

## A6.24 Dark-bellied Brent Goose *Branta bernicla bernicla*

### 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 ( <b>vulnerable</b> ) 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	

### 2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	103,300	1,000	93,677 (94% of GB total)
<b>Ireland</b>			
<b>Biogeographic population</b>	300,000	3,000	93,677 (31% of biogeographic population)

GB population source: Kirby 1995a

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. The Black Brant *Branta bernicla nigricans* is an occasional vagrant in the UK, originating from North America.

The sub-species *B. b. hrota* occurs generally in the western Arctic (Yamal Peninsula in the west, through to Canada and Svalbard in the east). Two distinct populations of *B. b. hrota* occur in Britain and Ireland – one breeds in Canada and winters in Ireland (section 6.25), the other breeds in Svalbard and winters in Denmark and England (section 6.26).

The nominate Dark-bellied Brent Goose *B. b. bernicla* breeds in the Russian high Arctic from the Yamal Peninsula in the west, extending east to the Lena Delta at about 120°E (Ebbinge *et al.* 1999). Those breeding in the western part of this range migrate to winter on the coasts of North Sea countries in Europe. Most recoveries of birds ringed in western Europe come from the Taiymyr Peninsula (*c.* 100°E), although the most easterly record is of a British-ringed Brent Goose recovered from 145°E (Ebbinge *et al.* 1999). The winter range of the population

of this race occurs from Denmark and the western Baltic, west through England (mostly south of a line from the Wash to the Severn Estuary) to western France. Large concentrations occur on the coast of the international Wadden Sea. This major intertidal area plays a particularly important role on the initial arrival of birds from the breeding grounds in late summer and again as a staging area prior to northward migration in spring (van Nugteren 1994; Ebbinge 1992).

The main wintering areas of Dark-bellied Brent Geese in the UK are in England, along the North Sea and Channel coasts, from The Wash south to Poole Harbour. Important concentrations are found around The Wash, along the Norfolk, Essex and north Kent coasts, and in the natural harbours of the south coast.

The traditional wintering habitat is mostly shallow coasts and estuaries with extensive mudflats and intertidal areas, as Dark-bellied Brent Geese rarely occur far from the sea and feed on intertidal plants such as *Zostera*, *Enteromorpha* and a small range of littoral plants. Population growth during the 1980s resulted in more rapid seasonal depletion of natural food sources. Thus, since the late 1970s, the geese have adapted to use coastal grasslands and the early growth of cultivated cereal crops (van Nugteren 1994; Ebbinge *et al.* 1999).

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

The world population of this sub-species has increased from *c.* 22,000 birds in winter 1960/61 to around 300,000 birds in the late 1990s (Batten *et al.* 1990; Rose & Scott 1997). This followed a long period of decline from the early 1930s until the late 1950s, during which time the population remained at around 16,500 individuals (Salomonsen 1958). The subsequent increase has been largely due to a reduction in mortality following the introduction of protection measures in the wintering areas (Ebbinge 1991). Indeed, the population was largely stable at a very low level from the 1950s until Denmark conferred protection in 1972. Since then, the introduction of protective legislation in all wintering areas, and other internationally co-ordinated conservation provisions, have allowed the population to recover its former range and abundance (Smart 1979; van Nugteren 1994; Ebbinge *et al.* 1999).

Numbers wintering in England have increased in proportion to the world population, with an average maximum of 57,300 during 1976-81 and 94,300 during 1985-89, representing 50% of the world population during each period. By winter 1997-98, the peak of the wintering numbers in Britain had reached just over 99,000 (Cranswick *et al.* 1999). In the winters of 1993/94 to 1997/98 The Wash alone held over 20,000 individuals, 20% of the total British wintering numbers.

As wintering Dark-bellied Brent Geese in Britain are concentrated in relatively few areas, wider countryside conservation measures are not ideally suited to the conservation of the species. Many important grazing marsh and saltmarsh areas used for feeding are protected within nature reserves, such as Old Hall Marshes RSPB Reserve in the Blackwater Estuary and Cley Norfolk Wildlife Trust Reserve on the North Norfolk Coast. The grassland of many of these sites is managed specifically for Dark-bellied Brent Geese through appropriate grazing regimes that include provision of alternative feeding areas such as high-quality grassland (Stroud 1994; Vickery *et al.* 1994a, b).

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

##### **SPA suite**

In the non-breeding season, the UK's SPA suite for Dark-bellied Brent Geese supports, on average, 93,677 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 about 94% of the British population<sup>1</sup>, and about 31% of the international flyway population. Dark-bellied Brent Geese do not regularly winter in Northern Ireland. The suite comprises 19 sites at which Dark-bellied Brent Geese have been listed as a qualifying species (Table 6.24.1).

## **6. Classification criteria**

All sites in the UK that were known to support more than 1% of the international population of Dark-bellied Brent Geese were considered under Stage 1.2, and all 13 were selected after consideration of Stage 2 judgements. A further six sites were considered and selected under Stage 1.3 (see section 5.3); at these sites Dark-bellied Brent Geese were identified as important components of a wider non-breeding waterbird assemblage.

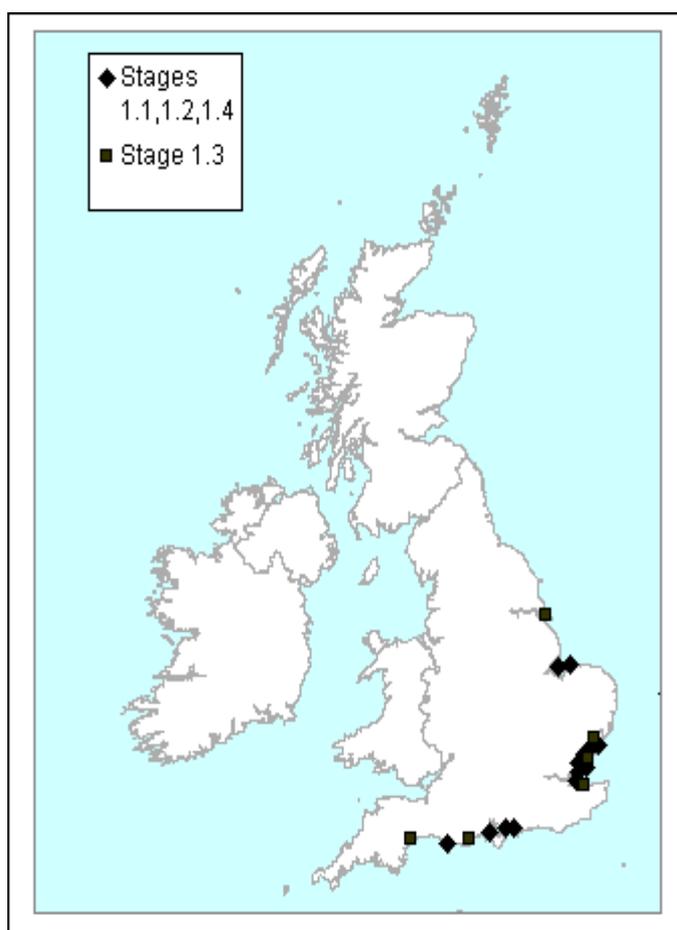
The sites are distributed throughout the full range of the population in England, from the Humber in the north-east, to the Exe Estuary in the south-west. Most of the sites are multi-species SPAs, of importance also for a range of other waterbirds, although Portsmouth Harbour has been selected solely for Dark-bellied Brent Geese. There is a very long recorded history of occupancy at most of these sites (Salomonsen 1958; Boyd in Atkinson-Willes 1963; Ogilvie & St Joseph 1976).

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

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<sup>1</sup> Calculation of population coverage for Dark-bellied Brent Geese is problematic due to the sometimes rapid movements of birds between wintering areas within Britain, and to and from other wintering areas in France and the Low Countries (Ebbinge & St. Joseph 1992). These movements can be stimulated by the onset of severe cold weather. The proportions of populations presented here should thus be regarded as indicative rather than exact.

### Distribution map for Dark-bellied Brent Goose SPA suite



**Table 6.24.1 – SPA suite**

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Benfleet and Southend Marshes	3,819	1.3	3.7	1.2
Blackwater Estuary	15,392	5.1	14.9	1.2
Chesil Beach and The Fleet	3,182	1.1	3.1	1.2
Chichester and Langstone Harbours	17,119	5.7	16.6	1.2
Colne Estuary	4,907	1.6	4.8	1.2
Crouch and Roach Estuaries	3,074	1.0	3.0	1.2
Dengie	2,308	0.8	2.2	1.3
Exe Estuary	1,905	0.6	1.8	1.3
Foulness	13,075	4.4	12.7	1.2
Hamford Water	6,892	2.3	6.7	1.2
Humber Flats, Marshes and Coast (Phase 1)	2,553	0.9	2.5	1.3
Medway Estuary and Marshes	3,205	1.1	3.1	1.2
North Norfolk Coast	11,512	3.8	11.1	1.2

<b>Site name</b>	<b>Site total</b>	<b>% of biogeographical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Poole Harbour	1,480	0.49	1.4	1.3
Portsmouth Harbour	2,847	0.95	2.8	1.2
Solent and Southampton Water	7,506	2.50	7.3	1.2
Stour and Orwell Estuaries	2,711	0.90	2.6	1.3
The Swale	1,961	0.65	1.9	1.3
The Wash	22,248	7.42	21.5	1.2

<b>TOTALS</b>	93,677 (in January)	31.2%	93.7%	
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