

A6.67b Dunlin *Calidris alpina alpina* (non-breeding)

1. Status in UK

See section A6.67a.

2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
GB	532,000	5,300	412,566 (78% of GB total)
Ireland	125,000	1,250	8,192 (7% of all- Ireland total)
Biogeographic population	1,373,000	14,000	420,758 (30% of biogeographic population)

GB population source: Cayford & Waters 1996

All-Ireland population source: Cranswick et al. 1999

Biogeographic population source: Rose & Scott 1997

3. Distribution

Section A6.67a outlines the global distribution and taxonomy of Dunlin.

Most Dunlin wintering in north-west Europe are of the nominate sub-species *alpina* which breeds in Scandinavia and Russia. Based on biometrics, Clark (1983) considered that at least 98% of Dunlin wintering on the Severn were of this sub-species. The sub-species *schinzii*, from Iceland, Great Britain, Ireland and the Baltic, winters mainly in southern Europe and Africa, whilst *arctica* birds pass through the UK on route between north-east Greenland and Africa (Greenwood 1984; Hardy & Minton 1980; Jönsson 1988; Smit & Piersma 1989; Tucker & Heath 1994).

In Europe, major concentrations are found in winter in the UK, Ireland, France, The Netherlands and Germany (Cramp & Simmons 1983; Tucker & Heath 1994). Their distribution in winter is essentially coastal, but especially in the Mediterranean basin, they also occur at inland wetlands.

After Lapwings, Dunlins are the most numerous wader in the UK in winter and are found on estuaries and open coasts throughout the country. They occur in particularly high densities in estuaries (Davidson *et al.* 1991), and several important sites are on eastern or south-eastern coasts: the Humber Flats, Marshes and Coast, The Wash, the Stour and Orwell Estuaries, the Blackwater Estuary and the Medway Estuary and Marshes. Other sites lie in the north-west of England and eastern Wales: the Dee Estuary, the Mersey Estuary, the Ribble and Alt Estuaries, and Morecambe Bay, the others being the Severn Estuary and Chichester and Langstone Harbours. A peak population of 507,169 Dunlin was recorded in Great Britain in the winter of 1998/99, with a maximum of only 18,883 in Northern Ireland (Pollitt *et al.* 2000).

Dunlin are highly site-faithful and move little between wintering areas either within or between years (Clark 1983; Symonds *et al.* 1984).

4. Population structure and trends

Nine biogeographical populations of Dunlin have been described (Rose & Scott 1997). Of these, four occur in Europe. The North Siberia/Europe/West Africa population of *C. a. alpina* comprises most non-breeding birds in Europe (and UK) and is currently estimated at 1,373,000 individuals. Iceland/Greenland breeding *C.a. schinzii* winter mainly in West Africa, migrating through Britain and Ireland en route, and are estimated to number 800,000 individuals. The temperate population of *C.a. schinzii* breeds in Britain and Ireland (on peatlands) and around the Baltic (on saltmarshes and wet grasslands). The population is estimated at 21,000 individuals. The small north-west Greenland population of *C. a. arctica* numbers around 15,000 individuals and is believed to winter in West Africa and migrate through Britain and Ireland in spring and autumn.

Over 90% of Dunlin wintering in the UK occur on estuaries (Cayford & Waters 1996) and the species is thus well monitored by the Wetland Bird Survey (WeBS). Long-term indices for the species in the UK indicate that numbers fell by almost 50% between the mid-1970s and mid-1980s, but they have since partially recovered (Pollitt *et al.* 2000; Pr• s-Jones *et al.* 1994). Austin *et al.* (2000) reveal that numbers have increased rapidly in south and south-east England, but that this change has been countered by declines in south-west England, Wales and north-west England.

A British non-breeding total of 532,000 was estimated for the period 1987/88–1991/92 using WeBS data and information from non-estuarine shores from the 1984/85 Winter Shorebird Count amended for probable population change (Cayford & Waters 1996; Moser & Summers 1986). This figure represents 39% of the estimated biogeographic population of *C. a. alpina*. A further 125,000 are estimated to winter in Ireland (9% of the biogeographic population). Peak numbers recorded on sites covered by the Irish Wetland Bird Survey fluctuated between 75,264 and 98,570 in the years between 1994/95 and 1997/98 (Colhoun 2000).

The *C. a. alpina* population as a whole is estimated to have fluctuated between 0.9 and 1.5 million wintering birds since 1970 (Rösner 1997). Fluctuations may be linked to annual changes in breeding productivity (*e.g.* Gromadzka 1998). In the UK, the spread of Common Cord-grass *Spartina anglica* on upper mud-flats has led to a loss of habitat on a number of estuaries and this has been linked to local declines (Goss-Custard & Moser 1988). Because of earlier declines, the wintering populations of Dunlin in Europe are considered vulnerable and the species listed amongst those of European Conservation Concern (Tucker & Heath 1994).

5. Protection measures for population in UK

SPA suite

In the non-breeding season, the UK's SPA suite for Dunlin supports, on average, 420,758 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 78% of the British non-breeding population, and about 7% of the all-Ireland population. The suite holds about 30% of the international flyway population and comprises 38 sites where Dunlin (non-breeding) has been listed as a qualifying species (Table 6.67b.1).

6. Classification criteria

All 12 sites in the UK that support more than 1% of the international population of Dunlin were considered under Stage 1.2, and all were selected after consideration of Stage 2

judgements (Table 6.67b.1). A further 26 sites were considered and selected under Stage 1.3 (see section 5.3), with Dunlin identified as an important component of non-breeding waterbird assemblages.

The sites within the suite are distributed throughout the range of the non-breeding Dunlin population in the UK, from sites in Northern Ireland and south Wales, to the Moray Basin in northern Scotland, to sites along the south, east and west coasts of England. All sites are multi-species SPAs, of importance also for a range of other waterbirds. There is a long recorded history of occupancy at most of these sites (Prater 1981).

As the selection of sites under Stages 1.2 and 1.3 resulted in a suite which gives comprehensive coverage of the population and range of non-breeding Dunlin in the UK, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for non-breeding Dunlin SPA suite

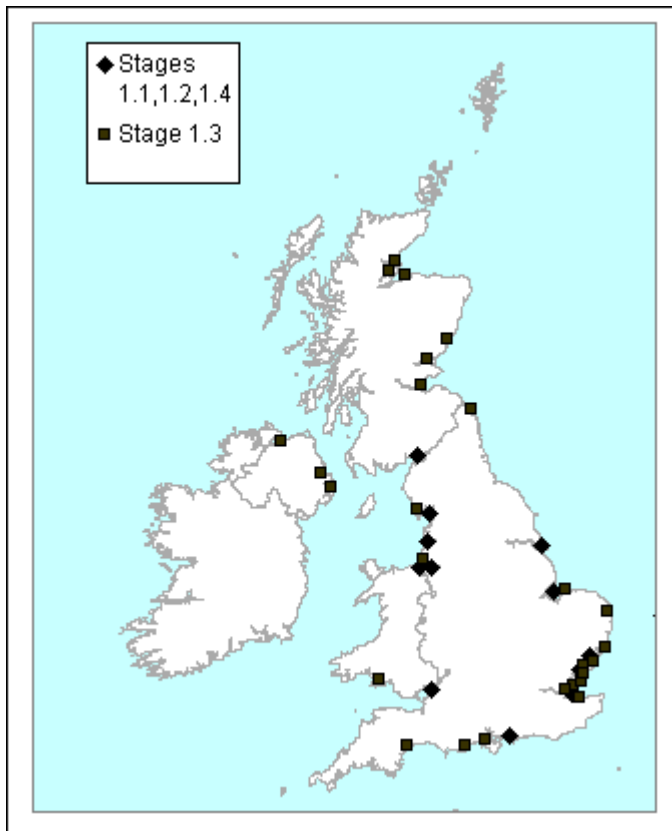


Table 6.67b.1 – SPA suite

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Alde-Ore Estuary	4,371	0.3	0.8	1.3
Belfast Lough	1,619	0.1	1.3 (Ire)	1.3
Benfleet and Southend Marshes	11,372	0.8	2.1	1.3
Blackwater Estuary	33,267	2.4	6.3	1.2

Site name	Site total	% of biogeographical population	% of national population	Selection stage
Breydon Water	2,870	0.2	0.5	1.3
Burry Inlet	6,242	0.5	1.2	1.3
Chichester and Langstone Harbours	44,294	3.2	8.3	1.2
Colne Estuary	11,065	0.8	2.1	1.3
Cromarty Firth	3,384	0.3	0.6	1.3
Dengie	7,838	0.6	1.5	1.3
Dornoch Firth and Loch Fleet	4,462	0.3	0.8	1.3
Duddon Estuary	11,216	0.8	2.1	1.3
Exe Estuary	5,740	0.4	1.1	1.3
Firth of Forth	10,033	0.7	1.9	1.3
Firth of Tay and Eden Estuary	5,479	0.4	1.0	1.3
Foulness	9,529	0.7	1.8	1.3
Hamford Water	6,618	0.5	1.2	1.3
Humber Flats, Marshes and Coast	23,605	1.7	4.4	1.2
Lindisfarne	7,703	0.6	1.5	1.3
Lough Foyle	5,606	0.4	4.5 (Ire)	1.3
Medway Estuary and Marshes	25,936	1.9	4.9	1.2
Mersey Estuary	44,300	3.2	8.3	1.2
Mersey Narrows and North Wirral Foreshore	4,069	0.3	0.8	1.3
Montrose Basin	2,244	0.2	0.4	1.3
Moray and Nairn Coast	2,689	0.2	0.5	1.3
Morecambe Bay	52,671	3.8	9.9	1.2
North Norfolk Coast	4,121	0.3	0.8	1.3
Poole Harbour	6,083	0.4	1.1	1.3
Ribble and Alt Estuaries	39,952	2.9	7.5	1.2
Severn Estuary	44,624	3.3	8.4	1.2
Solent and Southampton Water	13,210	1.0	2.5	1.3
Stour and Orwell Estuaries	23,940	1.7	4.5	1.2
Strangford Lough	5,317	0.4	4.3 (Ire)	1.3
Thames Estuary and Marshes	11,184	0.8	2.1	1.3
The Dee Estuary	22,479	1.6	4.2	1.2
The Swale	12,394	0.9	2.3	1.3
The Wash	35,620	2.6	6.7	1.2
Upper Solway Flats and Marshes	14,566	1.06	2.74	1.2

TOTALS	420,758 (in January)	30.1%	77.8% 6.6% (Ire)
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