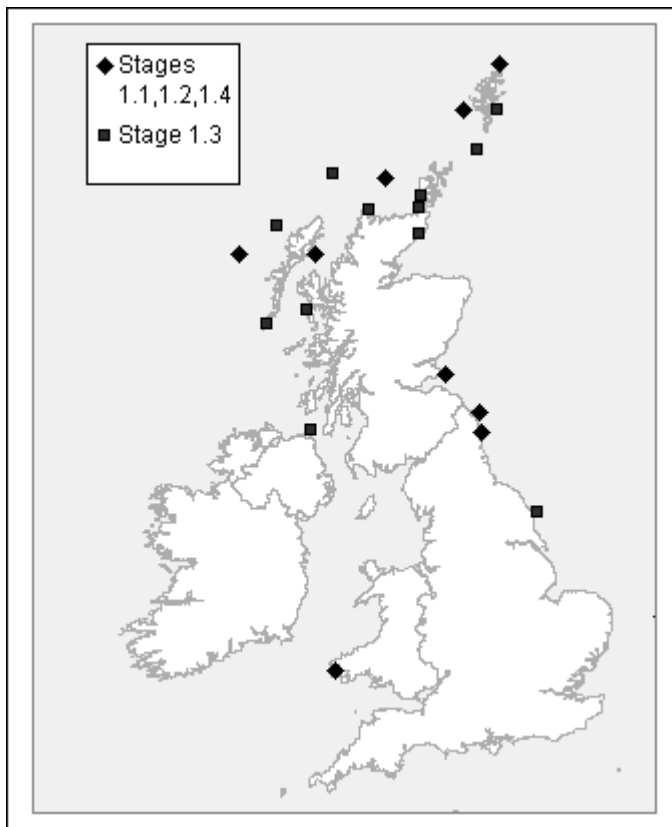
## 6. Classification criteria

The nine Puffin colonies in the UK that support more than 1% of the international breeding population (Coquet Island; Farne Islands; Firth of Forth Islands; Foula; Hermaness, Saxa Vord and Valla Field; Shiant Isles; Skomer and Skokholm; St Kilda; and Sule Skerry and Sule Stack) were considered under Stage 1.2, and all were selected after consideration of Stage 2 judgements. An additional 12 sites were selected under Stage 1.3 (see section 5.3), with Puffin identified as an important component of the breeding seabird assemblage at each of these localities.

All the sites selected are multi-species SPAs, important for a range of other seabirds. Many have a very long recorded history of occupancy, with written records from at least the latter part of the 19th century (Holloway 1996).

The suite encompasses sites in Northern Ireland, England, Wales and Scotland. As the selection of sites under Stages 1.2 and 1.3 resulted in adequate coverage of the range and numbers of this colonial species in the UK, it was not considered necessary to select additional sites using Stage 1.4.

### Distribution map for breeding Puffin SPA suite



**Table 6.95.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Canna and Sanday	1,225	0.1	0.3	1.3
Cape Wrath	5,900	0.7	1.3	1.3
Coquet Island	11,400	1.3	2.5	1.2
East Caithness Cliffs	1,750	0.2	0.4	1.3
Fair Isle	8,700	0.9	1.9	1.3
Farne Islands	34,710	3.9	7.7	1.2
Firth of Forth Islands	21,000	2.3	4.7	1.2
Flamborough Head and Bempton Cliffs	3,473	0.4	0.8	1.3
Flannan Isles	5,500	0.6	1.2	1.3
Foula	48,000	5.3	10.7	1.2
Hermaness, Saxa Vord and Valla Field	25,400	2.8	5.7	1.2
Hoy	3,500	0.4	0.8	1.3
Mingulay and Berneray	4,000	0.4	0.9	1.3
North Caithness Cliffs	1,750	0.2	0.4	1.3
North Rona and Sula Sgeir	5,250	0.6	1.2	1.3
Noss	2,348	0.3	0.5	1.3
Rathlin Island	2,398	0.3	11.7 (Ire)	1.3
Shiant Isles	76,100	8.5	17.0	1.2
Skomer and Skokholm	9,500	1.1	2.1	1.2
St Kilda	155,000	17.2	34.5	1.2
Sule Skerry and Sule Stack	43,380	4.8	9.7	1.2
<b>TOTALS</b>	<b>470,284</b>	<b>52.2%</b>	<b>c. 100%</b> <b>11.7% (Ire)</b>	

## A6.96 Short-eared Owl *Asio flammeus* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern <b>SPEC 3</b> Unfavourable conservation status ( <b>vulnerable</b> ) but not concentrated in Europe
Migratory	Wildlife (Northern Ireland) Order 1985 <b>General Protection Schedule 1(1)</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering ✓	EC Birds Directive 1979 <b>Annex I</b>	All-Ireland Vertebrate Red Data Book <b>Rare</b>

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	1,000	10	131 (13% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	13,400	134	131 (1% of biogeographic population)

GB population source: Gibbons et al. 1993

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The Short-eared Owl has a wide global distribution. It breeds in northern boreal regions of the Palearctic, from Iceland and Britain eastwards across northern Asia to the Bering Sea. It likewise occurs across the whole of northern North America. There are isolated populations in the Caribbean (Hispaniola) and northern South America, as well as the southern half of South America. Populations occurring on outlying oceanic islands, such as the Falkland Islands, Hawaii and Juan Fernández, probably derive from the long-distance migrations and dispersive movements typical of this nomadic owl, undertaken by individuals outside the breeding season (Hagemeyer & Blair 1997). The species is polytypic, the nominate race *A. f. flammeus* occurring throughout North America and the Palearctic. At least a further eight sub-species occur elsewhere (Cramp 1985).

In much of its range, the Short-eared Owl is migratory, moving south in winter from northern breeding areas. However, some populations are sedentary, for example those in South America.

Short-eared Owls have a scattered breeding distribution in western Europe, occurring in upland, moorland and heathland areas of Britain, the Low Countries, Denmark and Germany. Further north and east, in Scandinavia, the Baltic States, Belarus and Russia, the species occurs much more extensively.

In the UK, Short-eared Owls breed locally in south-east England, and in the uplands from the north Staffordshire moors, north to the Scottish border. The Welsh population is concentrated on moorland and afforested tracts flanking central areas and the north Cambrian Mountains. Similar habitats are occupied in the Isle of Man. In Scotland, breeding is recorded in most mainland counties, with greatest numbers found in the Southern Uplands and the foothills along the south and east fringes of the

Cairngorm and Grampian mountains. There is a healthy population in Orkney and on islands in the Inner Hebrides, but an absence on Shetland, Harris and Lewis (Gibbons *et al.* 1993). In Ireland, breeding has not been proven.

The species is widely, but sparsely distributed (Stroud *et al.* 1990). In the breeding season they inhabit moorland, heaths, marshes, bogs, sand dunes and young forestry plantations (Stroud *et al.* 1990; Gibbons *et al.* 1993). The species is an opportunistic feeder, heavily reliant upon vole and mice populations, upon which its distribution and nesting success tend to revolve.

#### 4. Population structure and trends

The European population is between 13,376–26,265 pairs (Hagemeijer & Blair 1997), with large numbers also occurring in Russia (10,000–100,000 pairs) where Short-eared Owls breed from the Arctic tundra south to the steppes. Elsewhere, the next-largest populations occur in Finland (3,000–10,000 pairs), Sweden (2,000–7,000 pairs), Norway (1,000–10,000 pairs), Belarus (1,500–3,000 pairs) and Great Britain (1,000–3,500 pairs) (Hagemeijer & Blair 1997). There is little information on trends in most of these countries.

In Britain, both the breeding distribution and population size of Short-eared Owls have expanded over the past 70 years as a result of young conifer plantations offering high numbers of voles for Short-eared Owl to prey upon (Shaw 1995). However, the suitability of this habitat declines as the plantations mature. For first rotation forestry, suitability is retained up to 12 years post planting (Shaw 1995).

Numbers and local distribution also fluctuate greatly in association with periodic cyclical changes in populations of prey species (Village 1987; Stroud *et al.* 1990; Gibbons *et al.* 1993). Short-eared Owls prey upon field voles almost everywhere, but it is usual for them to specialise on alternative prey. For example, in Norfolk, Short-eared Owls prey upon Brown Rats *Rattus norvegicus*. Lawton Roberts & Bowman (1986) found that numbers and distribution of heathland-breeding owls feeding on small mammals with relatively stable populations (*e.g.* shrews *Sorex* spp. and Wood Mice *Apodemus sylvaticus*) were themselves more stable (Gibbons *et al.* 1993).

#### 5. Protection measures for population in UK

##### *SPA suite*

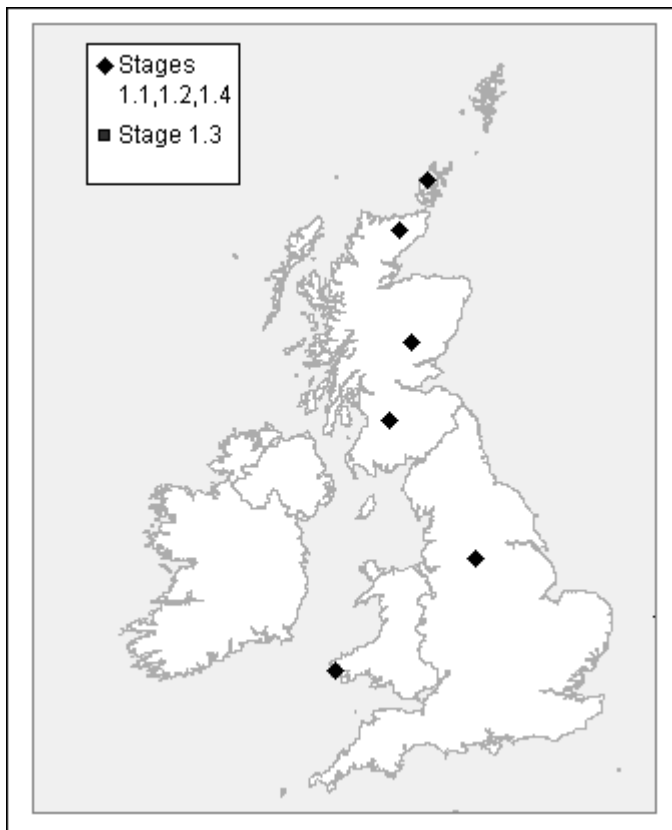
During the breeding season, the UK's SPA suite for Short-eared Owls supports, on average about 131 pairs. This amounts to about 13% of the British breeding population and about 1% of the international population. Short-eared Owls do not regularly breed in Northern Ireland. The suite contains six sites (Table 6.96.1) spread across the British uplands, where Short-eared Owl has been listed as a qualifying species.

#### 6. Classification criteria

All sites in the UK that support more than 1% of the national breeding population were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements. All sites selected are multi-species SPAs and are distributed throughout the uplands, from the moors of Orkney, south to Skomer in west Wales and the South Pennines, reflecting the breeding distribution of Short-eared Owls in Britain.

Knowledge of numbers of Short-eared Owls breeding in different parts of the British uplands is generally poor. They are typically distributed widely, often at low densities, although numbers vary considerably between years according to vole population cycles. Site occupancy also tends to be erratic, with territory and hunting ranges small but variable in relation to prey numbers (Mikkola 1983; Village 1987; Gibbons *et al.* 1993). All these factors make the identification of further sites outside core areas, problematic. Accordingly, no further sites have been selected under Stage 1.4.

Distribution map for breeding Short-eared Owl SPA suite



**Table 6.96.1 – SPA suite**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Caithness and Sutherland Peatlands	30	0.2	3.00	1.1
Forest of Clunie	20	0.1	2.00	1.1
Muirkirk and North Lowther Uplands	30	0.2	3.00	1.1
Orkney Mainland Moors	20	0.1	2.00	1.1
Skomer and Skokholm	6	<0.1	0.60	1.1
South Pennine Moors	25	0.2	2.50	1.1
<b>TOTALS</b>	<b>131</b>	<b>1.0%</b>	<b>13.1%</b>	

## A6.97 Nightjar *Caprimulgus europaeus*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern <b>SPEC 2</b> Unfavourable conservation status ( <b>declining</b> ) and concentrated in Europe
Migratory ✓	Wildlife (Northern Ireland) Order 1985 <b>General Protection Schedule 1(1)</b>	(UK) Species of Conservation Importance <b>Table 4</b>
Wintering	EC Birds Directive 1979 <b>Annex I</b>	All-Ireland Vertebrate Red Data Book <b>Endangered</b>

### 2. Population data

	Population sizes (churring males)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	3,400	34	1,785 (53% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	224,000	2,240	1,785 (0.8% of biogeographic population)

GB population source: Morris et al. 1994

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The Nightjar's global distribution lies in the Palearctic where it breeds from North Africa and western Europe, widely across temperate regions of Eurasia as far as central Asia and western China (to c. 112°E). It is polytypic with six sub-species described, two of which occur in Europe. The nominate race, *C. e. europaeus* has a northern distribution in central and northern Europe across to northern Asia, whilst *C. e. meridionalis* occurs in southern Europe, North Africa and Asia Minor (Cramp 1985).

Nightjars are highly migratory and birds leave temperate breeding areas to overwinter in Africa, where they are widely distributed south of the Sahara.

Over half of the species' global breeding range lies in Europe, where it occurs in most countries, being absent only from Iceland and northern parts of Scandinavia. In the UK, Ireland and central Europe its distribution tends to be sporadic, reflecting the scattered availability of good breeding habitats (Cramp 1985; Hagemeyer & Blair 1997).

Nightjars breeding in the UK are concentrated in southern and south-eastern England and East Anglia, with much smaller numbers and lower densities occurring in Wales, the Midlands, north-east England and south-west Scotland. There may be less than 30 pairs throughout the whole of Ireland (Gibbons *et al.* 1993).

Breeding habitats include heathland, often with scattered pine or birch, woodland edges and clearings, young forestry plantations and, particularly in south-east England, coppiced woodland. Forestry plantations are used up to 15–20 years after planting (Bowden & Green 1994). In clear-felled areas of

Thetford Forest, nests have been found in a variety of habitats, including extensive, non-vegetated areas and sparse bracken (Burgess *et al.* 1989). Birds forage over a variety of habitats including deciduous or mixed woods, orchards, gardens, riparian habitats and freshwater wetlands, heathland and young plantations (Bowden & Green 1994; Alexander & Cresswell 1990).

#### 4. Population structure and trends

The European population of Nightjar is estimated at between 223,921 and 264,419 pairs (Hagemeijer & Blair 1997). The species is declining in both numbers and range, with almost half of national populations having declined by more than 20% since 1970.

The Nightjar has been in decline through much of the UK since about 1930 and more markedly between 1953–1973 (Parslow 1973). It is now absent as a breeding bird from large areas of its former range, including much of Scotland, north-east England, the Midlands, Central Wales and Ireland (Parslow 1973; Holloway 1996). There are currently estimated to be about 3,400 churring males in Britain (Morris *et al.* 1994).

The decline in the UK reflects similar trends elsewhere in Europe and is largely attributed to the loss, fragmentation and degradation of heathland combined with the decline of invertebrate prey as a result of increased pesticide use (Tucker & Heath 1994). An increase in numbers of males in the UK between the national surveys of 1981 (Gribble 1983) and 1992 (Morris *et al.* 1994) was accompanied by a reduction in range. This may be explained by a shift in habitats occupied from traditional heathland sites towards forestry (possibly a reflection of changing availability and suitability). In particular, much suitable habitat became available in commercial restocks and clear-felled areas following the storms of 1987 and 1990/91 in southern and eastern England (Morris *et al.* 1994).

#### 5. Protection measures for population in UK

##### *SPA suite*

During the breeding season, the UK's SPA suite for Nightjar supports, on average about 1,785 churring males. This amounts to about 53% of the British breeding population. Nightjars do not regularly breed in Northern Ireland. The suite contains about 0.8% of the international population (Britain lies on the edge of the species' range and numbers in the UK are relatively small compared to those elsewhere in Europe). The SPA suite contains ten sites (Table 6.97.1) where Nightjar has been listed as a qualifying species.

The lowland heathlands in the SPA suite are currently benefiting from management work funded by the Heritage Lottery Fund in partnership with English Nature, RSPB, local authorities and wildlife trusts. Sympathetic management of heathland SSSIs, including the removal of conifers, and bracken control, is also encouraged by English Nature under its Wildlife Enhancement Scheme.

##### *Other measures*

A Biodiversity Action Plan has been published for this species (Biodiversity Steering Group 1998) and is being implemented as part of the UK's national response to the Biodiversity Convention.

#### 6. Classification criteria

All sites in the UK that support more than 1% of the national breeding population of Nightjars were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements. Most are multi-species SPAs, although Thorne and Hatfield Moors has been selected solely for Nightjars. The sites are concentrated in southern England and East Anglia reflecting the distribution of Nightjars in Britain. There is a long recorded history of occupancy at many of these sites.

Given that the selection of sites under Stage 1.1 resulted in a suite which gives adequate coverage of Nightjar population and range in the UK, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for breeding Nightjar SPA suite

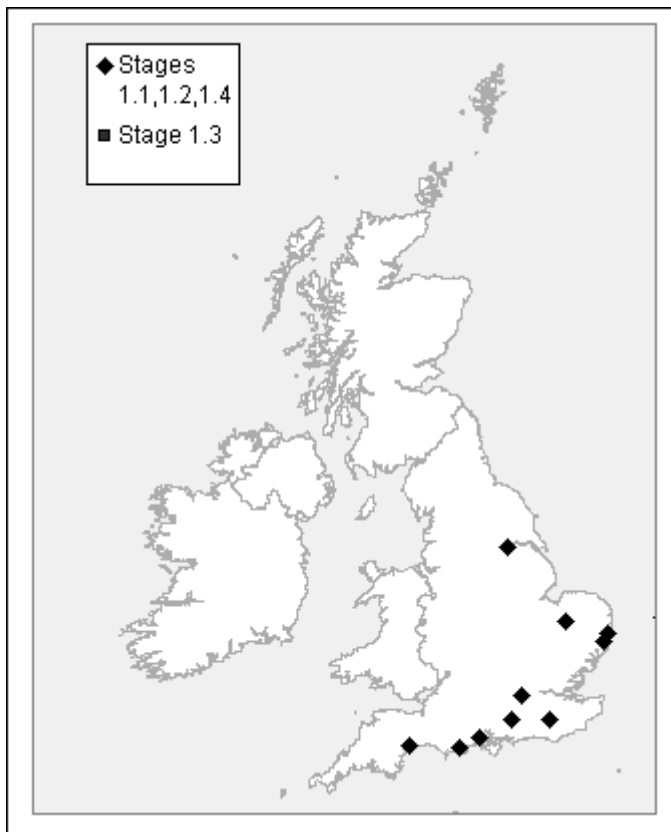


Table 6.97.1 – SPA suite

Site name	Site total	% of biogeographical populations	% of national population	Selection stage
Ashdown Forest	35	<0.1	1.0	1.1
Breckland	415	0.2	12.2	1.1
Dorset Heathlands	386	0.2	11.4	1.1
East Devon Heaths	83	<0.1	2.4	1.1
Minsmere – Walberswick	24	<0.1	0.7	1.1
New Forest	300	0.1	8.8	1.1
Sandlings	109	<0.1	3.2	1.1
Thames Basin Heaths	264	0.1	7.8	1.1
Thorne and Hatfield Moors	66	<0.1	1.9	1.1
Wealden Heaths	103	<0.1	3.0	1.1
<b>TOTALS</b>	<b>1,785</b>	<b>0.8%</b>	<b>52.5%</b>	

## A6.98 Woodlark *Lullula arborea*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981	Species of European Conservation Concern
	<b>General Protection Schedule 1(1) Schedule 4</b>	<b>SPEC 2</b> Unfavourable conservation status ( <b>vulnerable</b> ) and concentrated in Europe
Migratory	Wildlife (Northern Ireland) Order 1985	(UK) Species of Conservation Importance
	<b>General Protection</b>	<b>Table 4</b>
Wintering ✓	EC Birds Directive 1979	All-Ireland Vertebrate Red Data Book
	<b>Annex I</b>	<b>Extinct</b>

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	1,500	15	1,102 (73% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	1,050,000	10,500	1,102 (0.1% of biogeographic population)

GB population source: Wotton & Gillings 2000

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The Woodlark has a restricted global range that mostly lies in Europe. It breeds from southern Fennoscandia (south of 60°N), south to the Mediterranean and North Africa, and from Iberia east to the Urals and Iran (Cramp 1998; Tucker & Heath 1994). It is polytypic with two sub-species described. The nominate race *L. a. arborea* occurs across most of Europe, south to Portugal, northern Spain, northern Italy and Ukraine. *L. a. pallida* occurs further south of this range in North Africa, as well as further east, as far as Iran and Turkmenistan (Cramp 1988).

Woodlarks are widely distributed across Europe from Iberia to the Russian steppes, but have a generally southern distribution, occurring only in the southernmost parts of Scandinavia and Britain. This reflects its preference for Mediterranean and temperate climatic conditions with warm summers and mild winters. Western populations are sedentary, but further east birds migrate west and south from summer breeding areas to avoid severe continental winters. The species is absent from Ireland (Hagemeyer & Blair 1997).

In the UK, breeding is confined to southern England with most birds occurring in Dorset, Hampshire (especially the New Forest), Surrey, Sussex, Breckland and the Suffolk Coast. Small populations have also recently become established in north Norfolk and the east Midlands. The preferred breeding habitat in England varies with location. Birds in the south-west use agricultural habitats, whilst those in southern England are largely found on heathland, and those in East Anglia depend on recently cleared or restocked forestry plantations (Gibbons *et al.* 1993).

Migratory behaviour also varies across the species' English distribution. East Anglian birds largely desert their breeding grounds in the winter, although a greater proportion of the birds in southern England remain on breeding areas throughout the year.

#### 4. Population structure and trends

The European population of Woodlark is estimated at 1,050,376–2,239,048 pairs (Hagemeyer & Blair 1997). Numbers have fluctuated widely during the 20th century in north-west and central Europe, with several countries experiencing long-term declines. Up to two-thirds of the known European population is currently experiencing a reduction in range, particularly in Spain and France. Similarly in the UK and Finland, the northern limit of the range has moved south, and the species is now absent in Ireland. These declines have been attributed to the loss of dry grassland, fallow land and pasture to intensive agriculture, abandonment and afforestation, and the loss, or degradation of lowland heathland to agriculture, scrub invasion and development. Severe winters in north-west Europe may also cause local extinctions where numbers have already been reduced by habitat loss (Tucker & Heath 1994).

Woodlark populations have also fluctuated widely in the UK. Between the 1920s and early 1950s the population expanded and the species became widely distributed in England and Wales as far north as Yorkshire (Parslow 1973). This was followed by a rapid decline and contraction of range. From the late 1960s to the early 1980s, the population is thought to have fluctuated between 100–400 pairs (Sitters *et al.* 1996). The number of 10x10 km squares occupied in the breeding season in the UK decreased by 62% between 1968–1972 and 1988–1991. However, the population has since increased from an estimated 250 pairs in 1986 to around 1,500 pairs in 1997 (Wotton & Gillings 2000). The recent increase is thought to be largely because of a recent increase in the availability of breeding habitat in forestry plantations due to storm damage and clear felling.

#### 5. Protection measures for population in UK

##### *SPA suite*

During the breeding season, the UK's SPA suite for Woodlark supports, on average about 1,102 pairs. This amounts to about 73% of the British breeding population. Woodlarks do not breed in Northern Ireland. The suite contains about 0.1% of the international population (Britain lies on the edge of the European range and numbers in the UK are small compared to elsewhere in Europe). The SPA suite contains seven sites (Table 6.98.1) where Woodlark has been listed as a qualifying species.

##### *Other measures*

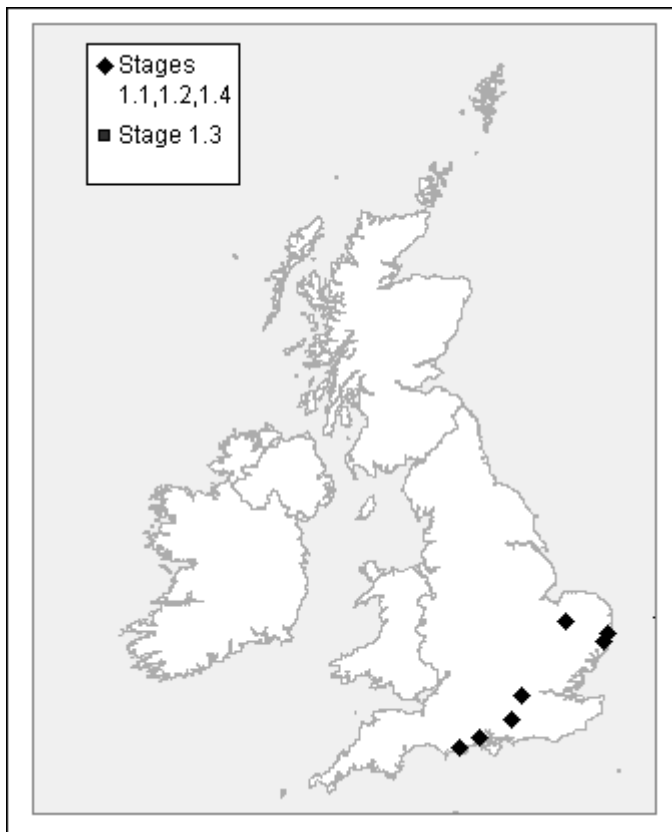
A Biodiversity Action Plan has been published for this species (Biodiversity Steering Group 1998) and is being implemented as part of the UK's national response to the Biodiversity Convention.

#### 6. Classification criteria

All sites in the UK that support more than 1% of the national breeding population were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements. All sites selected are multi-species SPAs, and are distributed in southern England and East Anglia, reflecting the distribution of Woodlarks in Britain.

Given that the selection of sites under Stage 1.1 resulted in a suite which gives very good coverage of Woodlark population and range in the UK, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for breeding Woodlark SPA suite



**Table 6.98.1 – SPA suite**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Breckland	430	<0.1	28.7	1.1
Minsmere – Walberswick	20	<0.1	1.3	1.1
Dorset Heathlands	60	<0.1	4.0	1.1
New Forest	184	<0.1	12.3	1.1
Sandlings	154	<0.1	10.3	1.1
Thames Basin Heaths	149	<0.1	9.9	1.1
Wealden Heaths	105	<0.1	7.0	1.1
<b>TOTALS</b>	<b>1,102</b>	<b>0.1%</b>	<b>73.4%</b>	

## A6.99 Fair Isle Wren *Troglodytes troglodytes fridariensis*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981 <b>General Protection</b>	Species of European Conservation Concern
Migratory	Wildlife (Northern Ireland) Order 1985	(UK) Species of Conservation Importance
Wintering ✓	EC Birds Directive 1979 <b>Annex I</b>	All-Ireland Vertebrate Red Data Book

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	37	1	37 (100% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	37	1	37 (100% of biogeographic population)

GB population source: SNH

Biogeographic population source: SNH

### 3. Distribution

The Fair Isle Wren *Troglodytes troglodytes fridariensis* is an endemic sub-species of Wren *T. troglodytes* confined to the small island of Fair Isle, located in the North Sea half way between Orkney and Shetland.

Fair Isle Wrens are resident and sedentary (Thom 1986). They are closely associated with cliffs and gully systems on the island, with a preference for the more sheltered inlets, or 'geos' (Williamson 1958b). Although, they occur around the entire coast of the island, they do show some preference for the less exposed north and east facing shores.

When nesting they are absent from the crofting areas on the island, maintaining territories along the cliffs and geos, but when the young fledge there is some dispersal into cultivated habitats, especially during severe winter weather. The feeding ecology of the Fair Isle Wren has not been subject to intensive study. They may feed on the small marine invertebrates and fly larvae found amongst seaweed washed up on the boulder beaches at the foot of geos (Williamson 1958b).

### 4. Population structure and trends

The first Fair Isle Wren population census was carried out in 1950, and the population has been monitored annually since. Population estimates are based on singing males, which are relatively easy to census, and monogamy is assumed for this sub-species (Armstrong 1955). The population has fluctuated between 36 singing males in 1950, no more than 50 in 1957, a maximum of 52 in the mid-1960s and a minimum of 10 in 1981. Despite these fluctuations the population was in general decline

between 1950 and 1987, but appears to have recently recovered and remained stable at around 30–35 singing males between 1994 and 1998 (Aspinall 1988; Fair Isle Bird Observatory annual reports).

As part of the SNH-funded Ranger Service, which is currently run through the Fair Isle Bird Observatory, methods are being developed to allow more accurate censuses to be made in future. The causes of the general decline in population are not fully understood. Severe wet and windy winter weather may play a part (Williamson 1958b; Aspinall 1988), particularly as the species is known to experience low breeding densities following cold winters (Marchant *et al.* 1900; Gibbons *et al.* 1993).

## 5. Protection measures for population in UK

### SPA suite

The UK's SPA suite for Fair Isle Wren contains the habitats used throughout the year by, on average, 37 pairs. This is the whole of the British and international breeding population, which is restricted in distribution solely to Fair Isle in Shetland (Table 6.99.1).

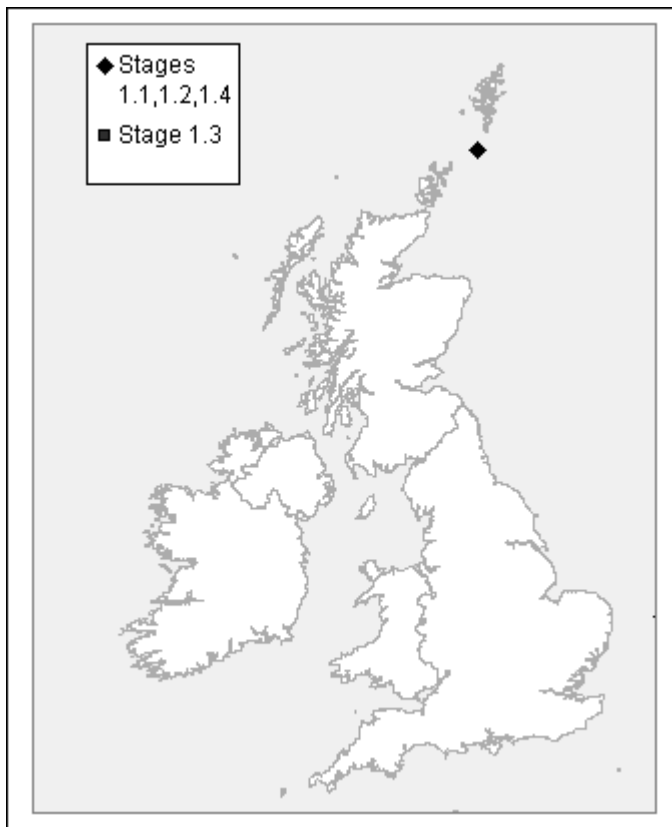
All the cliff habitats of the island are within the SPA, as are the uplands in the north. The only areas excluded from the SPA are the in-bye pastures, gardens and housing, which represents the majority of the southern end of the island. The island is part of the Shetland Environmentally Sensitive Area, and croft management throughout is likely to be beneficial to the sub-species under this scheme.

## 6. Classification criteria

Fair Isle was selected under Stage 1.1 after consideration of Stage 2 judgements.

Fair Isle is a multi-species SPA also holding important seabird populations. The SPA contains the entire coastal habitat of the island (the main breeding areas for the Wren) as well as moorland areas in the north of the island. The Fair Isle race of Wren was first described in 1951 (Williamson 1951) although it has clearly been long present on the island. The SPA is thus also the type locality.

### Distribution map for Fair Isle Wren SPA suite



**Table 6.99.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Fair Isle	37	100	100	1.1
<b>TOTALS</b>	37	100%	100%	

## A6.100 Aquatic Warbler *Acrocephalus paludicola*

### 1. Status in UK

Biological status		Legal status		Conservation status	
Breeding		Wildlife and Countryside Act 1981	<b>General Protection</b>	Species of European Conservation Concern	<b>SPEC 1</b> Global conservation concern ( <b>endangered</b> )
Migratory	✓	Wildlife (Northern Ireland) Order 1985	<b>General Protection</b>	(UK) Species of Conservation Importance	<b>Table 1</b>
Wintering		EC Birds Directive 1979	<b>Annex I Migratory</b>	All-Ireland Vertebrate Red Data Book	

### 2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	67	1	47 (70% of GB total)
<b>Ireland</b>			
<b>Biogeographic population</b>	11,220	112	47 (0.4% of biogeographic population)

GB population source: *English Nature unpublished*

Biogeographic population source: *Tucker & Heath 1994*

### 3. Distribution

Aquatic Warblers have a highly restricted global distribution that is confined to eastern Europe. They breed in extensive reed-swamps between 50°E and 60°E, from eastern Germany to the River Ob in western Siberia (Cramp 1992; Hagemeyer & Blair 1997). The population winters in west Sahelian wetlands, from Senegal and Mali, to Ghana (Hagemeyer & Blair 1997), although the exact location of the wintering area(s) remains unknown. The species is monotypic.

The extent of suitable breeding habitat, *i.e.* large, undisturbed reed-swamps, has been greatly diminished by large-scale drainage.

Despite their eastern European breeding distribution, many Aquatic Warblers migrate west or south-west in autumn en route to wintering areas in western Africa. This brings them into north-west Europe before they turn south through France and Iberia. Observations in Great Britain show that they are virtually restricted to reedbed habitats during their migration through Europe. Accordingly, small numbers of birds occur in southern England every autumn, mostly as drift migrants. Consequently, the UK passage population is very small and at the edge of the species' range, although several sites have a long history of occurrence. All regular passage sites are in England, concentrated on the south coast. On autumn passage, Aquatic Warblers occupy damp habitats with rushes (*Scirpus* and *Juncus spp.*).

#### 4. Population structure and trends

The Aquatic Warbler is classified as Globally Threatened (Collar *et al.* 1994) due to its small world population and anticipated further declines due to habitat loss. In fact the species is one of only three globally threatened birds that regularly occur in Great Britain.

The period 1970 to 1990 has seen declining numbers in most of the remaining central European populations and the current population in Europe is possibly as few as 3,740 singing males, although the upper limit of estimations is 18,000 singing males (Tucker & Heath 1994). No quantitative data are available to determine the magnitude of the decline which is thought to be largely the result of habitat loss due to land drainage for agriculture and industrial development, as well as the abandonment of traditional farming practices (Tucker & Heath 1994).

In Europe, the Aquatic Warbler has become extinct as a breeding species in the former Yugoslavia, Bulgaria, Romania, Italy, Slovakia, Austria, France and The Netherlands since 1930 (Tucker & Heath 1994).

Historically, very few quantitative data exist for Aquatic Warblers passing through the UK in autumn. However, the number of records has greatly increased since 1950 and the species ceased to be considered as an official rarity by the British Birds Rarities Committee in 1982 (Grant & the BBRC 1982). The increase in records is likely to be a result of greater observer coverage and, particularly, of ringing effort. The autumn passage population of Aquatic Warblers in Great Britain is estimated to be 67 birds, based on 1997 figures, although this number is based on casual observations supplemented by ringing records at a limited proportion of sites, so is likely to be an underestimate.

Numbers passing through the UK in any given year are primarily determined by the prevailing weather conditions in August and September. South-easterly winds are liable to push birds that would otherwise migrate over the European continent across the English Channel. Like other migrant passerines, Aquatic Warblers are more likely to pause suitable habitat if they encounter inclement weather during migration. Thus, the species is more likely to be recorded in adverse conditions than during fine weather.

On return migration to breeding areas in spring, Aquatic Warblers are thought to take a more easterly route across Europe, using inland wetlands as staging areas. Consequently, there are very few spring records for those sites along the southern English coast where the species occurs regularly in autumn. There is, however, a general paucity of data concerning both autumn and spring migration routes and habitat requirements (Heredia 1996).

#### 5. Protection measures for population in UK

##### *SPA suite*

In the autumn passage period, the UK's SPA suite for Aquatic Warbler supports, on average about 47 individuals. This is thought to amount to about 70% of the British population at this season<sup>29</sup>. There are no records of Aquatic Warblers migrating through Northern Ireland. In the autumn passage period, the SPA suite is thought to support about 0.4% of the international population. The suite comprises three sites on the south coast of England (Table 6.100.1).

Aquatic Warblers depend on the availability of large areas of reedbed habitat for feeding prior to autumn migration and at staging points along the course of the route to their wintering areas. They use these staging points to feed and rest in order to replenish their fat reserves, before commencing the long flight over the sea to France or Spain.

##### *Other measures*

A Biodiversity Action Plan has been drafted for this species (Biodiversity Steering Group 1995) and is being implemented as part of the UK's national response to the Biodiversity Convention.

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<sup>29</sup> Calculation of site totals and population coverage for migrating Aquatic Warblers is problematic. Assessment of total numbers using any site is difficult owing to turnover as birds move through. Additionally, the national total (although based on the best available data) is probably imprecise for the same reasons. The site totals and proportions presented here should thus be regarded as indicative rather than exact.

## 6. Classification criteria

All sites in the UK known to support more than 1% of the national total of Aquatic Warblers during autumn migration were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements. All three SPAs (Dungeness to Pett Level; Poole Harbour; and Marazion Marsh) are multi-species sites lying respectively on the eastern, central and western parts of the English south coast.

Monitoring of Aquatic Warblers has improved in recent years – they are known to have occurred at Dungeness to Pett Levels every autumn since at least 1989 (James 1996), and at Poole Harbour every autumn since 1991 (Taylor 1992).

Distribution map for passage Aquatic Warbler SPA suite

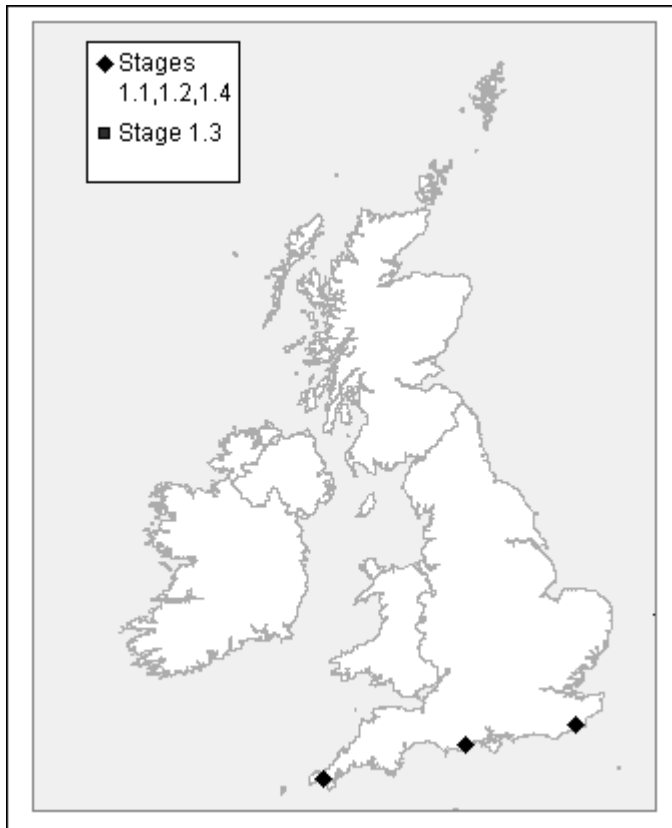


Table 6.100.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Dungeness to Pett Level	30	0.3	45	1.1
Marazion Marsh	6	<0.1	9	1.1
Poole Harbour	11	0.1	16	1.1
<b>TOTALS</b>	<b>47</b>	<b>0.4%</b>	<b>70%</b>	

## A6.101 Dartford Warbler *Sylvia undata*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981	Species of European Conservation Concern
	<b>General Protection Schedule 1(1) Schedule 4</b>	<b>SPEC 2</b> Unfavourable conservation status ( <b>vulnerable</b> ) and concentrated in Europe
Migratory	Wildlife (Northern Ireland) Order 1985	(UK) Species of Conservation Importance
	<b>General Protection</b>	<b>Table 2</b>
Wintering ✓	EC Birds Directive 1979	All-Ireland Vertebrate Red Data Book
	<b>Annex I</b>	

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	1,600	16	1,681 (100% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	2,026,000	20,260	1,681 (<0.1% of biogeographic population)

GB population source: Gibbons & Wotton 1996

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The global breeding range of the Dartford Warbler is largely restricted to the western part of the Mediterranean region and almost the entire world population breeds in Europe, with more than 75% thought to breed in Spain and large numbers also occurring in southern and western France, southern Italy and Portugal. The species is polytypic with three sub-species described, all of which occur in Europe. *S. u. dartfordiensis* occurs in southern England, western France, north-west Spain and northern Portugal. The nominate *S. u. undata* occurs in Mediterranean France, north-east Spain and the main Mediterranean islands, whilst *S. u. toni* occurs in southern Portugal, central and southern Spain and north-west Africa (Cramp 1992).

Southern England is at the northern limit of the species' world range. Here, the main concentrations occur in Dorset, Hampshire and Surrey, with smaller numbers in south-western England and East Anglia.

In Europe, Dartford Warblers breed in a wide variety of low Mediterranean scrub habitats and Atlantic heathlands. In Britain, the species is almost exclusively found on lowland dry heathland with Heather *Calluna vulgaris* and Gorse *Ulex* spp. Large areas of heathland typically hold higher densities of breeding birds than fragmented and isolated habitats, with up to 10–15 pairs/km<sup>2</sup> present in the best areas. Territories containing Gorse *Ulex* spp. tend to be more productive (Catchpole & Phillips 1992), most likely due to the greater abundance of invertebrate prey and increased shelter during the winter. Birds generally remain on the breeding grounds throughout the year, although there is a partial

migration of adults, notably in October. Such movements are more pronounced in years of high productivity (Bibby 1979).

#### 4. Population structure and trends

The total European population is estimated to be in the range 2,025,456–3,635,791 pairs (Hagemeijer & Blair 1997).

The Dartford Warbler population is generally stable or fluctuating in Europe, with the exception of parts of Spain where a slow progressive decline has continued since the 1970s (Tucker & Heath 1994). Populations may fluctuate markedly. During hard winters, populations can crash by as much as 90% causing widespread extinction. For example, the especially cold winters of 1961/62 and 1962/63 reduced the English population to only 11 known pairs. However, with two or three broods each year and autumn dispersal, breeding numbers can double in just two years. Consequently, the British population has recovered with an expansion of the species' range and an increase in numbers from nearly 600 pairs in the mid-1970s to an estimated minimum of 1,600–1,890 breeding pairs in 1994 (Gibbons & Wotton 1996).

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Dartford Warblers supports, on average, about 1,681 pairs. This amounts to virtually the whole British breeding population. Dartford Warblers do not breed in Northern Ireland. The suite contains less than 0.1% of the international population (England lies on the edge of the European range and numbers in the UK are very small compared to those in Iberia and south-west Europe). The SPA suite contains six sites (Table 6.101.1) where Dartford Warbler has been listed as a qualifying species.

The lowland heathlands in the SPA suite are benefiting from management work funded by the Heritage Lottery Fund in partnership with English Nature, RSPB, local authorities and wildlife trusts. Sympathetic management of heathland SSSIs, including the removal of conifers, and bracken control, is also encouraged by English Nature under its Wildlife Enhancement Scheme.

#### 6. Classification criteria

All sites in the UK that support more than 1% of the national breeding population of Dartford Warblers were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements. All sites selected are multi-species SPAs and are distributed in southern England reflecting the distribution of Dartford Warblers in Britain.

Given that the selection of sites under Stage 1.1 resulted in a suite which gives comprehensive coverage of the Dartford Warbler population and range in the UK, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for Dartford Warbler SPA suite

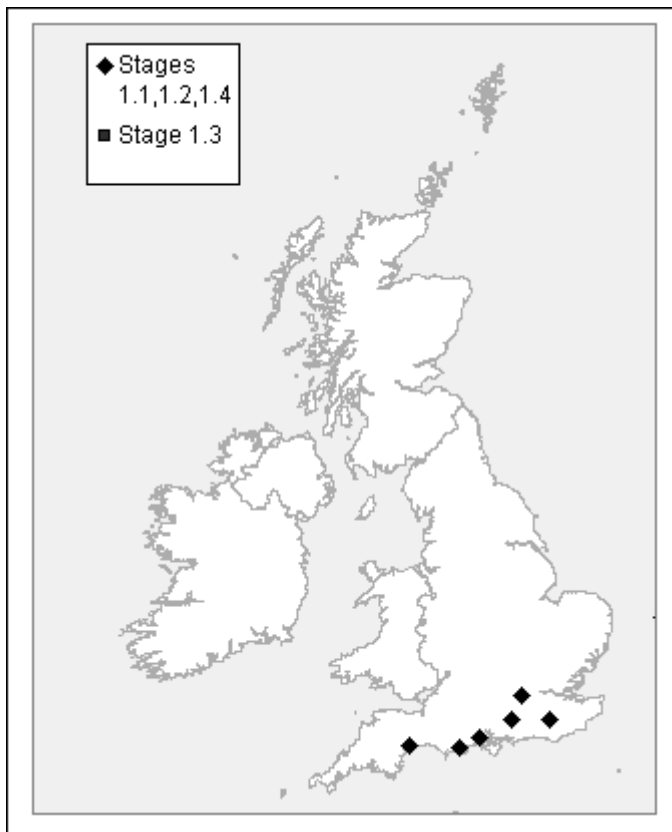


Table 6.101.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Ashdown Forest	29	<0.1	1.8	1.1
Dorset Heathlands	418	<0.1	26.1	1.1
East Devon Heaths	128	<0.1	8.0	1.1
New Forest	538	<0.1	33.6	1.1
Thames Basin Heaths	445	<0.1	27.8	1.1
Wealden Heaths	123	<0.1	7.7	1.1
<b>TOTALS</b>	<b>1,681</b>	<b>&lt;0.1%</b>	<b>c. 100%</b>	

## A6.102a Chough *Pyrrhocorax pyrrhocorax* (breeding)

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981	Species of European Conservation Concern
	<b>General Protection Schedule 1(1) Schedule 4</b>	<b>SPEC 2</b> Unfavourable conservation status ( <b>vulnerable</b> ) but not concentrated in Europe
Migratory	Wildlife (Northern Ireland) Order 1985	(UK) Species of Conservation Importance
	<b>General Protection Schedule 1(1)</b>	<b>Table 2</b>
Wintering ✓	EC Birds Directive 1979	All-Ireland Vertebrate Red Data Book
	<b>Annex I</b>	<b>Internationally important</b>

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	340	3	112 (33% of GB population)
<b>Ireland</b>	906	9	No SPAs selected in Northern Ireland
<b>Biogeographic population</b>	12,265	123	112 (c. 1% of biogeographic population)

GB population source: Bignal *et al.* 1997

All-Ireland population source: Berrow *et al.* 1993

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The Chough's global range extends from the European Atlantic coast in the west through montane areas of southern Europe and central Asia, to the Himalayas and China in the east (Cramp & Perrins 1994). Southwards, it reaches the Canaries, while the Scottish Hebrides represent the north-western edge of its global range (Bignal *et al.* 1997). Isolated populations are found in Morocco and Ethiopia, and throughout the rest of its range, the species' distribution is sparse and fragmented (Cramp & Perrins 1994). With such a widely scattered and isolated distribution, it is unsurprising that there is a high degree of geographic variation, and eight sub-species have been described. Of these, three races are found in Europe. The nominate *P. p. pyrrhocorax* is restricted to Britain and Ireland, whilst *P. p. erythrorhamphus* is distributed from Iberia and southern France through the Alps to Austria and south through Italy to Sicily and Sardinia. The race *P. p. docilis* is found in southern Yugoslavia, Greece, Crete, and east through Turkey and the Middle East, as far as Afghanistan.

The European distribution of Chough is highly localised. In Britain and Ireland it is essentially a coastal species, whilst in other countries (France, Austria, Italy, Greece and Switzerland) it occurs in mountainous areas. Only in Spain is the species widespread (Hagemeyer & Blair 1997).

Within the UK, the Chough is now restricted to isolated localities on the western coasts of Scotland, Wales and Ireland (Monaghan 1988) with a few isolated pairs remaining in inland parts of north and central Wales. Historically it was much more widespread in Britain, occurring along much of the coastline of south and west Britain from Kent and Sussex, westwards to Cornwall, and up the west

coast to the former counties of Cumberland and Westmoreland (Parslow 1973; Owen 1989). In Scotland, it formerly occurred on the east coast (Berwickshire and Fife), as well as on the coast of Dumfries and Galloway, Arran, and through the Inner Hebrides to Skye. There are also records from north-western Sutherland. The sequence and timing of local extinctions of Chough from much of its former UK range is closely related to patterns of spread of intensive agriculture and the loss of traditional mixed farming (Warnes 1983). In England, the Chough became extinct as a breeding species in Cornwall in 1948.

#### 4. Population structure and trends

The European Chough population is estimated to be in the range 12,265–17,370 pairs (Hagemeijer & Blair 1997). Britain holds about 27% of the nominate sub-species which is restricted in distribution to Britain and Ireland.

Not least, because the distribution of Choughs in Europe comprises populations that are small and isolated, the European status of Chough has been categorised as vulnerable (Tucker & Heath 1994). The species is estimated to be declining in about 90% of its range, as well as showing a contraction in its distribution. This decline is almost entirely attributed to the loss of traditional low-intensity livestock farming (Bignal & Curtis 1988; Tucker & Heath 1994).

Within the UK, persecution had an impact on Choughs for much of the early part of the 20th century (Owen 1989), and the population decline continued in more recent decades because of agricultural intensification. However, there has been some reversal in this downward trend over the last 20 years.

The British and Irish population is highly fragmented, with a restricted distribution, but censuses in 1982 and 1992 showed an increase from 923–949 to 1,246 breeding pairs (Newbery 1998) (although in part this may have reflected methodological differences between the surveys). The British population consists of three self-contained groups with no apparent interchange of individuals demonstrated by ringing programmes: in Scotland on the islands of Islay, Jura and Colonsay; on the Isle of Man; and in Wales. Colour-ringing studies have shown that movement within these populations can, however, be large and follow regular annual patterns. Thus birds fledged from the Anglesey and Lleyn coasts move up to 60 km to traditional wintering sites in Snowdonia.

The Welsh population is stable or increasing overall, with increases in coastal areas, but declines at inland sites in mid-Wales. Numbers inland in North Wales remain stable.

There are concerns about the Scottish population which is almost entirely concentrated on Islay and Colonsay and which has experienced a significant decrease in recent years (McKay, pers. comm.), especially on the Oa peninsula (Madders *et al.* 1998). Choughs regularly move between different areas of Islay (Bignal *et al.* 1989), as well as between Islay, Jura and Colonsay, but there is no exchange of individuals with other populations (Bignal *et al.* 1997). Numbers have declined on Islay, but increased over the same period on Colonsay.

A single breeding pair remains in Northern Ireland and the Chough there is on the verge of extinction.

#### 5. Protection measures for population in UK

##### *SPA suite*

In the breeding season, the UK's SPA suite for Chough supports, on average 112 pairs. This amounts to 33% of the British breeding population. The suite contains about 0.9% of the international population. In an all-Ireland context, no sites have been selected in Northern Ireland. The SPA suite contains nine sites (Table 6.102a.1) where Chough has been listed as a qualifying species.

##### *Other measures*

As understanding of Chough ecology increases (Bignal & Curtis 1988; Bignal *et al.* 1997), the impact of changes in agricultural practice on Chough populations is becoming apparent. In Northern Ireland, specific prescriptions have been introduced to the Environmentally Sensitive Areas Scheme to protect the foraging habitat of remaining breeding Choughs. Similar measures are being taken in Scotland, where some farmers who have Choughs on their land are being paid through management agreements and agri-environment schemes to undertake habitat management that will benefit the species.

Action has also been taken to create and protect breeding sites. In Wales a number of artificial cliff nest sites (on sea-cliffs, quarry faces and in mine shafts) have been successfully created. In Wales, these now support 5% of the population. RSPB Cymru is beginning a three-year, EU-funded project to improve Chough habitats at a range of sites throughout Wales. On Islay, farmers are given financial support to renovate barns in a way that maintains suitable nesting sites for Chough (Bignal & Bignal 1987). The need to manage habitats for Choughs in Wales is promoted through a number of 'Chough Conservation Strategies' (for example Hodges 1994) which promote awareness of the species' requirements both within and outside SPAs.

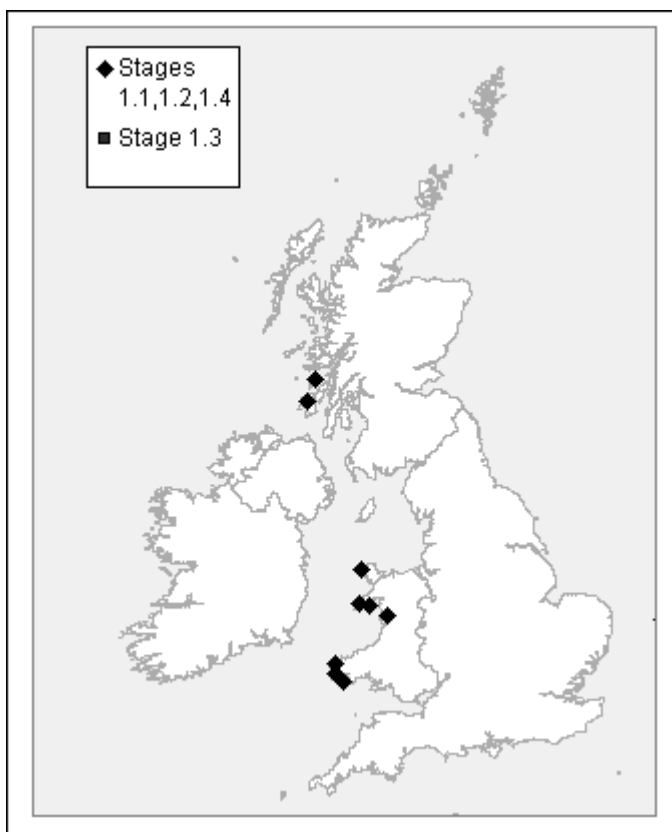
At sites where Choughs nest on recognised rock-climbing routes, disturbance during the breeding season is prevented by voluntary climbing restrictions.

## 6. Classification criteria

All sites in the UK that support more than 1% of the national breeding population of Chough were considered under Stage 1.1, and all, except for Gruinart Flats, The Oa peninsula and the Kilmeny area of Islay, were selected after consideration of Stage 2 judgements. The Oa was not selected because of current declines in numbers there (Madders *et al.* 1998). The decreasing population there cannot currently be confirmed as viable. Gruinart Flats and Kilmeny were not selected because they have the lowest density population and a higher proportion of birds nesting in buildings than other sites. A general point of difficulty for the selection is SPAs for Choughs on Islay is that the species is increasingly breeding in man-made sites rather than natural ones, raising issues of site and population viability.

All of the sites are of high naturalness, with a long history of occupation by Chough, and all make a significant contribution to the species' European range. Most sites have been selected solely because of their importance for Chough, although three of the sites (Rinns of Islay; Glannau Aberdaron and Ynys Enlli/Aberdaron Coast and Bardsey Island; and Skomer and Skomer) are multi-species sites.

### Distribution map for breeding Chough SPA suite



**Table 6.102a.1 – SPA suite**

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Castlemartin Coast	12	0.1	3.5	1.1
Craig yr Aderyn	6	<0.1	1.8	1.1
Glannau Aberdaron and Ynys Enlli/ Aberdaron Coast and Bardsey Island	12	0.1	3.5	1.1
Glannau Ynys Gybi/Holy Island Coast	18	0.1	5.3	1.1
North Colonsay and Western Cliffs	9	<0.1	2.7	1.1
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal/Mynydd Cilan, Trwyn y Wylfa and the St Tudwal Islands	9	<0.1	2.7	1.1
Ramsey and St David's Peninsula Coast	11	0.1	3.2	1.1
Rinns of Islay	31	0.3	9.1	1.1
Skomer and Skokholm	4	<0.1	1.2	1.1
<b>TOTALS</b>	<b>112</b>	<b>0.9%</b>	<b>32.9%</b>	

## A6.102b Chough *Pyrrhocorax pyrrhocorax* (non-breeding)

### 1. Status in UK

See section A6.102a.

### 2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	689	7	241 (35% of GB total)
<b>Ireland</b>	2,633	26	No SPAs selected in Northern Ireland
<b>Biogeographic population</b>	36,800	368	241 (0.7% of biogeographic population)

*GB population source: Bignal et al. 1997*

*All-Ireland population source: Berrow et al. 1993*

*Biogeographic population source: derived from Hagemeyer & Blair 1997*

### 3. Distribution

See section A6.102a for description of distribution and taxonomy.

Choughs are largely resident on their breeding areas, although there is some local movement. Out of the breeding season, non-breeders mix with fledglings to form large non-breeding flocks that roam and feed over extensive areas (Warnes 1982; Madders *et al.* 1998). The social significance of such winter flocking is both important and complex (Bignal *et al.* 1989; Bignal & Bignal 1997). Research on Islay has shown that the conservation requirements of such flocks is an important consideration in maintaining a viable population, not least because of their social role.

### 4. Population structure and trends

See section A6.102a. Winter numbers of Chough are not monitored on a national scale, although the UK population is covered by an international Anglo-Irish survey every ten years.

### 5. Protection measures for population in UK

#### *SPA suite*

In the non-breeding season, the UK's SPA suite for Chough supports, on average 241 individuals. This amounts to 35% of the British breeding population. The suite contains about 0.7% of the international population. In an all-Ireland context, no sites have been selected in Northern Ireland. The SPA suite contains eight sites (Table 6.102b.1) where Chough has been listed as a qualifying species.

#### *Other measures*

See section A6.102a.

### 6. Classification criteria

All sites in the UK that support more than 1% of the national population of Chough in the non-breeding season were considered under Stage 1.1, and all, except for Gruinart Flats, The Oa peninsula and the Kilmeny area of Islay, were selected after consideration of Stage 2 judgements. Kilmeny, The Oa, Gruinart Flats and Kilmeny were not selected because of lack of data.

Skomer and Skokholm has been identified as an SPA for breeding Chough but in winter, there are little data available on the birds' movements, although they are believed to move across to mainland parts of Pembrokeshire.

All of the sites are of high naturalness, with a long history of occupation by Chough, and all make a significant contribution to the species' European range. Most sites have been selected solely because of their importance for Chough, although three of the sites (Rinns of Islay; Glannau Aberdaron and Ynys Enlli/Aberdaron Coast and Bardsey Island; and Skomer and Skomer) are multi-species sites.

Distribution map for wintering Chough SPA suite

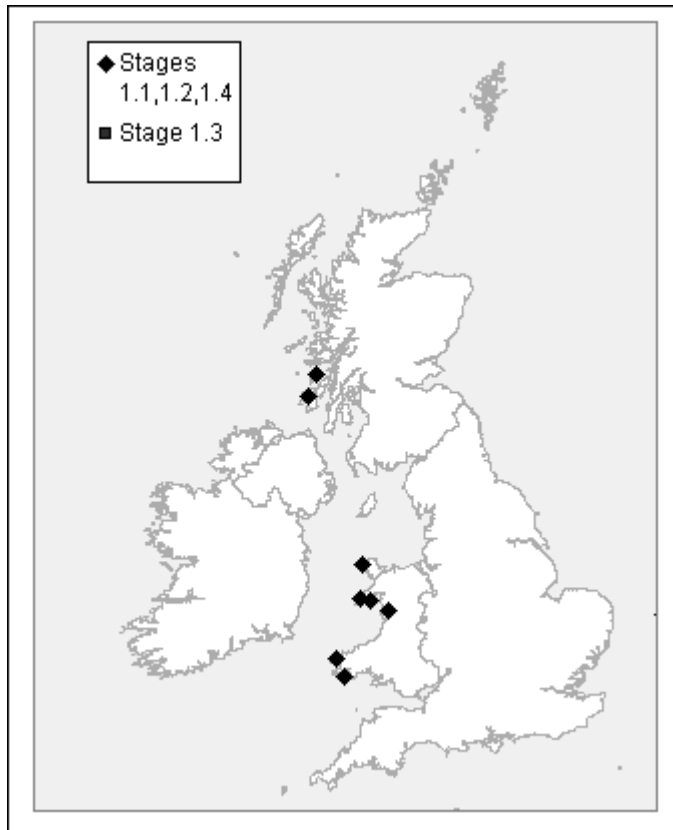


Table 6.102b.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Castlemartin Coast	24	<0.1	3.5	1.1
Craig yr Aderyn	55	0.1	8.0	1.1
Glannau Aberdaron and Ynys Enlli/ Aberdaron Coast and Bardsey Island	24	<0.1	3.5	1.1
Glannau Ynys Gybi /Holy Island Coast	18	<0.1	2.6	1.1
North Colonsay and Western Cliffs	18	<0.1	2.6	1.1
Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal/Mynydd Cilan, Trwyn y Wylfa and the St Tudwal Islands	18	<0.1	2.6	1.1
Ramsey and St David's Peninsula Coast	22	<0.1	3.2	1.1
Rinns of Islay	62	0.2	9.0	1.1
<b>TOTALS</b>	<b>241</b>	<b>0.7%</b>	<b>35.0%</b>	

## A6.103 Scottish Crossbill *Loxia scotica*

### 1. Status in UK

Biological status	Legal status	Conservation status
Breeding ✓	Wildlife and Countryside Act 1981	Species of European Conservation Concern
	<b>General Protection Schedule 1(1) Schedule 4</b>	<b>SPEC 1</b> Global conservation concern (insufficiently known)
Migratory	Wildlife (Northern Ireland) Order 1985	(UK) Species of Conservation Importance
		<b>Table 1</b>
Wintering ✓	EC Birds Directive 1979	All-Ireland Vertebrate Red Data Book
	<b>Annex I</b>	

### 2. Population data

	Population sizes (pairs)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	300 <sup>30</sup>	3	295 (98% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	300	3	295 (98% of biogeographic population)

GB population source: Stone et al. 1997

Biogeographic population source: Stone et al. 1997

### 3. Distribution

The Scottish Crossbill is globally endemic to the UK, where it occurs in the northern and eastern Highlands of Scotland (Voous 1978; Gibbons *et al.* 1993; Summers *et al.* in press). It is a species associated with remnant native Scots Pine *Pinus sylvestris* forests, and plantations of Scots Pine and other conifers. Breeding distribution is limited by suitable food supply, the main food being Scots Pine seeds (Cramp & Perrins 1994). The species is monotypic with its type location in East Ross-shire.

### 4. Population structure and trends

The Scottish Crossbill was long regarded as a race of other crossbills *Loxia* spp., and was recognised as a separate species in 1978 (Cramp & Perrins 1994; Voous 1978). The Scottish Crossbill can be identified by its calls, and although its range is now better described, there has been no good national population estimate to date. The distribution overlaps with Common Crossbill *Loxia curvirostra* and Parrot Crossbill *Loxia pytyopsittacus* (Summers *et al.* in press). The most recent estimate of population size was a minimum of 300 pairs (European Birds Database). The species' population size and/or distribution varies with natural fluctuations in the Scots pinecone crop (Summers 1999).

30 Note that the national population estimate for Scottish Crossbill has a very high degree of uncertainty attached to it and thus the proportions presented in this review are indicative rather than exact assessments.

## 5. Protection measures for population in UK

### *SPA suite*

The UK's SPA suite for Scottish Crossbill contains the habitats used throughout the year by, on average, 295 pairs. This is estimated to about 98% of the British breeding population and, as the species is endemic to Scotland, also 98% of the world population. As noted above, there is a high degree of uncertainty associated with both the overall total and the proportion contained within the SPA suite, owing to very poor quantitative information on the species both at key sites and elsewhere. The suite contains five sites (Table 6.103.1) where Scottish Crossbill is a qualifying species.

### *Other measures*

A Species Action Plan has been published as part of the UK Biodiversity Action Plan (Biodiversity Steering Group 1995), with the objective of maintaining current range and population size. Among the specific actions proposed are: consideration of additional protection for the remaining native pinewoods holding important crossbill populations; minimising the impact of development proposals that would damage relevant SSSIs; consideration of aerial insecticide spraying proposals on a case by case basis to ensure local crossbill populations are not affected; and enhancement of native pine wood management for the benefit of crossbills, with emphasis on isolated Scots Pine woods within the range of the Scottish Crossbill.

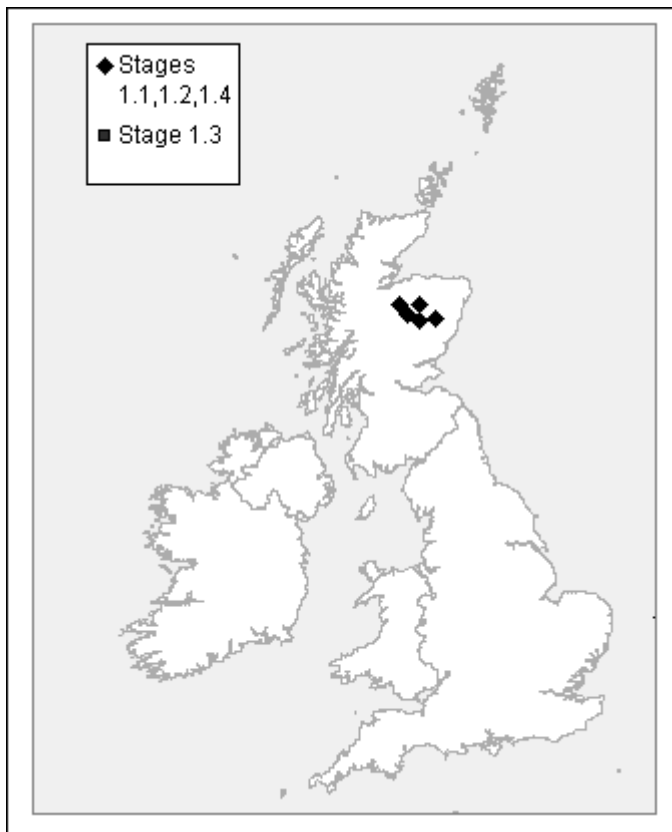
## 6. Classification criteria

All sites in the UK that were known to support more than 1% of the breeding population of Scottish Crossbills were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements. The distribution of the SPAs (Abernethy; Cairngorms; Glen Tanar; Kinveachy; and Ballochbuie) closely matches the core range of the species in Scotland and includes the best Caledonian pinewood habitat for this species. The Forest of Birse was assessed using Stage 1.4, but was not selected since this site did not add significant additional coverage of range or numbers (given the inclusion in the suite of the neighbouring larger population at Glen Tanar).

All the sites in the suite have a high degree of naturalness, and all are multi-species SPAs. Many are in the ownership of nature conservation organisations or are otherwise subject to active conservation management.

There is a history of occupancy at a number of the sites since the studies in 1974 which first led to clear understanding of the distribution and identification of Scottish Crossbills (Knox 1990a, 1990b). These sites include Glen Tanar, Ballochbuie, and Mar (within the Cairngorms SPA). Indeed, there are records of crossbills in these areas from the 19th century, indicating that this has long been the core range.

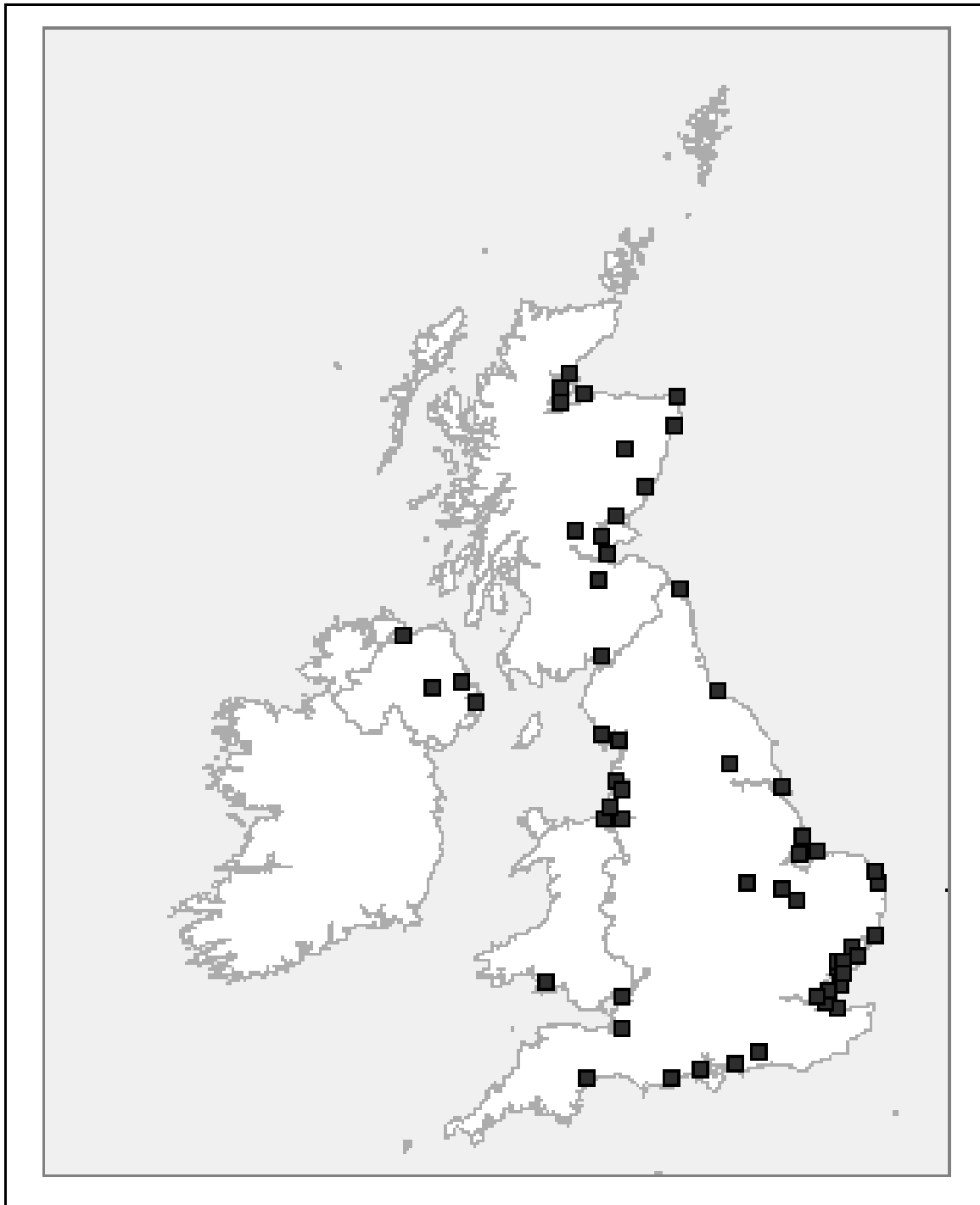
Distribution map for Scottish Crossbill SPA suite



**Table 6.103.1 – SPA suite**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Abernethy Forest	175	58.3	58.3	1.1
Ballochbuie	10	3.3	3.3	1.1
Cairngorms	50	16.7	16.7	1.1
Glen Tanar	50	16.7	16.7	1.1
Kinveachy	10	3.3	3.3	1.1
<b>TOTALS</b>	<b>295</b>	<b>98%</b>	<b>98%</b>	

## A6.104 Assemblages of waterbirds



**Figure 6.104.1.** Distribution of SPAs selected for holding internationally important assemblages of waterbirds.

The UK is of outstanding international importance for its waterbird populations – one of the notable features of the UK avifauna (Fuller 1982; Moser 1987; Davidson *et al.* 1991; Ferns 1992; Scott & Rose 1996; Madsen *et al.* 1999). Internationally important assemblages of more than 20,000 waterbirds have been selected under Stage 1.3 to represent this interest (Figure 6.104.1). This also reflects the requirement of Article 4.2 of the Birds Directive to pay particular attention to wetlands of international importance (Temple-Lang 1982).

A total of 57 sites have been selected (Table 6.104.1). Each of these sites holds more than 20,000 waterbirds, generally in the non-breeding season. In order to identify the important components of these assemblages, all species occurring at levels of more than 1% of national populations or where there are more than 2,000 individuals present were identified (section 4.3.1). These components are highlighted in the respective species accounts.

Many of these sites have already been designated by the UK as wetlands of international importance under the Ramsar Convention on Wetlands in support of that convention's aim to "stem the progressive encroachment on and loss of wetland now and in the future" through the wise use of wetlands.

### Distribution of waterbird assemblages

Most sites holding large numbers of waterbirds are coastal areas, with large estuaries being of particular importance. These tend to be located in the south and east of Britain. Sites selected range from the Firths of the Moray Basin – the most northerly regular wintering area for waterbirds in north-western Europe, down the Scottish and English coasts of the North Sea to sites within the Greater Thames Estuary. A further six sites lie along the coast of the English Channel.

There are fewer sites in western Britain, although there are many sites of high importance along the north-west coast of England (Stroud & Craddock 1996).

Four sites have been identified in Northern Ireland, including Lough Neagh and Lough Beg, a site of major international importance for its populations of diving ducks, a large proportion of which derive from Icelandic breeding areas. This site is also the most extensive freshwater body in the UK.

There are no sites holding more than 20,000 waterbirds on the west coast of Scotland, north of the Solway Firth. This tends to reflect the absence of large, productive estuarine systems, although the area is still of international importance for many wintering waterbirds (especially some geese and waders), which generally do not occur in large, multi-species aggregations.

Many of the sites identified are long known for their importance for waterbirds. Indeed, most were included in the first *Directory of Wetlands of International Importance in the Western Palearctic* (Carp 1980), as well as earlier inventories (Ratcliffe 1977; Berry 1939). In comparing the present list of sites with earlier inventories, it is notable that sites identified as SPAs are generally much more extensive than previously identified sites for the same interests. This reflects not only better knowledge of the distribution and abundance of waterbirds, but also statutory agency policy to ensure that boundaries of classified sites are so drawn that they contain and reflect the range of ecological needs of the individual species contained within them (Stroud *et al.* 1990a).

### Size of waterbird SPAs

During the period of this review, The Wash held the largest number of waterbirds (400,273), with the Ribble and Alt (301,449), Morecambe Bay (210,668), Humber Flats and Marshes (152,817), Upper Solway Flats and Marshes (133,222), the Blackwater Estuary (109,815) and Foulness (107,468) all holding more than 100,000 waterbirds.

It is not possible to sum the peak mean counts for each site given in Table 6.104.1 owing to the double counting that would occur, due to movement between sites within and between winters. However, the average of January counts for these sites between 1993 and 1997 is 2,084,272. To this total can be added the January totals of waterbirds wintering at a further 57 SPAs that hold qualifying species of wintering waterbirds but at population levels below 20,000. The addition of these totals indicates that the UK SPA network holds a minimum 2,186,443 waterbirds in January.

In terms of assessing total numbers of waterfowl that gain conservation benefits from the UK SPA network, it should be noted that this total is an underestimate for four reasons:

- the totals used on sites holding <20,000 waterbirds relate to just the totals of qualifying species. To this should be added other 'non-qualifying' waterbirds occurring on those sites;
- the totals do not account adequately for those non-breeding waterbird species where peak occurrence on the network is in months other than January (e.g. Tufted Duck where peak national occurrence is in December). The most extreme example of this is species that occur on the SPA network during migration periods, en route to/from Arctic breeding grounds and wintering areas further

south in Europe or Africa (*e.g.* populations of waders such as East Greenland Dunlin *Calidris alpina arctica* and North Siberian/West and South African Knot *Calidris canutus canutus*);

- since the January counts are 'snapshots' they makes no allowance for turnover of birds in migratory periods. This can be very considerable as birds pass through the UK, but is technically very difficult to assess (Frederiksen *et al.* 2001); and
- periods of extremely cold weather, especially further east in Europe, displace large numbers of waterbirds to seek milder areas in Britain and Ireland (Ridgill & Fox 1990). The winters included in this review were generally mild, although there were significant periods of severe cold in 1995/96 and 1996/97.

Making allowance for these factors, it can be conservatively estimated that about 3,000,000 non-breeding waterbirds directly benefit from the general wetland habitat conservation provisions of the UK SPA network. This is a significant proportion of total East Atlantic Flyway populations of waders and North-west European populations of waterbirds.

**Table 6.104.1. SPAs holding more than 20,000 waterbirds.**

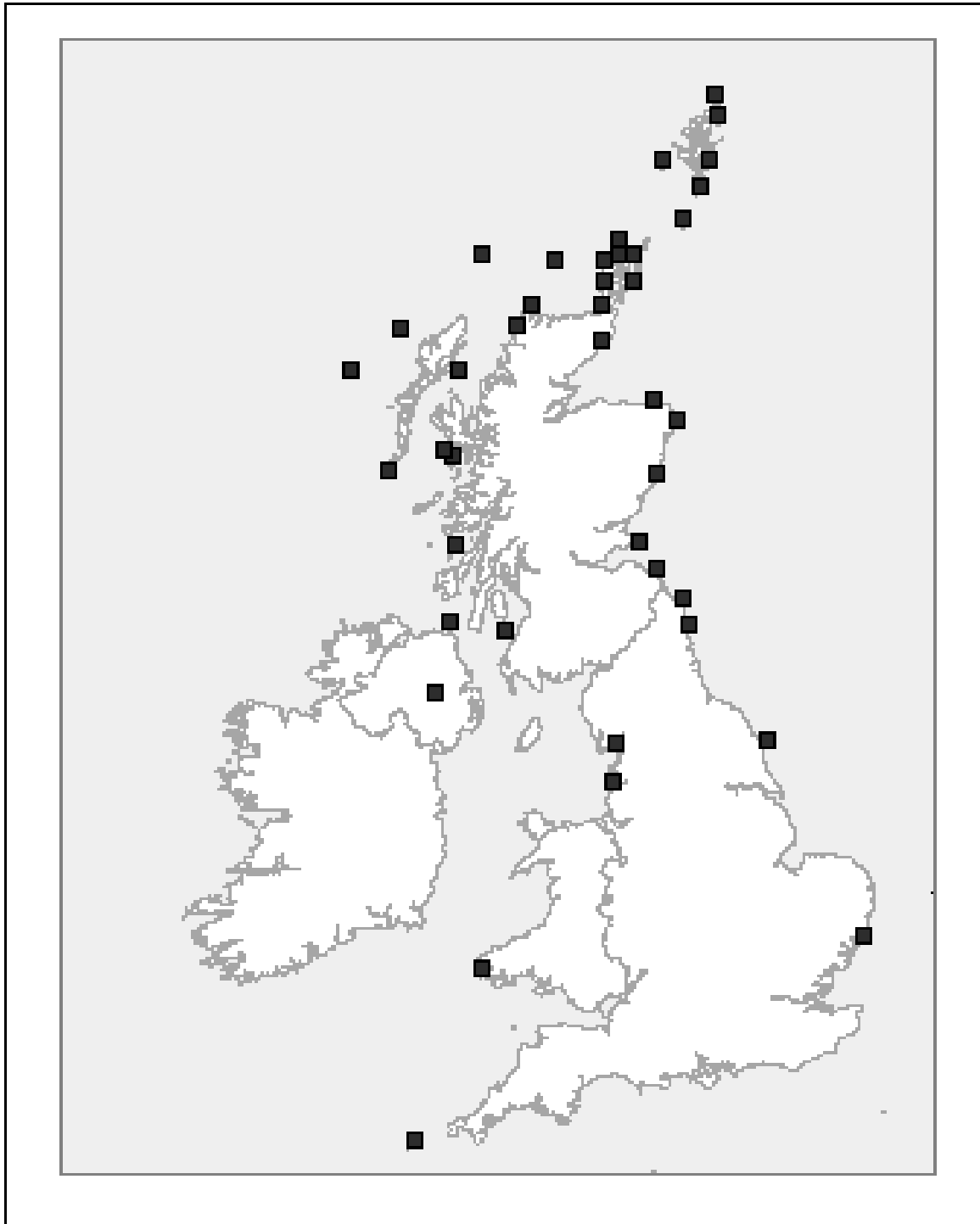
Site	Numbers of waterbirds (five year peak mean)
Abberton Reservoir	39,155
Alde – Ore Estuary	24,962
Arun Valley	27,241
Belfast Lough	20,492
Benfleet and Southend Marshes	34,789
Blackwater Estuary	109,815
Breydon Water	43,225
Broadland	22,603
Burry Inlet	34,962
Chichester and Langstone Harbours	93,142
Colne Estuary	38,548
Cromarty Firth	34,847
Dengie	31,452
Dornoch Firth and Loch Fleet	34,837
Duddon Estuary	78,415
Exe Estuary	23,513
Firth of Forth	86,067
Firth of Tay and Eden Estuary	34,074
Foulness	107,468
Gibraltar Point	22,137
Hamford Water	44,461
Humber Flats, Marshes and Coast	187,617
Inner Moray Firth	33,148
Lindisfarne	41,870
Loch Leven	32,177
Loch of Strathbeg	49,452
Lough Foyle	37,310
Lough Neagh and Lough Beg	99,221
Lower Derwent Valley	39,936
Martin Mere	46,196

Site	Numbers of waterbirds (five year peak mean)
Medway Estuary and Marshes	65,274
Mersey Estuary	99,467
Mersey Narrows and North Wirral Foreshore	20,269
Montrose Basin	54,917
Moray and Nairn Coast	20,250
Morecambe Bay	210,668
Muir of Dinnet	28,600
Nene Washes	25,437
North Norfolk Coast	91,249
Ouse Washes	64,392
Poole Harbour	28,426
Ribble and Alt Estuaries	301,449
Rutland Water	23,501
Severn Estuary	93,986
Solent and Southampton Water	53,948
Somerset Levels and Moors	72,874
South Tayside Goose Roosts	52,403
Stour and Orwell Estuaries	64,768
Strangford Lough	60,220
Teesmouth and Cleveland Coast	21,406
Thames Estuary and Marshes	33,433
The Dee Estuary	130,408
The Swale	65,390
The Wash	400,273
Upper Solway Flats and Marshes	133,222
Westwater	31,465
Ythan Estuary, Sands of Forvie and Meikle Loch	51,265

**Table 6.104.2. January waterbird totals on the UK SPA network.**

	1993	1994	1995	1996	1997	Mean
Total on sites holding >20,000 waterbirds (Guideline 1.3 qualifiers)	2,059,695	2,081,224	2,112,164	2,007,900	2,160,379	2,084,272
Total on sites holding <20,000 waterbirds (Guideline 1.1 & 1.2 qualifiers only)	108,394	115,699	108,813	94,780	83,165	102,170
Total waterbirds on SPA network	2,168,089	2,196,923	2,220,977	2,102,680	2,243,544	2,186,443

## A6.105 Assemblages of breeding seabirds



**Figure 6.105.1.** Distribution of SPAs selected for holding internationally important assemblages of breeding seabirds.

The UK is notable for the outstanding international importance of its populations of breeding seabirds (Cramp *et al.* 1974; Lloyd *et al.* 1991). Internationally important assemblages of breeding seabirds have been selected under Stage 1.3 to represent this interest (Figure 6.105.1).

A total of 41 sites have been selected (Table 6.105.1). Each of these sites holds more than 10,000 pairs of seabirds (*i.e.* >20,000 individuals). In order to identify the important components of these assem-

blages, all species occurring at levels of more than 1% of national populations (or where there are more than 2,000 individuals present) were identified (section 4.3.1). These components are highlighted in the respective species accounts.

### Distribution of seabird assemblages

Unsurprisingly, the distribution of SPAs identified for important assemblages closely reflects the distribution of major seabird colonies in the UK (Lloyd *et al.* 1991; Gibbons *et al.* 1993). There are significant clusters of SPAs in the archipelagos of Shetland and Orkney, as well as the Atlantic islands of St Kilda, the Flannans, North Rona and Sula Sgeir, and Sule Stack and Sule Skerry.

Seabird SPAs have been identified along most of the coast of the North Sea, from the far north of Shetland, down the east coast of Scotland, to eastern England (with the Alde – Ore Estuary being the most southerly on this coast). In the south-west, the concentrations of seabirds on the Isles of Scilly and Skomer, Skokholm and Middleholm have been included. Further north, sites are located through the Inner Hebrides to the Minch.

One inland colony of seabirds (dominated by gulls) has been identified – Lough Neagh and Lough Beg in Northern Ireland.

The sites identified contain a wide range of habitats. Whilst many important seabird colonies occur on cliffs, especially in the north and west of Britain, in other areas seabirds breed on moorland (for example, in Shetland at sites such as Hermaness, Saxa Vord and Valla Field, and Foula), or on soft coastal environments. Several of the English sites include sand dunes and shingle beaches (for example, the Alde – Ore Estuary, the Ribble and Alt Estuaries, and Morecambe Bay). Where low coastal islands, such as the Farne Islands in north-east England, have remained free of land predators, these often hold large numbers of breeding seabirds.

There are a wide range of types of cliff, determined by geology and patterns of exposure. These range from hyper-oceanic exposed stacks and islands such as those found at St Kilda, Sule Skerry and Sule Stack in the Atlantic, through to eroded sandstone cliffs, with horizontal bedding planes (such as are found in Orkney at sites such as Marwick Head), and to low cliffs in relatively sheltered areas (for example, the Shiant Isles in Scotland, and Skomer and Skokholm in Wales). The variety of cliff types and locations results in a range of differing assemblages of breeding seabirds.

### Size of breeding seabird SPAs

The largest seabird SPA, by a significant margin, is the St Kilda archipelago, which holds about 600,000 individual breeding seabirds. Other sites holding more than 200,000 individual breeding seabirds during the period of this review are Flamborough Head and Bempton Cliffs (305,784 breeding individuals), East Caithness Cliffs (300,000), Foula (250,000), Handa (200,000), and the Shiant Islands (200,000). In total, all the sites identified under Stage 1.3 for breeding seabirds hold 4,724,078 individual breeding seabirds.

### Total number of breeding seabirds on the UK SPA network

To the total of seabirds occurring on sites holding major seabird assemblages (4,724,078 individuals) can be added those species that occur as qualifying species at sites where total numbers are less than 10,000 pairs. This amounts to a further 222,470 pairs of 14 species at 51 further SPAs, bringing the total number of seabirds breeding in the SPA network to 4,946,548 individuals. Note, however, that this is a minimum estimate of the number of breeding seabirds that benefit from the general habitat conservation provisions on seabird SPAs. This is because the total excludes non-qualifying seabird species which breed at sites classified for seabirds but where there are less than 10,000 pairs.

**Table 6.105.1. SPAs holding more than 20,000 individual breeding seabirds.**

<b>Site</b>	<b>Number of individual breeding seabirds</b>
Ailsa Craig	65,000
Alde – Ore Estuary	59,118
Buchan Ness to Collieston Coast	95,000
Calf of Eday	30,000
Canna and Sanday	21,000
Cape Wrath	50,000
Copinsay	70,000
Coquet Island	33,448
East Caithness Cliffs	300,000
Fair Isle	180,000
Farne Islands	142,490
Fetlar	22,000
Firth of Forth Islands	90,000
Flamborough Head and Bempton Cliffs	305,784
Flannan Isles	50,000
Foula	250,000
Fowlsheugh	170,000
Handa	200,000
Hermaness, Saxa Vord and Valla Field	152,000
Hoy	120,000
Isles of Scilly	26,616
Lough Neagh and Lough Beg	67,690
Marwick Head	75,000
Mingulay and Berneray	110,000
Morecambe Bay	61,858
North Caithness Cliffs	110,000
North Colonsay and Western Cliffs	30,000
North Rona and Sula Sgeir	130,000
Noss	100,000
Rathlin Island	66,000
Ribble and Alt Estuaries	29,236
Rousay	30,000
Rum	130,000
Shiant Isles	200,000
Skomer and Skokholm	67,278
St Abb's Head to Fast Castle	79,560
St Kilda	600,000
Sule Skerry and Sule Stack	100,000
Sumburgh Head	35,000
Troup, Pennan and Lion's Heads	150,000
West Westray	120,000
Total seabirds at assemblage sites	4,724,078
Total seabirds at non-assemblage sites	222,470
Total seabirds in UK SPA network	4,946,548

## A6.106 Annex I and migratory species for which no SPAs have been selected

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This section outlines the reasons why SPAs have been not been selected for certain species that are either migrants (or partial migrants) and/or are listed on Annex I of the Directive. The latter species are indicated by bold facing. See Appendix 2 for the derivation of the list of regularly occurring migratory species in the UK.

### 1. Wintering and passage waders

A number of waders pass through the UK on migration to/from breeding grounds in the Arctic or Scandinavia, and more southerly wintering areas. The migration of these species is irregular and often varies in volume considerably between years. Sites used are not always predictable. For the following migratory species it has not been possible to locate internationally significant concentrations that occur on a predictable basis: Spotted Redshank *Tringa erythropus*, Green Sandpiper *Tringa ochropus*, Little Stint *Calidris minuta*, Curlew Sandpiper *C. ferruginea*, and – the least predictable – Grey Phalarope *Phalaropus fulicarius*.

Jack Snipe *Lymnocyptes minimus* winters in the UK and the species is arguably the most poorly known of all regularly occurring British birds in terms of knowledge of population size (10,000–100,000 individuals – Cayford & Waters 1996), and trends (unknown). There are no known concentrations. An EU action plan is under development for the species since it is an Annex II species with an unfavourable conservation status. A major element of this plan will to be to improve knowledge and monitoring of the species.

### 2. Breeding waders

Little Ringed Plovers *Charadrius dubius* have colonised Britain during the twentieth century and the species is especially associated with exposed sand and gravel banks. It has accordingly benefitted from the development of minerals and aggregate extraction in lowland England and Wales and is especially associated with this habitat. The population is relatively small and there are no known internationally important concentrations.

Kentish Plover *Charadrius alexandrinus* formerly bred in the UK in very small numbers, but there have been no recent breeding records.

Woodcock *Scolopax rusticola* are widely, but locally, distributed across Britain and Ireland, occurring in woodlands. They occur at low densities. Especially given the large numbers of this species occurring in continental Europe (Britain holds between 1%–4% of the European total), there are no known concentrations of international importance. Both breeding and wintering Woodcocks occur on many SPAs classified for other species within the UK network.

Common Sandpipers *Actitis hypoleucos* breed widely in upland Britain and Ireland. They are territorial waders occurring adjacent to streams and other flowing water. There are no known concentrations of international importance, although the species occurs incidentally in most upland SPAs classified for other montane and sub-montane birds.

Britain lies on the northernmost edge of the European range of **Black-winged Stilt** *Himantopus himantopus* which is essentially a Mediterranean species. The species has regularly occurred in the breeding season at one site since 1995 (Ogilvie and the Rare Birds Breeding Panel 1998, 1999). There are no current, or likely future, concentrations of this species at levels of international importance.

### 3. Rails

Moorhens *Gallinula chloropus* are widely distributed across Britain and Ireland (other than in north-west Scotland). Britain is particular important in terms of the European conservation of this species. Indeed, Britain and Ireland hold 35% of the European population, with smaller numbers also in France, The Netherlands and Spain (Hagemeijer & Blair 1997). The range (and numbers) of Moorhen declined between 1968–1972 and 1988–1991 (Gibbons *et al.* 1993). There are no known internationally

important concentrations in the UK, though Moorhens occur incidentally in most wetland SPAs classified for other waterbirds.

Water Rails *Rallus aquaticus* are locally distributed across the UK. Britain and Ireland lie on the edge of the European range and together hold only a small proportion of the European population (c. 1.5%). Although traditional sites are used, there are no known concentrations of European importance, but census data are very poor.

#### 4. Wildfowl and other waterbirds

Although formerly widespread in historical times (Boisseau & Yalden 1998) **Cranes** *Grus grus* became extinct in Ireland by the 14th century and by about 1600 in England. It has recently recolonised England with regular nesting occurring since 1981, and birds resident throughout the year. The area of recolonisation is an SPA, but Cranes have not been listed as a qualifying species there because of uncertainty surrounding the viability of the breeding population, which is known to be derived from a very small number of birds and includes at least one sibling pair (Taylor *et al.* 1999). Consequently, the population may be at risk of suffering inbreeding depression. These birds also behave in a manner that is different from other Cranes in Europe since they are largely sedentary within their breeding area, although they do occasionally wander within East Anglia during spring and autumn. The reasons for this are not clear. It may be that the area provides for the birds requirements year round or this aberrant behaviour could have resulted from the possible inbreeding depression described above.

Grey Herons *Ardea cinerea* are partial migrants in the UK. They nest locally and colonially across the whole of Britain and Ireland. Britain holds about 9% of the European total and the island of Ireland a further 3%. None of the colonies occurring in the UK exceed 1% of the European total.

Ferruginous Duck *Aythya nyroca* occurs irregularly as a non-breeding vagrant. There are no concentrations of the species. Red-crested Pochard *Netta rufina* breed in the UK, but as a result of introduced stock (Ogilvie & the Rare Breeding Birds Panel 1999b). There are no obligations for SPA designation for non-native birds. A few natural vagrants occur irregularly.

**Smew** *Mergus albellus* occur regularly in the UK at a small number of wetlands, although numbers are very low relative to the major concentrations in The Netherlands and elsewhere in continental Europe. No SPAs have been selected for Smew because levels of occurrence, even at sites with the largest numbers, fall significantly below the threshold of 50 used as a minimum in selecting sites for wintering waterbirds (see section 5.1.2).

#### 5. Raptors and owls

No SPAs have been selected in this review for **White-tailed Eagle** *Haliaeetus albicilla* for reasons outlined in section 5.6.2. **Montagu's Harrier** *Circus pygargus* nest largely on arable land in eastern England. No SPAs have been selected for this species because the only regular breeding area is largely comprised of intensively managed arable farmland within which precise nest locations vary considerably between years. This has prevented the identification of concentrations and delineation of suitable site boundaries. Nevertheless, Montagu's Harriers are monitored in their regular nesting area and, as mechanisms are currently being developed to enable the classification of temporary and mobile habitats such as arable land, the species will remain under review."

Although the British populations of a number of birds of prey are particularly significant in European terms, (15% of Kestrel *Falco tinnunculus*, 11% of Sparrowhawk *Accipiter nisus*), the dispersed nesting of the following species means that it has not been possible to identify sites holding concentrations of European importance for Goshawk *Accipiter gentilis*, Sparrowhawk, Buzzard *Buteo buteo*, Kestrel, Hobby *Falco subbuteo*, and Long-eared Owl *Asio otus*. All these species occur in significant numbers on many UK SPAs classified for other species.

Following a period of regular breeding in Shetland between 1967–1975, **Snowy Owls** *Nyctea scandiaca* now occur only sporadically in the British uplands. There have been no breeding attempts since 1975.

## 6. Grebes and seaducks

Both Red-necked Grebe *Podiceps grisegena* and Black-necked Grebe *Podiceps nigricollis* are rare breeding birds, whilst Little Grebes *Tachybaptus ruficollis* occur much more widely across the UK. There are no known concentrations of European importance for these grebe species.

## 7. Birds using the marine environment

A number of migrant seabirds regularly pass through British and Irish waters, sometimes in very large numbers. Their protection needs, relative to the Birds Directive, are the subject of a separate review (see section 2.2). These species include: Great Northern Diver *Gavia immer*, Surf Scoter *Melanitta perspicillata*, Velvet Scoter *Melanitta fusca*, Cory's Shearwater *Calonectris diomedea*, Great Shearwater *Puffinus gravis*, Sooty Shearwater *Puffinus griseus*, Pomarine Skua *Stercorarius pomarinus*, Long-tailed Skua *Stercorarius longicaudus*, Little Gull *Larus minutus*, Sabine's Gull *Larus sabini*, Iceland Gull *Larus glaucoides*, Glaucous Gull *Larus hyperboreus*, **Black Tern *Chidonias niger***, and Little Auk *Alle alle*.

## 8. Passerines

Many of the terrestrial birds that breed (or winter) in the UK are migrants or partial migrants. They generally have wide distributions across Britain and Ireland. They rarely aggregate in large numbers and sites holding concentrations of European importance (or, in the case of the Annex I species, of national importance) have not been identified for the following species: Stock Dove *Columba oenas*, Woodpigeon *Columba palumbus*, Turtle Dove *Streptopelia turtur*, Swift *Apus apus*, Sand Martin *Riparia riparia*, Swallow *Hirundo rustica*, House Martin *Delichon urbica*, Cuckoo *Cuculus canorus*, **Kingfisher *Alcedo atthis***, Wryneck *Jynx torquilla*, Skylark *Alauda arvensis*, Shore Lark *Eremophila alpestris*, Tree Pipit *Anthus trivialis*, Meadow Pipit *Anthus pratensis*, Rock Pipit *Anthus petrosus*, Water Pipit *Anthus spinoletta*, Yellow Wagtail *Motacilla flava*, Grey Wagtail *Motacilla cinerea*, Pied (White) Wagtail *Motacilla alba*, Waxwing *Bombicilla garrulus*, Robin *Erithacus rubecula*, Nightingale *Luscinia megarhynchos*, Black Redstart *Phoenicurus ochruros*, Redstart *Phoenicurus phoenicurus*, Whinchat *Saxicola rubetra*, Stonechat *Saxicola torquata*, Wheatear *Oenanthe oenanthe*, Ring Ouzel *Turdus torquatus*, Blackbird *Turdus merula*, Fieldfare *Turdus pilaris*, Song Thrush *Turdus philomelos*, Redwing *Turdus iliacus*, Grasshopper Warbler *Locustella naevia*, Savi's Warbler *Locustella luscinioides*, Sedge Warbler *Acrocephalus schoenobaenus*, Marsh Warbler *Acrocephalus palustris*, Reed Warbler *Acrocephalus scirpaceus*, Lesser Whitethroat *Sylvia curruca*, Whitethroat *Sylvia communis*, Garden Warbler *Sylvia borin*, Blackcap *Sylvia atricapilla*, Yellow-browed Warbler *Phylloscopus inornatus*, Wood Warbler *Phylloscopus sibilatrix*, Chiffchaff *Phylloscopus collybita*, Willow Warbler *Phylloscopus trochilus*, Goldcrest *Regulus regulus*, Firecrest *Regulus ignicapillus*, Spotted Flycatcher *Muscicapa striata*, **Red-breasted Flycatcher *Ficedula parva***, Pied Flycatcher *Ficedula hypoleuca*, Golden Oriole *Oriolus oriolus*, Red-backed Shrike *Lanius collurio*, Great Grey Shrike *Lanius excubitor*, Rook *Corvus frugilegus*, Starling *Sturnus vulgaris*, Chaffinch *Fringilla coelebs*, Brambling *Fringilla montifringilla*, Serin *Serinus serinus*, Greenfinch *Carduelis chloris*, Goldfinch *Carduelis carduelis*, Siskin *Carduelis spinus*, Linnet *Carduelis cannabina*, Redpoll *Carduelis flammea*, Crossbill *Loxia curvirostra*, Common Rosefinch *Carpodacus erythrinus*, Lapland Bunting *Calcarius lapponicus*, Snow Bunting *Plectrophenax nivalis*, Little Bunting *Emberiza pusilla* and Reed Bunting *Emberiza schoeniclus*.

Many of these species are subject to monitoring through the Breeding Bird Survey (Noble *et al.* 1999) and other relevant schemes. National Biodiversity Action Plans exist for several of the scarcer species and these are listed in Table 6.1. All these species are liable to occur – some in significant numbers – at many UK SPAs classified for other species.

## 9. Vagrants and scarce migrants

A number of species are not rarities as defined by the British Birds Rarities Committee, yet occur on an infrequent basis in the UK. These are usually only seen individually and at unpredictable locations.

Accordingly, no SPAs have been selected for the following species: Mediterranean Shearwater *Puffinus yelkouan*, Snow Goose *Anser caerulescens*, Ring-necked Duck *Aythya collaris*, Rough-legged Buzzard *Buteo lagopus*, Purple Heron *Ardea purpurea*, **White Stork *Ciconia ciconia***, **Spoonbill *Platalea leucorodia***, Pectoral Sandpiper *Calidris melanotos*, Buff-breasted Sandpiper *Tryngites subruficollis*,

Ring-billed Gull *Larus delawarensis*, Bee-eater *Merops apiaster*, Hoopoe *Upupa epops*, Red-rumped Swallow *Hirundo daurica*, Woodchat Shrike *Lanius senator*, Richard's Pipit *Anthus novaeseelandiae*, Tawny Pipit *Anthus campestris*, Bluethroat *Luscinia svecica*, **Barred Warbler *Sylvia nisoria***, Pallas's Warbler, *Phylloscopus proregulus*, Icterine Warbler *Hippolais icterina*, Melodious Warbler *Hippolais polyglotta*, and Ortolan Bunting *Emberiza hortulana*.