

A6.23 Svalbard Barnacle Goose *Branta leucopsis*

1. Status in UK

Biological status		Legal status		Conservation status	
Breeding		Wildlife and Countryside Act 1981	General Protection	Species of European Conservation Concern	SPEC 2 (winter) Unfavourable conservation status (localised - winter) and concentrated in Europe
Migratory	✓	Wildlife (Northern Ireland) Order 1985	General Protection Schedule 9(1)	(UK) Species of Conservation Importance	Table 4
Wintering	✓	EC Birds Directive 1979	Annex I Migratory	All-Ireland Vertebrate Red Data Book	Internationally important

2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
GB	17,450	120	13,821 (79% of GB population) ¹
Ireland			
Biogeographic population	12,000 ²	120	13,821 (c. 100% of biogeographic population)

GB population source: WeBS 1995/6

Biogeographic population source: Rose & Scott 1997

3. Distribution

Barnacle Geese are globally restricted to limited breeding areas in north-east Greenland, Svalbard, and the islands of Novaya Zemlya and Vaigach in the Russian high Arctic. Although the species is monotypic, the populations breeding in each of these three areas are strongly distinct with separate migratory flyways and wintering areas within Europe (Rose & Scott 1996).

The Svalbard Barnacle Goose is geographically isolated from the two other populations of this species breeding in northern Eurasia. It breeds in the Svalbard archipelago between 80°N and 76°30'N (Prestrud *et al.* 1989). In late August and early September, many birds migrate to the southernmost islands in the archipelago, Bjørnøya, where they stay for several weeks before migrating through northern Scotland to wintering grounds around the Solway Firth (Owen & Gullestad 1984). In recent years, small numbers have taken to wintering at Loch of Strathbeg, and larger numbers occur there on spring and autumn passage.

¹ This assessment underestimates the actual coverage of the population within the SPA suite owing to a lag in reporting times and more recent assessments of numbers. The actual proportion is close to 100%.

² The formally reported international assessment of the size of this population given in Rose & Scott (1996) is significantly out of date and does not reflect the recent large counts that have been made (see text).

During the winter, flocks roost at night in sheltered locations within the estuary and fly to nearby meres and pastures to feed during the day. The winter diet consists of a range of natural and cultivated grasses (especially Ryegrass *Lolium perenne*), clover *Trifolium* stolons, the seeds and leaves of saltmarsh plants and grain on stubble fields (Owen & Kerbes 1971; Owen 1975).

In Britain, almost the entire population occurs around the Solway Firth. Three areas are used intensively: the Caerlaverock area, Rockliffe Marsh, and farmland around Southernness. However, numbers of birds using these areas have changed markedly over the years. During the early 1970s, when the Wildfowl & Wetlands Trust (WWT) began managing farmland for geese, the use of the Caerlaverock area increased markedly (Owen & Campbell 1974). In the late 1970s and early 1980s, when the population began to grow, the carrying capacity at Caerlaverock was reached and the proportion of time spent there declined by 40%. The use of Southernness increased at this time.

In the early 1980s, better management at Caerlaverock meant that more geese used that site as the carrying capacity of Rockliffe during the spring was reached (Owen *et al.* 1987). In the 1990s, the Southernness area was afforded further protection and has become more important at the expense of Caerlaverock and Rockliffe (Shimmings *et al.* 1993), in part due to the establishment of the RSPB reserve at Mersehead.

4. Population structure and trends

The number of Svalbard Barnacle Geese wintering in Britain has increased substantially since the 1940s. In the mid-1940s, there was considerable disturbance at the wintering grounds from military activities and shooting. In 1948, only 300 geese were recorded on the Solway (Owen & Norderhaug 1977). The geese were legally protected from shooting in 1954 and in Svalbard in 1955. This, together with the establishment of the NNR at Caerlaverock in 1957, led to a recovery, to 3,000-4,000 birds in the 1960s.

Further increases occurred in the 1970s and 1980s following the establishment of the WWT refuge at Caerlaverock in 1970 and the creation of breeding sanctuaries on the main breeding areas in 1973. Numbers appeared to stabilise at around 12,000-14,000 in the early 1990s (Black *et al.* 1999). However, a comprehensive census in spring 1997 indicated that the population comprises 23,000 birds. It is thought that this count represented a more accurate estimate of the population than earlier counts made in late autumn, when the majority of birds may not have arrived. A huge count of 32,000 birds in February 1998 suggests that some birds from the Greenlandic population wintering in Islay may have moved to the Solway during that year. A count made during the winter of 1999-2000 confirmed that the population is around the 24,000 mark.

5. Protection measures for population in UK

SPA suite

In the non-breeding season, the UK's SPA suite for Svalbard Barnacle Geese supports, on average, 13,821 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 virtually the entire British and international flyway population. The population does not occur in Northern Ireland. The suite comprises two sites at which the Svalbard Barnacle Goose has been listed as a qualifying interest (Table 6.23.1).

Other measures

In 1993, Scottish Natural Heritage established a Goose Management Scheme by which farmers in the main goose areas of the Solway are subsidised for the damage caused by Barnacle Geese on their land. Furthermore, the Merse Management Scheme pays grants to farmers to improve the grazing of merses with the aim of improving land for wildlife.

A Flyway Management Plan has been produced for the Svalbard population of Barnacle Geese (Black 1998). It is hoped to formalise this plan under the African-Eurasian Waterbird Agreement, which was signed by the United Kingdom and Norway in 1995. The plan provides a framework for co-ordinated conservation action to secure the protection of important areas throughout the flyway and promote relevant research on population dynamics.

6. Classification criteria

The two sites in the UK that support more than 1% of the international population of Svalbard Barnacle Geese were considered under Stage 1.2, and both were selected after consideration of Stage 2 judgements. The population does not occur in Northern Ireland. The SPA suite contains substantially all of the winter range of this discrete population.

Loch of Strathbeg is primarily an autumn arrival point (first landfall on the flight from the breeding areas), whilst the whole population winters on the Solway Firth.

Distribution map for Svalbard Barnacle Goose SPA suite

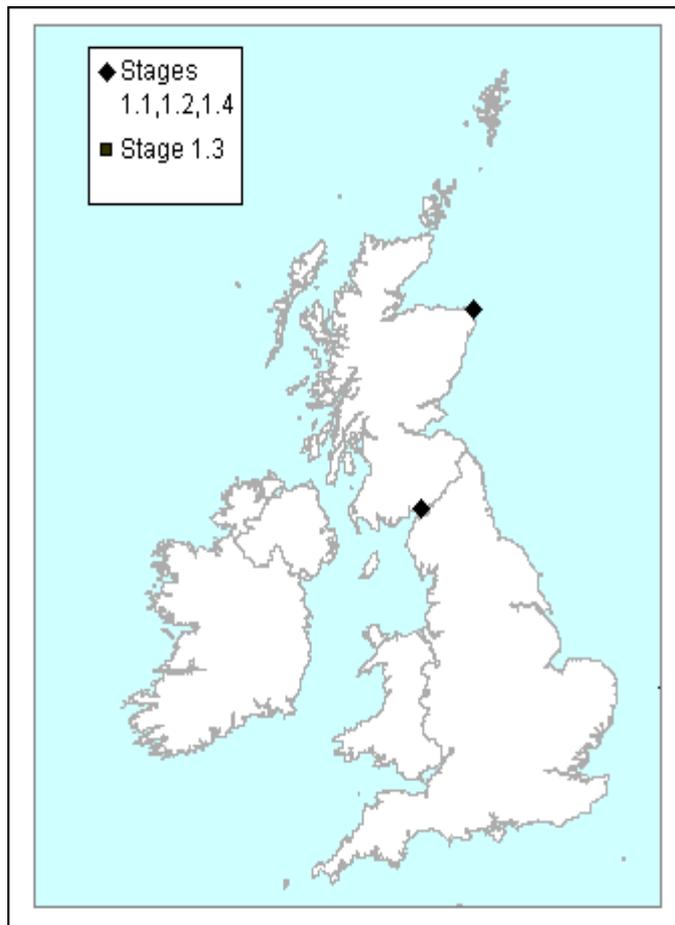


Table 6.23.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Loch of Strathbeg	226	1.9	1.3	1.1
Upper Solway Flats and Marshes	13,595	<i>c.</i> 100	<i>c.</i> 100	1.1

TOTALS	13,821 (in January)	<i>c.</i> 100%	<i>c.</i> 100%	
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