

## A6.91 Arctic Tern *Sterna paradisaea*

### 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> <b>Schedule 1(1)</b>	(UK) Species of Conservation Importance
Wintering	EC Birds Directive 1979 <b>Annex I</b> <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>	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 (Rogaeva 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>1</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 *Erinaceus europaeus* (Uttley *et al.* 1989) and North American Mink (Craik 1995), together with coastal development and disturbance, especially recreational disturbance.

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<sup>1</sup> Although 64,900 of this total was 1980 data from Orkney and Shetland owing to the lack of census coverage in 1985–1987.

## **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.

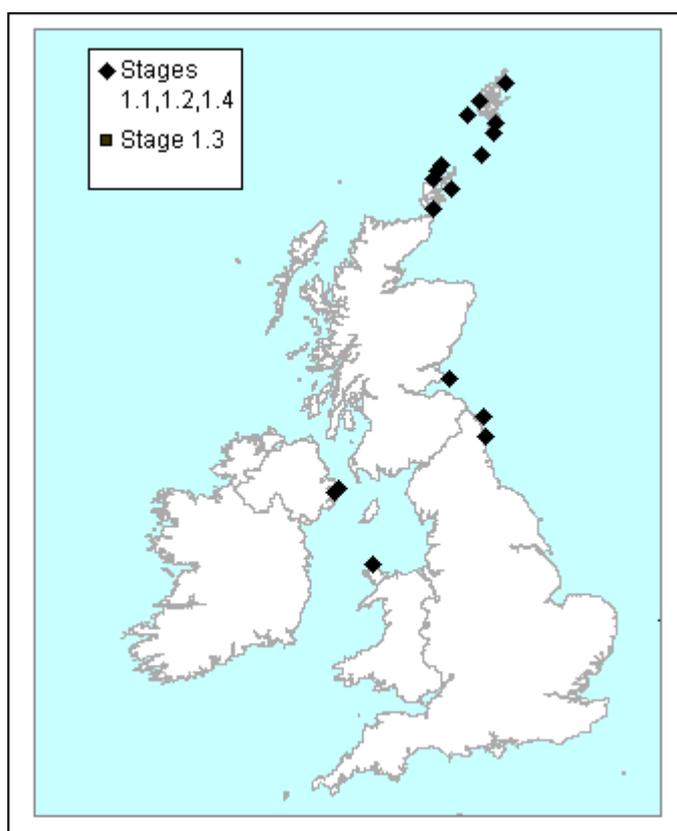
## **6. Classification criteria**

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 (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 19<sup>th</sup> 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**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
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

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
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>	17,124	1.9%	37.9%	16.7% (Ire)
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