A6.64 Knot *Calidris canutus*

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 (winter)** Unfavourable conservation status (**localised in winter**) 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
GB	291,000	2,900	242,039 (84% of GB total)
Ireland	37,500	375	3,863 (10% of all-Ireland total)
Biogeographic population	345,000	3,500	245,902 (70% of biogeographic population)

GB population source: Cayford & Waters 1996
All-Ireland population source: Way et al. *1993*
Biogeographic population source: Rose & Scott 1997

3. Distribution

Knots are found in many regions of the world, although they are highly localised within each region. The breeding distribution is circumpolar, with the species nesting in the high Arctic. After the breeding season, they migrate through temperate coastal regions in the northern hemisphere to wintering grounds in the southern hemisphere. They undertake some of the longest migrations of any bird species (Piersma & Davidson 1992b).

The species is polytypic. Each of the five sub-species occupies discrete breeding and winter areas. The nominate race *C. c. canutus* breeds on the coasts of the Taiymyr peninsula in the central Russian Arctic and migrates along the coast of north-west Europe to overwinter on the coasts of west and southern Africa (Piersma *et al.* 1992; Lappo 1998). *C. c. islandica* breeds in northern Greenland and the east Canadian high Arctic, and migrates through Iceland and northern Norway to overwinter in Britain and around the North Sea (Davidson & Wilson 1992). The three remaining populations of *C. c. rogersi, roselaari* and *rufa* breed respectively in the east Russia Arctic, Alaska and the west Canadian Arctic respectively,

wintering in Australasia, central America and the southern part of South America (Piersma & Davidson 1992b).

Europe thus supports two sub-species of Knot. The Afro-Siberian Knot *C. c. canutus* migrates through coastal areas in spring and autumn. The Waddensea is of particular importance as a spring staging area prior to the flight to the breeding grounds in Siberia (Meltofte *et al.* 1994; Prokosch 1988), and small numbers also occur on southern and eastern British coasts.

The UK is of particular importance in winter for the Canadian/Greenland population of Knot *C. c. islandica.* These birds are concentrated almost wholly at just a few estuaries in the UK and around the southern North Sea, with about 90% occurring in Britain in 1993 (Davidson & Wilson 1992; Tucker & Heath 1994). The single most important site is The Wash holding about a quarter of the whole population of *C. c. islandica.*

Overwintering Knot are almost exclusively estuarine in the UK as elsewhere (Piersma 1994) and at favoured sites they occur at very high densities.

4. Population structure and trends

Although the overall European population of *C. c. islandica* is now defined as stable (Davidson in Tucker & Heath 1994), there was a large decline in the non-breeding population in the 1970s. This was attributed to a series of poor breeding seasons (Boyd 1992), but habitat changes and land claim at wintering sites were also instrumental (Smit & Piersma 1989). Despite subsequent recovery during the 1980s, numbers in the 1990s remain about 40% lower than during the early 1970s (Tucker & Heath 1994). By the end of the 1980s, the European Knot population was estimated at 345,000 birds (Smit & Piersma 1989) compared with 609,000 in the mid-1970s (Prater 1976).

Since the mid 1980s, there has been an increase of approximately 30% in the British non-breeding population of Knot (Cayford & Waters 1996), but this is thought to be largely due to redistribution of birds from The Netherlands and Germany, since the overall European population has remained largely unchanged over this time (Tucker & Heath 1994)

The treatment of counts of Knots in Britain for site identification and monitoring purposes is problematic, owing to the presence of the two separate populations that cannot be distinguished by observation in the field. Thus, counts in the spring and autumn may include birds from both the Canadian/Greenland (*C. c. islandica*) and Russian (*C. c. canutus*) breeding areas. Counts in mid-winter are more reliably attributed solely to *C. c. islandica.*

5. Protection measures for population in UK

SPA suite

In the non-breeding season, the UK's SPA suite for Knot supports, on average, 245,902 individuals (calculated using WeBS November 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 84% of the British population, about 10% of the all-Ireland population, and about 70% of the international flyway population. The suite comprises 25 sites at which Knot has been listed as a qualifying species (Table 6.64.1).

6. Classification criteria

All 18 sites in the UK that were known to support more than 1% of the international population of Knots were considered under Stage 1.2. All were selected after consideration of Stage 2 judgements. A further seven sites were considered and selected under Stage 1.3 (see section 5.3), with Knot an important component of the non-breeding waterbird assemblages at these localities.

The suite is distributed throughout the range of the population in the UK, from sites in Northern Ireland and Wales, to the Montrose Basin in eastern Scotland, and to sites on the east coast 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 Knot in the UK, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for Knot SPA suite

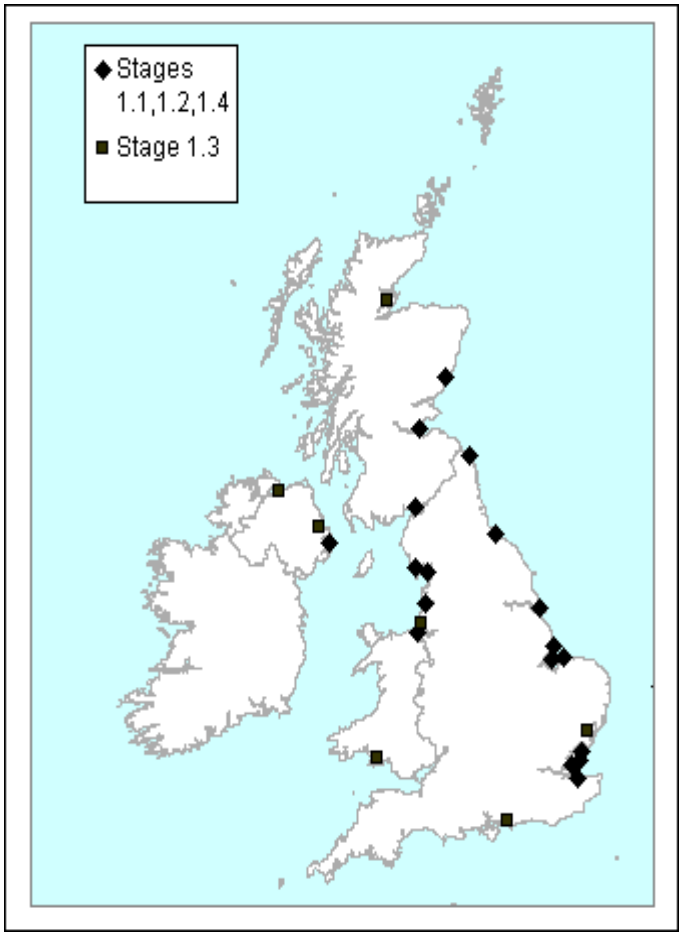

Table 6.64.1 – SPA suite

Site name	Site total	% of biogeo-graphical population	% of national population	Selection stage
Belfast Lough	444	0.1	1.2 (Ire)	1.3
Benfleet and Southend Marshes	8,850	2.6	3.0	1.2
Burry Inlet	2,153	0.6	0.7	1.3
Chichester and Langstone Harbours	2,875	0.8	1.0	1.3
Cromarty Firth	3,078	0.9	1.1	1.3
Dengie	8,393	2.4	2.9	1.2
Duddon Estuary	4,495	1.3	1.5	1.2
Firth of Forth	8,013	2.3	2.8	1.2
Foulness	40,429	11.7	13.9	1.2
Gibraltar Point	10,155	2.9	3.5	1.2
Humber Flats, Marshes and Coast	33,848	9.8	11.6	1.2
Lindisfarne	3,827	1.1	1.3	1.2
Lough Foyle	441	0.1	1.2 (Ire)	1.3
Mersey Narrows and North Wirral Foreshore	3,300	0.9	1.1	1.3
Montrose Basin	4,500	1.3	1.6	1.2
Morecambe Bay	29,426	8.5	10.1	1.2
North Norfolk Coast	10,801	3.1	3.7	1.2
Ribble and Alt Estuaries	57,865	16.8	19.9	1.2
Stour and Orwell Estuaries	3,293	1.0	1.1	1.3
Strangford Lough	8,723	2.5	23.3 (Ire)	1.2
Teesmouth and Cleveland Coast	4,190	1.1	1.3	1.2
The Dee Estuary	21,553	6.2	7.4	1.2
The Swale	5,582	1.6	1.9	1.2
The Wash	186,892	54.2	64.2	1.2
Upper Solway Flats and Marshes	12,271	3.6	4.2	1.2

TOTALS	245,902 (in November)	70.3%	83.5% 10.3% (Ire)