

A6.21 Icelandic Greylag Goose *Anser anser*

1. Status in UK

Biological status		Legal status		Conservation status	
Breeding		Wildlife and Countryside Act 1981	General Protection Schedule 2(1)	Species of European Conservation Concern	
Migratory	✓	Wildlife (Northern Ireland) Order 1985	General Protection Schedule 2(1)	(UK) Species of Conservation Importance	Table 4
Wintering	✓	EC Birds Directive 1979	Annex II/1; Annex II/2 Migratory	All-Ireland Vertebrate Red Data Book	

2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
GB	100,000	1,000	56,972 (57.0% of GB total)
Ireland	3,800	50 (see section 5.1.2 for rationale)	547 (18.2% of all-Ireland total)
Biogeographic population	100,000	1,000	57,519 (57.5% of biogeographic population)

GB population source: Kirby 1995a

Ireland population source: Way et al. 1993

Biogeographic population source: Rose & Scott 1997

3. Distribution

Greylag Geese have a Palearctic distribution extending from Iceland in the west, discontinuously through Europe and central Asia to the Pacific shores of Russia (Miyabayashi & Mundkur 1999). Two sub-species have been described, both of which occur in Europe – the nominate form occurs in west and north-west Europe, whilst *A. a. rubrirostris* occurs in south-east and eastern Europe as well as western and central Asia. Only the nominate sub-species occurs in the UK.

A number of distinct biogeographic populations of the nominate sub-species are recognised (Scott & Rose 1996). Birds from the Icelandic breeding population of Greylag Goose winter exclusively in Great Britain and Ireland (Owen *et al.* 1986; Hagemeyer & Blair 1997; Madsen *et al.* 1999). Most winter in Scotland, with concentrations in the Moray Firth, Aberdeenshire, eastern central Scotland, the central Southern Uplands and southwest Scotland (Lack 1986; Owen *et al.* 1986; Madsen *et al.* 1999).

Non-breeding Greylag Geese south of the line between the Isle of Man and Teesmouth are sedentary re-established birds, established from geese translocated from the Hebrides since

the 1930s, but there is also a large re-established flock in south-west Scotland. In addition to non-breeding feral birds, there are small populations of native breeding Greylag Geese in the Western Isles, and western and northern Scotland. Birds in the Western Isles and in much of western Scotland are sedentary, but those nesting in northern Scotland migrate to nearby agricultural and coastal areas in winter, with some birds moving elsewhere in Scotland and even as far south as England (Lack 1986; Batten *et al.* 1980; Paterson 1991; Owen *et al.* 1986; Thom 1986; Buxton *et al.* 1995; Mainwood 1996; Mitchell & Sigfusson 1999).

There is some mixing of Icelandic and native Greylag Geese, especially when Icelandic birds are migrating through northeast Scotland, but also at a few wintering locations (Mainwood 1996). Many of the birds wintering in Ireland, however, are feral, with only small flocks of Icelandic birds recorded (Lack 1986; Mitchell *et al.* 1999). In autumn, birds migrating from Iceland arrive at a limited number of locations before dispersing to other areas later in the winter period. There can be considerable re-distribution during the winter, especially to sites in the south of the range. In late winter, birds begin to move north, with pre-migratory staging occurring in northeast Scotland and Orkney (Mitchell *et al.* 1995; Mitchell & Sigfusson 1999). During spring migration, Greylag Geese stage in the southern lowlands of Iceland for several weeks, foraging on improved grasslands before returning to breeding grounds (Mitchell & Sigfusson 1999).

Historically, Greylag Geese concentrated on estuaries in winter, where they fed on water plants (Owen 1976). However, more recently they have adapted almost exclusively to using agricultural areas near favoured roost sites. Roost sites include estuaries, lakes and reservoirs, and occasionally river islands. Grasses form the majority of the winter diet. Crops such as winter barley and brassicas may be eaten in severe weather, but grains and root crops are important foods (Lack 1986).

4. Population structure and trends

The total British non-breeding population is currently estimated to be 100,000 individuals, and the all-Ireland population is estimated to be 3,800 individuals (Kirby 1995a; Way *et al.* 1993; Rose & Scott 1997). These totals do not include the sedentary feral population, which may number about 22,000 wintering individuals (Delany 1993; see also Madsen *et al.* 1999), and so represent only the Icelandic and native British populations. The native (North Scottish) British population is estimated to be just less than 10,000 wintering individuals, with an estimated 3,300 in the Uists, 2,900 in Coll and Tiree, 2,500 in northeast Scotland and small populations elsewhere (Cranswick *et al.* 1999; Owen *et al.* 1986; Madsen 1991; Paterson 1991; Buxton *et al.* 1995; Mainwood 1996; Mitchell & Sigfusson 1999).

The Icelandic breeding population was estimated at 25,000 individuals in 1952 and since then has increased steadily to over 100,000 individuals in the late 1980s (Madsen 1991). This increase was reflected in the British wintering total that increased from 26,500 individuals in 1960 to just over 100,000 in 1984 (Mitchell & Sigfusson 1999). The increase in the Icelandic population is in most part attributable to lower winter mortality due to regulated hunting and improved winter foraging opportunities (Owen *et al.* 1986; Thom 1986; Fox *et al.* 1989).

Since the early 1990s, the wintering numbers have entered a period of decline, possibly as a result of hunting in Iceland where large numbers are shot each year (about 35,000 individuals annually during the mid-1990s) (Cranswick *et al.* 1999; Mitchell & Sigfusson 1999). The native British population has increased steadily since the mid-1960s, when it was estimated to be 600-700 birds (Paterson 1991; Madsen 1991; Mitchell & Sigfusson 1999). The increase in the native British population is attributed to lack of hunting, but may also be related to improved foraging opportunities as a result of changes in agriculture (Paterson 1991).

5. Protection measures for population in UK

SPA suite

In the non-breeding season, the UK's SPA suite for Icelandic Greylag Goose supports, on average, 57,519 individuals (calculated using site totals from the WWT/JNCC co-ordinated November census of grey goose populations (Hearn 1998) for the period 1992/93 to 1996/97 — see section 4.4.1 and Appendix 2 for further explanation). This total amounts to 57.0% and 18.2% of numbers in Britain and Northern Ireland respectively, and 57.5% of the total flyway population. The SPA suite comprises 22 sites at which Icelandic Greylag Geese has been listed as a qualifying species (Table 6.21.1).

6. Classification criteria

All natural and semi-natural sites in the UK that were known to support more than 1% of the international population of Icelandic Greylag Geese were considered under Stage 1.2 and, of these, 19 were selected after consideration of Stage 2 judgements. A further three sites (all in Northern Ireland) were considered and selected under Stage 1.3 (see section 5.3), with Icelandic Greylag Goose identified as an important component of wider non-breeding waterbird assemblages at these localities.

Given the mobility of these geese through the non-breeding season, especially their use of distinct areas in autumn and spring for staging (pre-migratory feeding), potential SPAs were considered in a number of broadly defined regions. This approach ensured that key sites would be selected from throughout the range within the UK and that areas used upon autumn arrival, in mid-winter, and in spring prior to departure to Iceland, would all be represented within the species' SPA suite. The Stage 2 judgements made are as follows:

There are two main areas used in the northernmost part of the wintering range. Caithness Lochs was included in preference to Orkney as supporting a larger population on a multi-species site.

Within the Moray Basin area, Loch Eye was included as supporting the largest numbers, whilst Cromarty Firth, Dornoch Firth and Loch Fleet, Inner Moray Firth, and Moray and Nairn Coast (which includes Findhorn Bay) were included as multi-species sites. Loch Spynie was selected in preference to Lower Bogrotten as supporting a larger population on a single species site.

Loch of Skene and Muir of Dinnet were selected within Grampian as regularly supporting the largest numbers of these geese in the UK. Loch of Strathbeg was included in preference to Abernethy Forest (Loch Garten) as although both are multi-species sites, Loch of Strathbeg has previously supported larger numbers. The regularly used sites of Haddo House Lochs, Corby Loch, and the River Spey were also considered but not selected, as they did not add significantly to range or numerical coverage within Grampian.

In the Tayside and Fife area, South Tayside Goose Roosts¹, Loch of Lintrathen, Firth of Tay and Eden Estuary, Loch of Kinnordy, and the Montrose Basin were all selected to provide population and range coverage within the core of the range of Icelandic Greylag Geese in Scotland. The regularly used sites of Tay/Isla Valley, River Tay at Scone, Fincastle Loch, Kilconquhar Loch, Carlhurlie Reservoir, and Ballo Reservoir, were all considered but not

¹ comprising Carsebreck and Rhynd Lochs in Strathallan, and Drummond Lochs and Dupplin Lochs in Strathearn

selected, as they did not add significantly to range or numerical coverage within Tayside and Fife.

In the Borders area and northern England, Holburn Lake and Moss, and Lindisfarne are both included because they lie at the edge of the range of Icelandic Greylag Geese in Britain, whilst Din Moss - Hoselaw Loch provides additional population coverage. The regularly used site of Gadloch was also considered but not selected, as it did not add significantly to range or numerical coverage within Borders.

Loch Ken and River Dee Marshes is a long-established site in south-west Scotland and provides for range and population coverage in this part of the Scottish range of Icelandic Greylag Geese. The regularly used sites of Stranraer Lochs, and Bute, were also considered but not selected, as they did not add significantly to range or numerical coverage within the region.

In Northern Ireland, Lough Foyle, Lough Neagh and Lough Beg, and Strangford Lough were all selected because they support Icelandic Greylag Geese at levels of all-Ireland importance within internationally important assemblages of waterbirds.

No sites were selected for the north Scottish Greylag Goose population since this is a discrete non-migratory population (see section 5.7.3).

Distribution map for Icelandic Greylag Goose SPA suite

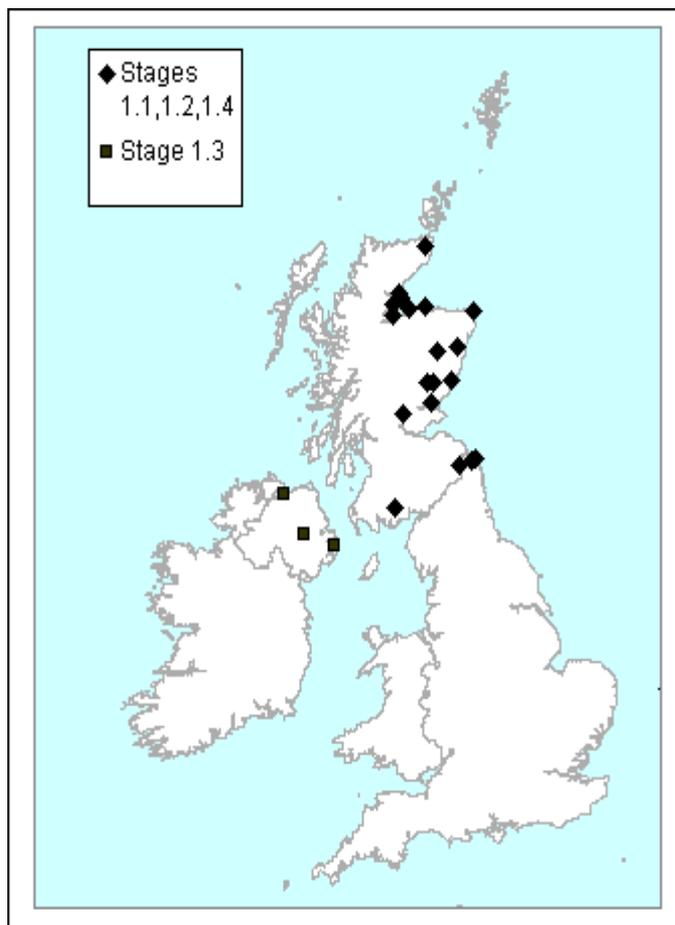


Table 6.21.1 – SPA suite

Site name	Season of peak use	Site total	% of biogeographical population	% of national population	Selection stage
Caithness Lochs	Autumn	6,872	6.9	6.9	1.2
Cromarty Firth	Autumn	1,777	1.8	1.8	1.2
Din Moss - Hoselaw Loch	Autumn	1,081	1.1	1.1	1.2
Dornoch Firth and Loch Fleet	Winter (DF) / Autumn (LF)	2,079	2.1	2.1	1.2
Firth of Tay and Eden Estuary	Winter	1,355	1.4	1.4	1.2
Holburn Lake and Moss	Winter	2,150	2.2	2.2	1.2
Inner Moray Firth	Winter	1,731	1.7	1.7	1.2
Lindisfarne	Spring	1,416	1.4	1.4	1.2
Loch Eye	Autumn	11,321	11.3	11.3	1.2
Loch Ken and River Dee Marshes	Winter	1,000	1.0	1.0	1.2
Loch of Kinnordy		1,000	1.0	1.0	1.2
Loch of Lintrathen	Winter	3,098	3.1	3.1	1.2
Loch of Skene	Autumn	10,840	10.8	10.8	1.2
Loch of Strathbeg	Winter	3,325	3.3	3.3	1.2
Loch Spynie	Autumn	3,360	3.4	3.4	1.2
Lough Foyle	Spring	67	0.1	1.8 (Ire)	1.3
Lough Neagh and Lough Beg	Winter	176	0.2	4.6 (Ire)	1.3
Montrose Basin		1,080	1.1	1.1	1.2
Moray and Nairn Coast		2,679	2.7	2.7	1.2
Muir of Dinnet	Autumn	29,458	29.5	29.5	1.2
South Tayside Goose Roosts	Autumn	3,667	3.7	3.7	1.2
Strangford Lough	Winter/ Spring	419	0.4	11.0 (Ire)	1.3

TOTALS		57,519 (in November)	57.5%	57.0% 18.2% (Ire)	
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