

A6.25 Canadian Light-bellied Brent Goose *Branta bernicla hrota*

1. Status in UK

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

2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
GB			
Ireland	20,000	200	14,087 (70.4% of all-Ireland total)
Biogeographic population	20,000	200	14,087 (70.4% of biogeographic population)

Ireland population source: Way et al. 1993

Biogeographic population source: Rose & Scott 1997

3. Distribution

Brent Geese have a circumpolar distribution breeding in the extreme high Arctic in all northern countries. The range extends from Greenland to Svalbard and northern Russia, continuing through Alaska to the Canadian Arctic Archipelago. There are three sub-species, only two of which regularly occur in Europe (section 6.24). The sub-species *B. b. hrota* occurs generally in the western Arctic (Canada to Svalbard and Franz Joseph Land). Two distinct populations of *B. b. hrota* occur in Britain and Ireland. One breeds in Svalbard and north-east Greenland and winters in Denmark and England (section 6.26), the other breeds in Canada and winters in Ireland.

The Canadian breeding population winters almost entirely in Ireland, with only small numbers continuing on to Wales, the Channel Islands and the north French coast (Merne *et al.* 1999). The distribution in Ireland is wholly coastal, with large estuaries and areas of intertidal mudflats with fine sediments preferred (Lack 1986).

Light-bellied Brent Geese use many sites in the course of the winter. Most birds congregate at Strangford Lough in Northern Ireland on autumn arrival, prior to dispersing to other

estuaries. Five estuaries are used as main autumn staging areas, with Strangford Lough holding up to 75% of the population (Ó Briain & Healy 1991). Lough Foyle in Northern Ireland has also become increasingly important in autumn.

Light-bellied Brent Geese feed on a range of plants, particularly eelgrasses *Zostera* spp. and algae on mudflats, various saltmarsh plants and, more recently, on grass and cultivated crops such as barley, wheat and oilseed rape. The movements of birds wintering in Ireland are less extensive than those of other Brent Goose populations and are mainly influenced by regular changes in the availability of eelgrass (Ó Briain & Healy 1991). Early in the winter, more than 90% of the population feed on eelgrass, followed by a switch to green algae, saltmarsh and increasingly terrestrial habitats. It is thought that the rapid depletion of eelgrass in the autumn prompts redistribution within and between sites. Birds roost communally on sheltered coastal and estuarine waters.

4. Population structure and trends

The numbers of all populations of Brent Geese crashed in the early 1930s, caused in part by a reduction in availability of eelgrass due to disease (Salomonsen 1958) together with probable high levels of shooting. Since the 1950s, when the population was first estimated at 6,000 birds (Salomonsen 1958), the Canadian population of Light-bellied Brent Goose has shown a steady increase in numbers. During the 1960s and 1970s, the population was estimated to range from 7,000 to 16,000, and in 1983, it was around 12,000 birds (Cramp & Simmons 1977; Lack 1986; Owen *et al.* 1986). Although a peak of 24,600 was recorded in 1985 (Ó Briain & Healy 1991) the population is currently estimated to be 20,000 birds and has apparently stabilised (Scott & Rose 1996). As with other populations of Brent Geese, this increase is largely attributed to improved protection in wintering and staging areas leading to reduced mortality and improved energetic conditions.

Many birds disperse to intertidal habitats outside the main sites during midwinter and, in some areas birds have recently taken to feeding on grasslands and cultivated crops inland. Although the habit of feeding on agricultural land appears to be a more recent development in Ireland than in England, and fewer birds and localities are involved, conflicts with farmers could become more frequent if large numbers of birds begin to feed more extensively on winter cereals and newly sown grass. On Strangford Lough, in particular, there has been a recent increase in the use of adjacent agricultural land by geese, a trend which has been linked to an overall decline in the abundance of eelgrass at this site (Andrews *et al.* 1996; Mathers 1995).

5. Protection measures for population in UK

SPA suite

In the non-breeding season, the UK's SPA suite for the Canadian population of Light-bellied Brent Goose supports, on average, 14,087 individuals (calculated using WeBS October 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 70% of the all-Ireland and international flyway populations. Canadian Light-bellied Brent Geese do not regularly winter in Great Britain in significant numbers. The suite comprises six sites in Northern Ireland at which Light-bellied Brent Geese have been listed as a qualifying species (Table 6.25.1).

The suite includes all the main coastal wintering sites in Northern Ireland, including the two most important sites at Strangford Lough and Lough Foyle, which, between them, occasionally hold up to 90% of the total population. No further SPAs have been selected due to the dispersed, low-density occurrence of the birds outside the SPA suite.

6. Classification criteria

All sites in the UK that were known to support more than 1% of the international population of Canadian Light-bellied Brent Geese were considered under Stage 1.2, and all six were selected after consideration of Stage 2 judgements.

The sites are distributed throughout the range of the population in Northern Ireland, from Lough Foyle in the north-west to Carlingford Lough in the south-east. Most of the sites are multi-species SPAs, of importance also for a range of other waterbirds, although Killough Harbour has been selected solely for its importance for this population of Light-bellied Brent Geese. There is a very long recorded history of occupancy at most of these sites (Salomonsen 1958; Boyd in Atkinson-Willes 1963).

As the selection of sites under Stage 1.3 resulted in a suite that gives comprehensive coverage of the population and range of wintering Canadian Light-bellied Brent Geese in the UK, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for Canadian Light-bellied Brent Goose SPA suite

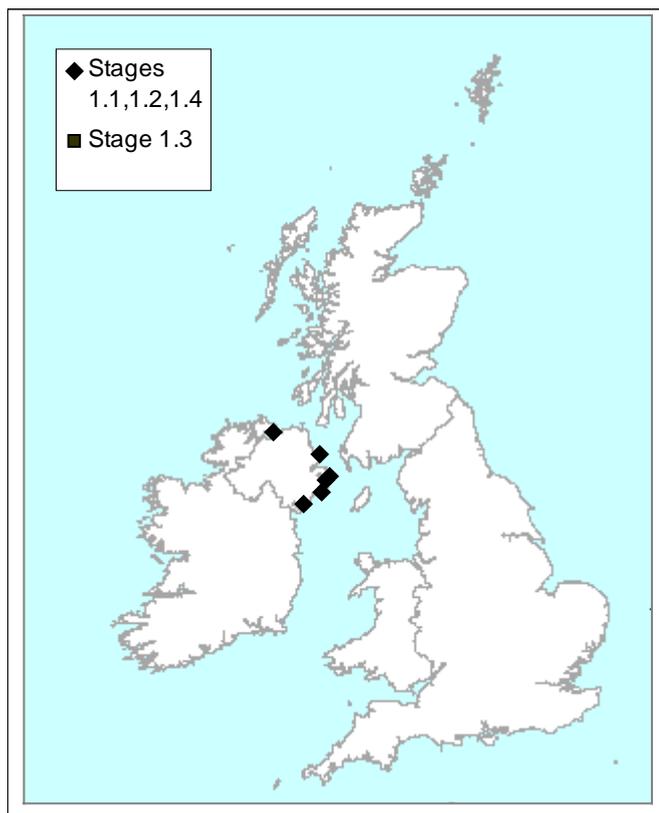


Table 6.25.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Carlingford Lough	319	1.6	1.6 (Ire)	1.2
Killough Harbour	354	1.8	1.8 (Ire)	1.2
Larne Lough	227	1.1	1.1 (Ire)	1.2
Lough Foyle	3,730	18.7	18.7 (Ire)	1.2
Outer Ards	245	1.2	1.2 (Ire)	1.2
Strangford Lough	10,527	52.6	52.6 (Ire)	1.2
TOTALS	14,087 (in October)	70.4%	70.4% (Ire)	