A6.15 Bewick's Swan *Cygnus columbianus bewickii*

1. Status in UK

Biological status		Legal status		Conservation status	
Breeding		Wildlife and Countryside Act 1981	**General Protection** **Schedule 1(1)**	Species of European Conservation Concern	**SPEC 3 (winter)** Unfavourable conservation status (**vulnerable – in winter**) but not concentrated in Europe
Migratory	✔	Wildlife (Northern Ireland) Order 1985	**General Protection** **Schedule 1(1)**	(UK) Species of Conservation Importance	**Table 2**
Wintering	✔	EC Birds Directive 1979	**Annex I** **Migratory**	All-Ireland Vertebrate Red Data Book	

2. Population data

	Population sizes (individuals)	Selection thresholds	Totals in species' SPA suite
GB	7,200	70	6,937 (99% of GB total)
Ireland	2,500	50 (see section 5.1.2 for rationale)	136 (5% of all-Ireland total)
Biogeographic population	17,000	170	7,072 (42% of biogeographic population)

GB population source: Kirby 1995a
Ireland population source: Way et al. *1993*
Biogeographic population source: Rose & Scott 1997

3. Distribution

Bewick's Swan is the Palearctic sub-species of *Cygnus columbianus*, a species which has a Holarctic breeding range extending through Alaska, northern Canada and Arctic Russia, and wintering south to the USA, north-west Europe, Caspian Sea, China and Japan (Scott & Rose 1996). Two sub-species have been identified. The nominate *C. c. columbianus* (the Tundra Swan) occurs in North America. The sub-species *C. c. bewickii* (Bewick's Swan) breeds on Arctic tundra across the northern Russian Palearctic, from the Kanin Peninsula to Kolyuchin Bay in the Chukchi Sea (Rees 1997). *C. c. jankowski*, which occurs in eastern Asia, was also previously considered to be a sub-species but recent evidence suggests these birds are of the race *bewickii* (Rees *et al.* 1997a).

The main European wintering grounds of Bewick's Swan are in lowland areas of northern Europe, from Denmark, through the Low Countries to northern France, Britain and Ireland. Smaller numbers occur in the Camargue, southern France and the south Caspian region. In Britain, the species has a southerly distribution during the winter, with by far the largest concentrations in eastern England, especially the Nene and Ouse Washes. Smaller flocks occur in western England with relatively small numbers in Wales. In Northern Ireland, the

only flocks of note occur at Loughs Foyle, Neagh and Beg. This species shows a high level of winter site fidelity in the UK (Rees 1987). Furthermore, movements between sites within a given winter are infrequent (Rees & Bacon 1996), although such movements can occur, especially in response to severe weather conditions.

Bewick's Swans winter on shallow freshwater lakes, marshes or slow-moving rivers near or adjacent to extensive grasslands liable to flooding (Rees *et al.* 1997b; Rees 1990). In Ireland, they feed predominantly on permanent wet grassland and, in the past, brackish coastal lagoons (Kennedy *et al.* 1954). In recent decades this species has increasingly taken to foraging on agricultural land, especially waste root crops, grain stubbles and winter cereals (MacMillan 1969; Merne 1972; Owen & Cadbury 1975; Rees *et al.* 1997b). In general, they feed by day and return to wetland areas to roost overnight. They are highly gregarious and often occur in flocks of several hundreds.

4. Population structure and trends

Two populations of *C. c. bewickii* have been identified: a large population of 17,000 individuals that breeds in north-east Europe and north-west Siberia and winters in north-west Europe, and a much smaller population, approximately 500 individuals, which breeds further east and winters in the Caspian (Rose & Scott 1997).

The trend for the population of Bewick's Swans wintering in north-west Europe indicates that there was a marked increase in the population between 1974 and 1994, with slight evidence of a decline since the mid-1990s (Beekman 1997; Delany *et al.* 1999). In the mid-1970s, the population was thought to comprise 9,000-10,000 individuals (Mullie & Porter 1977) rising to 17,000 by the mid-1980s (Monval & Pirot 1989). A dramatic increase occurred during the 1980s; 25,800 birds were recorded in January 1990 and 29,000 in January 1995 (Beekman 1997). The reasons for this increase are unknown but may have been related to increased survival rates or emigration from the eastern population. Productivity (judged from the numbers of juveniles occurring in wintering areas) was extremely variable during the period of increase and was therefore unlikely to have been responsible.

During the 19th and early 20th centuries, Bewick's Swan was rare in England and Wales but occurred in relatively high numbers in north-west Scotland, particularly in the Outer Hebrides and Tiree (Owe*n et al.* 1986). In the 1930s, numbers began to rise in England and decline in Scotland as the migration route shifted southwards. It is thought that cold-weather influxes of birds in the late 1930s and mid-1950s (Nisbet 1959) helped establish England as a regular wintering area. The Scottish population dwindled to almost nothing until a small wintering flock started to over-winter at Caerlaverock, on the north shore of the Solway, during the mid-1950s (Rees & Bowler 1997).

Numbers of Bewick's Swans have increased at the Ouse Washes since the 1940s when only a small number of birds wintered there. The flock grew to about 1,000 in the early 1970s and numbers have continued to climb; around 5,000 birds now winter at this site making it the key wintering area in Britain. There is now some interchange between birds at this site and those at the nearby Nene Washes. Population increases at the Ouse Washes are largely due to the establishment of RSPB and WWT refuges during the late 1960s and early 1970s. These sites are characterised by low levels of disturbance and supplementary feeding at some sites.
Fewer Bewick's Swans cross the North Sea from the continent during mild winters and this probably explains recent declines in the numbers visiting Britain (Cranswick *et al.* 1999) and may also be responsible for the decline in numbers overwintering in Ireland in recent decades (Colhoun 2000).

5. Protection measures for population in the UK

SPA suite

In the non-breeding season, the UK's SPA suite for Bewick's Swan supports, on average, 7,072 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 99% of the British population, about 5% of the all-Ireland population, and about 42% of the international flyway population. The suite comprises 15 sites where Bewick's Swan has been listed as a qualifying species (Table 6.15.1).

WeBS counts of swans at many of the sites selected may often include numbers in surrounding areas of intensively managed farmland outwith the SPA boundary. This highlights the continuing need to manage these areas in a way that is sympathetic to the needs of the swans.

6. Classification criteria

All sites in the UK that were known to support more than 1% of the national population were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements.

The sites within the suite are distributed throughout the winter range of the population in the UK, from sites in Northern Ireland, across England from sites in Lancashire, to the east and south coasts of England. Most sites are multi-species SPAs, of importance also for a range of other waterbirds, although Walmore Common has been selected solely for its importance for Bewick's Swans. There is a very long recorded history of occupancy at many of these sites, particularly the Ouse Washes (Nisbet 1959; Boyd in Atkinson-Willes 1963).

As the selection of sites under Stage 1.1 resulted in a suite of SPAs which includes the main population centres of Bewick's Swans throughout their UK distribution, it was not considered necessary to select additional sites using Stage 1.4.

Distribution map for Bewick's Swan SPA suite

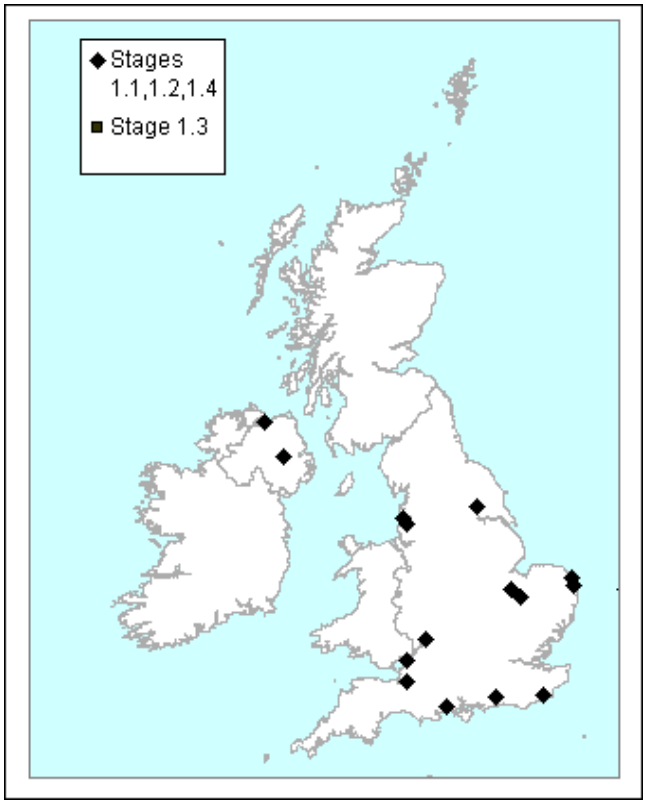

Table 6.15.1 – SPA suite

Site name	Site total	% of biogeo-graphical population	% of national population	Selection stage
Arun Valley	115	0.7	1.6	1.1
Avon Valley	135	0.8	1.9	1.1
Breydon Water	391	2.3	5.4	1.1
Broadland	320	1.9	4.4	1.1
Dungeness to Pett Level	179	1.1	2.5	1.1
Lough Foyle	78	0.5	3.1 (Ire)	1.1
Lough Neagh and Lough Beg	136	0.8	5.4 (Ire)	1.1
Lower Derwent Valley	72	0.4	1.0	1.1
Martin Mere	449	2.6	6.2	1.1
Nene Washes	1,718	10.1	23.9	1.1
Ouse Washes	4,639	27.3	64.4	1.1
Ribble and Alt Estuaries (Phase 2)	229	1.4	3.2	1.1
Severn Estuary	280	1.7	3.9	1.1
Somerset Levels and Moors	191	1.1	2.7	1.1
Walmore Common	104	0.6	1.4	1.1

TOTALS	7,072 (in January)	41.6%	99.1% 5.4% (Ire)