

## A6.20 Greenland White-fronted Goose *Anser albifrons flavirostris*

### 1. Status in UK

| Biological status |   | Legal status                           |                                    | Conservation status                      |         |
|-------------------|---|--|------------------------------------|--|---------|
| Breeding          |   | Wildlife and Countryside Act 1981      | General Protection                 | Species of European Conservation Concern | Table 4 |
| Migratory         | ✓ | Wildlife (Northern Ireland) Order 1985 | General Protection                 | (UK) Species of Conservation Importance  |         |
| Wintering         | ✓ | EC Birds Directive 1979                | Annex I<br>Annex II/2<br>Migratory | All-Ireland Vertebrate Red Data Book     |         |

### 2. Population data

|                                 | Population sizes (individuals) | Selection thresholds | Totals in species' SPA suite            |
|---------------------------------|--------------------------------|----------------------|---|
| <b>GB</b>                       | 13,700                         | 140                  | 8,243 (59% of GB total)                 |
| <b>Ireland</b>                  | 14,000                         | 140                  | No SPAs selected in Northern Ireland    |
| <b>Biogeographic population</b> | 30,000                         | 300                  | 8,243 (28% of biogeographic population) |

GB population source: Stroud 1992

Ireland population source: WeBS 1998

Biogeographic population source: Rose & Scott 1997

### 3. Distribution

White-fronted Geese have a circumpolar distribution, breeding from Kanin Peninsula (44°E) in the eastern Russian Arctic, 4,500 km west to the Bering Strait. They breed discontinuously in Alaska and across high Arctic Canada, as well as in west Greenland. Four sub-species are recognised, two of which (*A. a. albifrons* and *A. a. flavirostris*) occur in Europe, including the UK. SPA provision for the former sub-species is presented in section 6.19.

The population of Greenland White-fronted Geese is small and their world range limited. Breeding occurs in low-Arctic west Greenland between 65° and 72°N (Salomonsen 1950). On autumn and spring passage, the population passes through areas of south and west Iceland (Fox *et al.* 1994b, 1999).

The winter range of the population falls entirely within Britain and Ireland, with groups in Ireland, the west and north of Scotland (with a major population segment on the island of Islay), as well as in Wales (Fox *et al.* 1994b, 1998; Fox & Stroud 1985). In the past, the population appears to have traditionally wintered on lowland peatlands (both raised and blanket bogs), and the birds' distribution mirrors the climatic template for the formation of oceanic blanket bog.

Originally, the geese foraged almost exclusively on various bog plants, notably Broad-leaved Cotton Grass *Eriophorum angustifolium* and White-beaked Sedge *Rhynchospora alba*. More recently, geese have adapted to using grasslands under a variety of intensities of management. On Islay, geese use intensively managed grasslands in some (but not all) areas, although through much of the wintering range it is more typical for wintering flocks to occur on less-intensively managed grasslands, including callows in Ireland (Bignal *et al.* 1988; Norriss & Wilson 1993; Fox *et al.* 1994b; Fox & Stroud in press).

#### **4. Population structure and trends**

The world population declined from a maximum of 23,000 birds in the late 1950s to c. 15,000 birds by the late 1970s, due primarily to wintering habitat destruction and agricultural intensification, especially in Ireland. Correspondingly, the British population declined by 35%, whilst all-Ireland numbers fell by around 50% (Rutledge & Ogilvie 1979). Following positive conservation measures in the UK and other range states (Ireland, Iceland, and Greenland), combined with several good breeding seasons, the total population in Great Britain has since risen from 7,282 birds in 1983 to 16,635 birds in 1995, and for the island of Ireland from 9,259 birds in 1983 to 13,824 birds by 1995 (Fox *et al.* 1998).

Despite these overall population increases, five traditional flocks have since become extinct and 18 more have declined. Analysis indicates that size, number and quality of feeding areas, levels of disturbance, flock size and latitude are all factors that influence flock status. The smallest, most southerly flocks occurring on ranges that contain the fewest feeding sites, which are both of the poorest quality and most limited in extent, are those that have shown the most serious declines (Fox *et al.* 1998). The continued contraction of range to a few major sites is an issue of conservation concern highlighted by both international and national conservation action plans for the population (Fox *et al.* 1998).

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

##### **SPA suite**

The UK's SPA suite for Greenland White-fronted Geese supports, on average, 8,243 individuals (calculated using site totals for the period 1992/93 to 1996/97 – see section 4.4.1 and Appendix 2 for further explanation). Estimating use of the suite by the population is complex: some SPAs act as feeding areas, supporting the geese during the day, with other nearby SPAs being used as roost sites at night. Thus, the same birds may utilise two or more SPAs in any one day. The estimated total amounts to about 59% of the British population and about 28% of the international flyway population. In an all-Ireland context, no SPAs for Greenland White-fronts have been selected in Northern Ireland. The suite comprises 12 sites where Greenland White-fronted Geese have been listed as a qualifying sub-species (Table 6.20.1).

The distribution of the SPA suite for the sub-species reflects the fact that Islay forms the core UK wintering range. Outside the SPA suite, the population is typically very locally scattered in traditional small flocks of less than 100 birds (Fox *et al.* 1994). This is particularly the case in Northern Ireland, with the majority of the all-Ireland population occurring within the Republic of Ireland.

##### **Other measures**

On Islay, a Goose Management Scheme has been implemented and this supplements site protection measures for those SPAs on Islay (listed below).

Following detailed analysis of the causes of population change since the early 1980s, Fox *et al.* (1998) highlighted that urgent management consideration now needs to be given to the consequences arising from increasing concentration of the population at a few wintering areas.

A draft international conservation plan for the sub-species has been published (Stroud 1992) following international consultation, although this has yet to be implemented by the states within the range of the sub-species.

## **6. Classification criteria**

All sites in the UK that were known to support more than 1% of the national population were considered under Stage 1.1, and all except Danna/Keills and Lismore/Benderloch were selected after consideration of Stage 2 judgements. On mainland Argyll and Bute, Loch Lomond was selected in preference to the larger populations at Danna/Keills and Lismore/Benderloch since it contributes more to the coverage of range.

The peatland SPA of Eilean na Muice Duibhe, Islay, is the most important individual roost site within the UK wintering range (Nature Conservancy Council 1985). It comprises high quality semi-natural habitat (peatland). Laggan Peninsula and Gruinart Flats SPAs were selected for as core daytime feeding areas within the wintering range of Greenland White-fronted Geese on Islay. They do not include roosting areas, with birds feeding on Laggan flying mainly to Eilean na Muice Duibhe SPA or the Rinns of Islay SPA to roost, and birds feeding on Gruinart Flats in part using Feur Lochain and other roosts on the Rinns of Islay (Ridgill *et al.* 1994). In addition, whilst being largely agricultural, both Laggan Peninsula and Gruinart Flats SPAs also include areas of semi-natural habitat, have a long history of occupancy by this sub-species and are also multi-species areas supporting another two bird species in numbers of European importance. The goose populations on these two SPAs are shown on Table 6.20.1 but do not form part of the SPA suite's total population, as these birds are already included on their respective roost site SPAs.

Kintyre Goose Roosts is a composite of a number of individual roost locations (all freshwater lochs), which together support a substantial proportion of the British wintering total. All comprise semi-natural habitat and have a very long history of occupancy for this sub-species.

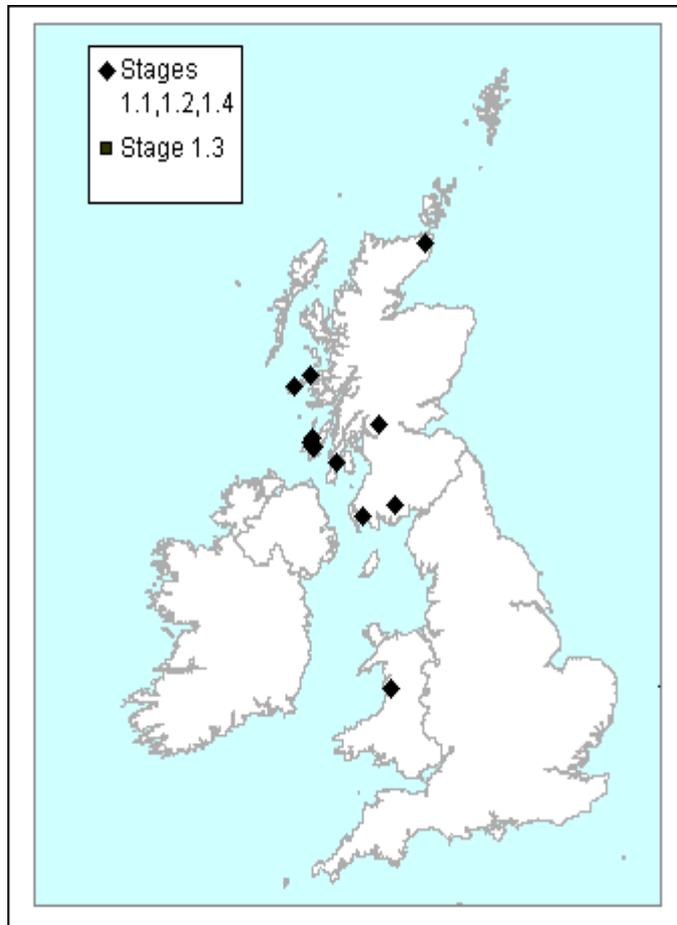
Both Coll and Sleibhtean agus Cladach Thiriodh (Tiree Wetlands and Coast) are important components in maintaining the sub-species' UK wintering range (Fox *et al.* 1989). Coll is primarily a roost site, whilst Sleibhtean agus Cladach Thiriodh (Tiree Wetlands and Coast) SPA additionally includes important feeding areas. Both sites comprise extensive areas of high quality semi-natural habitat, have a long history of occupancy for this sub-species, and are multi-species areas.

The SPAs of Caithness Lochs, Loch Lomond, Loch Inch and Torrs Warren, and Loch Ken and River Dee Marshes are distributed across the wintering range in Scotland, and are important components in maintaining the species' UK wintering range. All have a long history of occupancy for this sub-species (Ruttledge & Ogilvie 1979). All include roost areas, whilst Loch Lomond and Loch Ken and River Dee Marshes additionally include some feeding areas.

The Dyfi Estuary is the sole remaining wintering site in Wales and the most southerly in the UK. It is both a roosting and feeding area, and is particularly important in the context of maintaining the traditional wintering range within the UK. The geese here have been subject to a range of current and past conservation measures to enhance their status. It has a long

history of occupancy (Fox & Stroud 1985) and the geese use both semi-natural habitat as well as agriculturally managed grassland areas for feeding and roosting.

**Distribution map for Greenland White-fronted Goose SPA suite**



**Table 6.20.1 – SPA suite**

| <b>Site name</b>  | <b>Site total<sup>1</sup></b> | <b>% of biogeographical population</b> | <b>% of national population</b> | <b>Selection stage</b> |
|---|-------------------------------|--|---------------------------------|------------------------|
| Caithness Lochs   | 183                           | 0.6                                    | 1.3                             | 1.1                    |
| Coll  | 789                           | 2.6                                    | 5.7                             | 1.1                    |
| Dyfi Estuary  | 144                           | 0.5                                    | 1.1                             | 1.1                    |
| Eilean na Muice Duibhe/Duich Moss, Islay                    | 1,300                         | 4.3                                    | 9.5                             | 1.1                    |
| Gruinart Flats, Islay                                       | 1,000                         | 3.3                                    | 7.3                             | 1.1                    |
| Kintyre Goose Roosts  | 2,323                         | 7.7                                    | 17.0                            | 1.1                    |
| Laggan, Islay   | 300                           | 1.0                                    | 2.2                             | 1.1                    |
| Loch of Inch and Torrs Warren                               | 534                           | 1.8                                    | 3.9                             | 1.1                    |
| Loch Ken and River Dee Marshes                              | 350                           | 1.2                                    | 2.6                             | 1.1                    |
| Loch Lomond   | 237                           | 0.8                                    | 1.7                             | 1.1                    |
| Rinns of Islay  | 1,600                         | 5.3                                    | 11.7                            | 1.1                    |
| Sleibhtean agus Cladach Thiriodh (Tiree Wetlands and Coast) | 783                           | 2.6                                    | 5.7                             | 1.1                    |
| <b>TOTALS</b>   | <b>8,243</b>                  | <b>27.5%</b>                           | <b>58.9%</b>                    |                        |

<sup>1</sup> Note that the totals in this column are not additive since many geese move between sites listed here on a regular, diurnal basis.