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## Glossary

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The terms listed below are generally restricted to those that have been adopted specifically for use within WeBS or more widely for monitoring.

**1% criterion** The criterion identifies sites as being of *international importance* if at least 1% of the *waterbirds* of a particular migratory flyway or population regularly make use of a site during their annual cycle. The term thus relates to the proportion (1%) that is used as a criterion of site selection. First used in the Ramsar Convention, the 1% criterion is used widely in assessment of site importance.

**1% threshold** This logically derives from the *1% criterion* and relates to the number of birds that are used as the nominal 1% of the population for the purposes of site selection. Thus, an international population of 75,215 Shelduck has a derived 1% threshold (adopting rounding conventions) of 750.

**African-Eurasian Migratory Waterbird Agreement (AEWA)** An independent international treaty developed under the Convention on the Conservation of Migratory Species of Wild Animals (*'Bonn Convention'*). Parties to the Agreement are called upon to engage in a wide range of conservation actions addressing key issues such as species and habitat conservation, management of human activities, research and monitoring, education and information, and implementation.

**All-Ireland** Comprises the whole island of Ireland (Northern Ireland and the Republic of Ireland).

**Autumn** For waders, autumn comprises July to October inclusive. Due to differences in seasonality between species, a strict definition of autumn is not used for wildfowl.

**British Trust for Ornithology (BTO)** The BTO is a well-respected organisation, combining the skills of professional scientists and volunteer birdwatchers to carry out research on birds in all habitats and throughout the year. Data collected by the various surveys form the basis of extensive and unique databases, which enable the BTO to objectively advise conservation bodies,

government agencies, planners and scientists on a diverse range of issues involving birds.

**Complex site** A *WeBS site* that consists of two or more *WeBS sectors*.

**Core Counts** The fundamental WeBS counts that monitor all types of wetlands throughout the UK once per month on, or as near as possible to, pre-selected *priority dates*. Used to determine population estimates and trends and identify important sites.

**Great Britain** The countries of England Scotland and Wales (excludes the Channel Isles and the Isle of Man).

**Incomplete counts** When presenting counts of an individual species, a large proportion of the number of birds was suspected to have been missed, *e.g.* due to part coverage of the site or poor counting conditions, or when presenting the total number of birds of all species on the site, a significant proportion of the total number was missed.

**I-WeBS** An independent but complementary scheme operating in the Republic of Ireland to monitor non-breeding *waterbirds*, organised by BirdWatch Ireland, the National Parks and Wildlife Service (Ireland) and The *Wildfowl & Wetlands Trust*.

**Joint Nature Conservation Committee (JNCC)** JNCC is the statutory body constituted by the Environmental Protection Act 1990 to be responsible for research and advice on nature conservation at both UK and international levels. The committee is established by Natural England, Scottish Natural Heritage and the Countryside Council for Wales, together with independent members and representatives from the Countryside Commission and Northern Ireland, and is supported by specialist staff.

**Local Organiser** Person responsible for coordinating counters and counts at a local

level, normally a county or large estuary, and the usual point of contact with the *WeBS office*.

**Low Tide Counts (LTC)** WeBS counts made at low tide to assess the relative importance of different parts of individual estuaries as feeding areas for intertidal *waterbirds*.

**Priority date** Pre-determined dates published by the *WeBS Office* to aid coordination of surveys. Counters are asked to count on, or as near as possible to, priority dates to minimise the risk of missing birds or double counting.

**Royal Society for the Protection of Birds (RSPB)** The RSPB is the charity that takes action for wild birds and the environment in the UK. The RSPB is the national BirdLife partner in the UK.

**Spring** For waders, spring comprises April to June inclusive. Due to differences in seasonality between species, a strict definition of spring is not used for wildfowl.

**United Kingdom** *Great Britain* and Northern Ireland (excludes the Channel Isles and the Isle of Man).

**Waterbirds** WeBS follows the definition adopted by *Wetlands International*. This includes a large number of families, those occurring regularly in the UK being divers, grebes, cormorants, herons, storks, ibises and spoonbills, wildfowl, cranes, rails, waders, gulls and terns.

**WeBS count unit** The area/boundary within which a count is made. The generic term for *WeBS sites*, *WeBS sub-sites* and *WeBS sectors*.

**WeBS Office** Main administrative centre for the day-to-day running of WeBS and main point of contact for information or data pertaining to WeBS (see *Contacts* section).

**WeBS sector** The unit of division of large *sites* into areas that can be counted by one

person in a reasonable time period. They are often demarcated by geographic features to facilitate recognition of the boundary by counters. The finest level at which data are recorded.

**WeBS site** A biologically meaningful area that represents a discrete area used by *waterbirds* such that birds regularly move within but only occasionally between sites. The highest level at which count data are stored.

**WeBS sub-site** A grouping of *sectors* within a *site* to facilitate coordination. In most cases, sub-sites also relate to biologically meaningful units for describing *waterbird* distribution.

**WeBS Year** Defined as July to June inclusive the WeBS Year is centred on the time when most *waterbird* species are present in their largest number, during *winter*. Counts during *autumn* passage and *spring* passage the following calendar year are logically associated with the intervening *winter*.

**Wetlands International** A leading global non-profit organisation whose mission is to sustain and restore wetlands, their resources and biodiversity for future generations through research, information exchange and conservation activities, worldwide.

**Wildfowl & Wetlands Trust (WWT)** Founded by Sir Peter Scott in 1946, WWT is the largest international wetland conservation charity in the UK. WWT works to conserve wetlands and their biodiversity, focusing particularly on waterbirds and their habitats, and seeks to raise awareness of the value of wetlands, the threats they face and the actions needed to save them. WWT has nine visitor centres throughout the UK.

**Winter** For waders, winter comprises November to March inclusive. Due to differences in seasonality between species, a strict definition of winter is not used for wildfowl.

## Appendices

### APPENDIX 1. INTERNATIONAL AND NATIONAL IMPORTANCE

Any site recognised as being of international ornithological importance is considered for classification as a Special Protection Area (SPA) under the EC Directive on the Conservation of Wild Birds (EC/79/409), whilst a site recognised as an internationally important wetland qualifies for designation as a Ramsar site under the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Criteria for assessing the international importance of wetlands have been agreed by the Contracting Parties to the Ramsar Convention on Wetlands of International Importance (Ramsar Convention Bureau 1988). Under criterion 6, a wetland is considered internationally important if it regularly holds at least 1% of the individuals in a population of one species or subspecies of waterbird, while criterion 5 states that any site regularly supporting 20,000 or more waterbirds also qualifies. Britain and Ireland's wildfowl belong, in most cases, to the northwest European population and the waders to the east Atlantic flyway population (Wetlands International 2006).

A wetland in Britain is considered nationally important if it regularly holds 1% or more of the estimated British population of one species or subspecies of waterbird, and in Northern Ireland important in an all-Ireland context if it holds 1% or more of the estimated all-Ireland population.

The 1% thresholds for British, all-Ireland and international waterbird populations, where known, are listed in Table A1. Thus, any site regularly supporting at least this number of

birds potentially qualifies for designation under national legislation, or the EC Birds Directive or Ramsar Convention. The international population for each species and subspecies is also specified in the table. However, it should be noted that, where 1% of the national population is less than 50 birds, 50 is normally used as a minimum qualifying threshold for the designation of sites of national or international importance.

It was agreed at the meeting of the Ramsar Convention in Brisbane that population estimates will be reviewed by Wetlands International every three years and 1% thresholds revised every nine years (Rose & Stroud 1994; Ramsar Resolution VI.4). 1% thresholds have not been derived for introduced species since protected sites would not be identified for these birds.

Sources of qualifying levels represent the most up-to-date figures following recent reviews: for wildfowl in Britain see Kershaw & Cranswick (2003); for waders in Britain see Rehfisch *et al.* (2003); for gulls in Britain see Burton *et al.* (2003); for all-Ireland importance for divers see Danielsen *et al.* (1993) and for other waterbirds see Whilde (*in prep.*) cited in Way *et al.* (1993). International criteria follow Wetlands International (2006).

It should be noted that for some populations, where the British total is the international total, the precise figure given for the estimates may differ because of different rounding conventions applied in the relevant publications.

Table A1. 1% thresholds for national and international importance

	Great Britain	all-Ireland	International	Subspecies/Population
Mute Swan: <i>British</i>	375	n/a	320	Britain
<i>Irish</i>	n/a	100	100	Ireland
Bewick's Swan	81	*25	200	<i>bewickii</i> , NW Europe (non-br)
Whooper Swan	57	100	210	Iceland (br)
Bean Goose: <i>Taiga</i>	*4	+	800	<i>fabalis</i>
Pink-footed Goose	2,400	+	2,700	Greenland, Iceland (br)
European White-fronted Goose	58	+	10,000	<i>albigrons</i> , Baltic-North Sea
Greenland White-fronted Goose	209	140	270	<i>flavirostris</i>
Greylag Goose: <i>Iceland</i>	819	*40	870	<i>anser</i> , Iceland (br)
<i>Hebrides/N Scotland</i>	90	n/a	100	<i>anser</i> , NW Scotland
Barnacle Goose: <i>Greenland</i>	450	75	560	E Greenland (br)
<i>Svalbard</i>	220	+	270	Svalbard (br)

Table A1. continued

	Great Britain	all-Ireland	International	Subspecies/Population
Dark-bellied Brent Goose	981	+	2,000	<i>Bernicla</i> , W Siberia (br)
Light-bellied Brent Goose: <i>Canada</i>	+	200	260	<i>hrota</i> , Ireland (non-br)
<i>Svalbard</i>	*30	+	70	<i>hrota</i> , Svalbard, N Greenland (br)
Shelduck	782	70	3,000	NW Europe (br)
Wigeon	4,060	1,250	15,000	NW Europe (non-br)
Gadwall	171	+	600	<i>strepera</i> , NW Europe (br)
Teal	1,920	650	5,000	NW Europe (non-br)
Mallard	3,520	500	**20,000	<i>platyrhynchos</i> , NW Europe (non-br)
Pintail	279	60	600	NW Europe (non-br)
Garganey	+	+	**20,000	W Africa (non-br)
Shoveler	148	65	400	NW & C Europe (non-br)
Red-crested Pochard	+	+	500	C Europe & W Mediterranean
Pochard	595	400	3,500	NE & NW Europe (non-br)
Tufted Duck	901	400	12,000	NW Europe (non-br)
Scaup	76	*30	3,100	<i>marila</i> , W Europe (non-br)
Eider	730	*20	12,850	<i>mollissima</i> , NW Europe <sup>1</sup>
Long-tailed Duck	160	+	**20,000	W Siberia, N Europe (br)
Common Scoter	500	*40	16,000	<i>nigra</i>
Velvet Scoter	*30	+	10,000	<i>fusca</i> , Baltic, W Europe (non-br)
Goldeneye	249	110	11,500	<i>clangula</i> , NW & Central Europe (non-br)
Smew	*4	+	400	NW & C Europe (non-br)
Red-breasted Merganser	98	*20	1,700	NW & C Europe (non-br)
Goosander	161	+	2,700	<i>merganser</i> , NW Europe <sup>2</sup>
Red-throated Diver	49	*10	3,000	NW Europe (non-br)
Black-throated Diver	*7	*1	3,750	<i>arctica</i>
Great Northern Diver	*30	?	50	NW Europe (non-br)
Little Grebe	78	?	4,000	<i>ruficollis</i>
Great Crested Grebe	159	*30	3,600	<i>cristatus</i>
Red-necked Grebe	*2	?	5,10	<i>grisegena</i> , NW Europe (non-br)
Slavonian Grebe	*7	?	55	<i>auritus</i> , NW Europe (large billed)
Black-necked Grebe	*1	?	2,200	<i>nigricollis</i> , Europe, N Africa
Cormorant	230	?	1,200	<i>carbo</i> , NW Europe
Shag	?	?	2,000	<i>aristotelis</i>
Little Egret	?	?	1,300	<i>garzetta</i> , W Europe, NW Africa
Grey Heron	?	?	2,700	<i>cinerea</i> , W Europe, NW Africa (br)
Moorhen	7500	?	**20,000	<i>chloropus</i> , Europe, N Africa (br)
Coot	1,730	250	17,500	<i>atra</i> , NW Europe (non-br)
Oystercatcher	3,200	500	10,200	<i>ostralegus</i> , Europe, NW Africa
Avocet	*35	+	730	W Europe (br)
Ringed Plover: <i>winter</i>	330	125	730	<i>hiaticula</i> , Europe & N Africa (non-br)
<i>passage</i>	300			
Golden Plover	2,500	2,000	9,300	<i>altifrons</i> , Iceland & Faeroes, E Atlantic <sup>3</sup>
Grey Plover	530	*40	2,500	E Atlantic (non-br)
Lapwing	**20,000	2,500	**20,000	Europe (br)
Knot	2,800	375	4,500	<i>islandica</i>
Sanderling: <i>winter</i>	210	*35	1,200	E Atlantic, W & S Africa (non-br)
<i>passage</i>	300			
Purple Sandpiper	180	*10	750	<i>maritima</i> , E Atlantic
Dunlin: <i>winter</i>	5,600	1,250	13,300	<i>alpina</i> , W Europe (non-br) <sup>4</sup>
<i>passage</i>	2,000			
Ruff	*7	+	?	W Africa (non-br)
Jack Snipe	?	250	?	NE Europe (br)
Snipe	?	?	**20,000	<i>gallinago</i> , Europe (br)
Woodcock	?	?	**20,000	Europe (br)
Black-tailed Godwit	150	90	470	<i>islandica</i>
Bar-tailed Godwit	620	175	1,200	<i>lapponica</i>
Whimbrel	+	+	6,800	<i>islandicus</i>
Curlew	1,500	875	8,500	<i>arquata</i>
Spotted Redshank	+	+	900	Europe (br)
Redshank	1,200	245	2,800	<i>britannica</i> <sup>5</sup>
Greenshank	*6	*9	2,300	Europe (br)
Green Sandpiper	?	?	17,000	Europe (br)
Common Sandpiper	?	?	17,500	N, W & C Europe (br)
Turnstone	500	225	1,500	<i>interpres</i> , NE Canada, Greenland (br)

Table A1. continued

	Great Britain	all-Ireland	International	Subspecies/Population
Little Gull	?	?	1,230	N, C & E Europe (br)
Black-headed Gull	19,000	?	**20,000	N & C Europe (br)
Common Gull	9,000	?	**20,000	<i>canus</i>
Lesser Black-backed Gull	500	?	5,500	<i>graellsii</i>
Herring Gull	4,500	?	5,900	<i>argentatus</i> <sup>6</sup>
Great Black-backed Gull	400	?	4,400	NE Atlantic
Kittiwake	?	?	**20,000	<i>tridactyla</i> , E Atlantic (br)
Sandwich Tern	?	?	1,700	<i>sandvicensis</i> , W Europe (br)
Common Tern	?	?	1,900	<i>hirundo</i> , S, W Europe (br)
Little Tern	?	?	490	<i>albifrons</i> , W Europe (br)
Black Tern	?	?	7,500	<i>niger</i>

? Population size not accurately known.

+ Population too small for meaningful figure to be obtained.

\* Where 1% of the British or all-Ireland wintering population is less than 50 birds, 50 is normally used as a minimum qualifying level for national or all-Ireland importance respectively.

\*\* A site regularly holding more than 20,000 waterbirds qualifies as internationally important by virtue of absolute numbers.

- 1 The degree of interchange of UK Eiders with birds on the continent is unclear, and although Wetlands International (2006) has recommended that birds in Britain and Ireland should be treated as a separate biogeographical population, a recent review of available data by DEFRA's SPA and Ramsar Scientific Working Group has found limited evidence to support this conclusion, and recommended that for site-selection purposes, British Eider continue to be considered as a component of the four groups of the Northwest European groups of the race *mollissima* with an international 1% threshold of 15,500. It is hoped that future genetic studies will help clarify the situation.
- 2 Although Wetlands International (2006) considers Goosanders breeding in Scotland, northern England and Wales to be a discrete population, a recent review of available data by DEFRA's SPA and Ramsar Scientific Working Group has found limited evidence to support this conclusion for the time being, and recommended that for site-selection purposes, British Goosanders continue to be considered as a component of the NW and C European population of Goosander, with an international 1% threshold of 2,700.
- 3 Three populations of Golden Plover listed by Wetlands International (2006) overlap in the UK in winter. Draft guidelines from Ramsar suggest that the largest of the three thresholds (*i.e.* that for *altifrons*, Iceland & Faeroes, E Atlantic) should be used for site-selection purposes.
- 4 Whilst several populations of Dunlin occur in the UK at different times of the year, most wintering birds are referable to the listed population.
- 5 Three populations of Redshank listed by Wetlands International (2006) overlap in the UK in winter: *totanus* E Atlantic (non-br), *robusta* and *britannica*. Most *totanus* winter outside the UK but the other populations are known to occur widely. Draft guidelines from Ramsar suggest that the larger of the two thresholds (*i.e.* that for *britannica*) should be used for site-selection purposes.
- 6 Two populations of Herring Gull overlap in the winter in the UK; *argentatus* and *argenteus*. Draft guidelines from Ramsar suggest that the larger of the two thresholds, *i.e.* that for *argentatus*, should be used for site-selection purposes.



## APPENDIX 2. LOCATIONS OF PRINCIPAL WeBS COUNT SITES

Table A2 provides details of principal WeBS sites that are mentioned in the Principal Sites table (Table 6.). Sites are listed alphabetically, with details of the Ordnance Survey 1-km square that the centre of the sites falls into. Numbers following Principal Core Count sites refer to the sites' location in Figure A1. Details of all sites covered by WeBS are available from the [www.bto.org/webs](http://www.bto.org/webs) or the WeBS Office, (see *CONTACTS*).

Table A2. Details for Principal Sites mentioned in Table 6. Numbers refer to the sites' location in figure A1.

Site	1-km sq						
Abberton Reservoir	TL9717	103	Kilconquhar Loch	NO4801	52	Morecambe Bay	SD4070 71
Alde Complex	TM4257	98	Killough Harbour	IJ5436	137	Nene Washes	TF3300 89
Alt Estuary	SD2903	77	Lake of Menteith	NN5700	37	North Norfolk Coast	TF8546 92
Arun Valley	TQ0314	121	Langstone Harbour	SU6902	127	North West Solent	SZ3395 130
Balnakeil Bay	NC3869	9	Lavan Sands	SH6474	81	Orchardton and	NX8151 65
Balnakiel Farm	NC3968	10	Lee Valley GPs	TL3807	115	Auchencairn Bays	
Balranald Nat Res	NF7169	22	Lindisfarne	NU1041	61	Orwell Estuary	TM2238 100
Beaulieu Estuary	SZ4297	129	Loch a' Phuill	NL9541	30	Ouse Washes	TL5394 90
Belfast Lough	IJ3983	141	Loch An Eilein	NL9843	29	Outer Ards Shoreline	IJ6660 139
Blackwater Estuary	TL9307	105	Loch Bee	NF7743	25	Pagham Harbour	SZ8796 122
Blyth Estuary	TM4675	97	Loch Bhasapoll	NL9746	28	Pegwell Bay	TR3563 111
Branahuie Saltings	NB4631	16	Loch Eye	NH8379	19	Pitsford Reservoir	SP7669 87
Breydon Water & Berney Marshes	TG4706	96	Loch Fleet Complex	NH7896	17	Poole Harbour	SY9988 131
Burry Inlet	SS5096	85	Loch Garten	NH9718	39	Portsmouth Harbour	SU6204 126
Cameron Reservoir	NO4711	51	Loch Gorm	NR2365	33	R Clyde: Carstairs to	NS9842 55
Carlingford Lough	IJ1814	135	Loch Gruinart Floods	NR2767	32	Thankerton	
Carmarthen Bay	SN2501	84	Loch Hempriggs	ND3447	14	Ribble Estuary	SD3825 75
Carsebreck & Rhynd Lochs	NN8609	38	Loch Ken	NX7168	68	R. Avon:	SU1410 124
Chew Valley Lake	ST5659	118	Loch Leven	NO1401	53	Fordingbridge to	
Chichester Harbour	SU7700	123	Loch Lomond	NS3599	36	Ringwood	
Cleddau Estuary	SN0005	83	Loch Mor: Baleshare	NF7962	24	R. Avon: Ringwood	SZ1499 128
Colne Estuary	TM0614	104	Loch of Boardhouse	HY2725	4	toChristchurch	
Cotswold Water Park (West)	SU0595	117	Loch of Harray	HY2915	7	R. Nith: Keltonbank	NX9774 62
Cromarty Firth	NH7771	20	Loch of Hundland	HY2926	3	toNunholm	
Crouch-Roach Est	TQ9895	107	Loch of Lintrathen	NO2754	47	River Tay - Haughs	NO1439 48
Deben Estuary	TM2942	99	Loch of Skail	HY2418	5	of Kercock	
Dee Estuary (England & Wales)	SJ2675	79	Loch of Skene	NJ7807	44	Rutland Water	SK9307 88
Dee Flood Meadows	SJ4059	80	Loch of Stenness	HY2812	8	Rye Harbour and	TQ9418 114
Dengie Flats	TM0302	106	Loch of Strathbeg	NK0758	41	Pett Level	
Dornoch Firth	NH7384	18	Loch of Swannay	HY3128	2	Severn Estuary	ST5084 119
Duddon Estuary	SD2081	70	Loch of Wester	ND3259	11	Severn Hams	SO8426 86
Dundrum Bay	IJ4135	136	Loch Paible	NF7268	23	Slains Lochs (Meikle	NK0230 42
Dungeness GPs	TR0619	113	Loch Riaghain	NM0347	27	and Sand and	
Dyfi Estuary	SN6394	82	Loch Scarmclate	ND1859	12	Cotehill)	
Eden Estuary	NO4719	50	Loch Spynie	NJ2366	40	Solway Estuary	NY1060 67
Exe Estuary	SX9883	133	Loch Watten	ND2256	13	Somerset Levels	ST4137 120
Fleet and Wey	SY6976	132	Lochs Davan & Kinord	NO4499	45	Southampton Water	SU4507 125
Forth Estuary	NT2080	54	Lough Foyle	IC5925	143	St Benet's Levels	TG3815 93
Hamford Water	TM2225	102	Loughs Neagh & Beg	IJ0475	142	Stour Estuary	TM1732 101
Hickling Broad	TG4221	94	Lower Derwent Ings	SE6939	72	Strangford Lough	IJ5460 140
Holburn Moss	NU0536	60	Lower Lough Erne	IH0960	144	Swale Estuary	TQ9765 110
Hornsea Mere	TA1947	73	Lower Teviot Valley	NT6725	57	Taw-Torridge Est	SS4731 134
Hule Moss	NT7149	58	Medway Estuary	TQ8471	109	Tay Estuary	NO4828 49
Humber Estuary	TA2020	74	Melbost Sands, Tong Saltings and Broad Bay (Lewis)	NB4534	15	Tees Estuary	NZ5528 69
Inner Firth of Clyde	NS3576	35	Mersehead RSPB Reserve	NX9255	63	Teviot Haughs	NT6925 56
Inner Moray and Inverness Firth	NH6752	21	Mersey Estuary	SJ4578	78	Thames Estuary	TQ7880 108
Island of Egilsay	HY4730	1	Middle Yare Marshes	TG3504	95	The Wash	TF5540 91
Isle of Coll	NM2055	26	Milldam and Balfour Mains Pools	HY4817	6	Tring Reservoirs	SP9113 116
Kentra Moss and Lower Loch Shiel	NM6668	31	Moine Mhor and Add Estuary	NR8293	34	Tweed Estuary	NT9853 59
			Montrose Basin	NO6958	46	Upper Lough Erne	IH3131 145
						Upper Quoile River	IJ4745 138
						Walland Marsh	TQ9824 112
						Wigtown Bay	NX4456 66
						WWT Caerlaverock	NY0565 64
						WWT Martin Mere	SD4214 76
						Ythan Estuary	NK0026 43

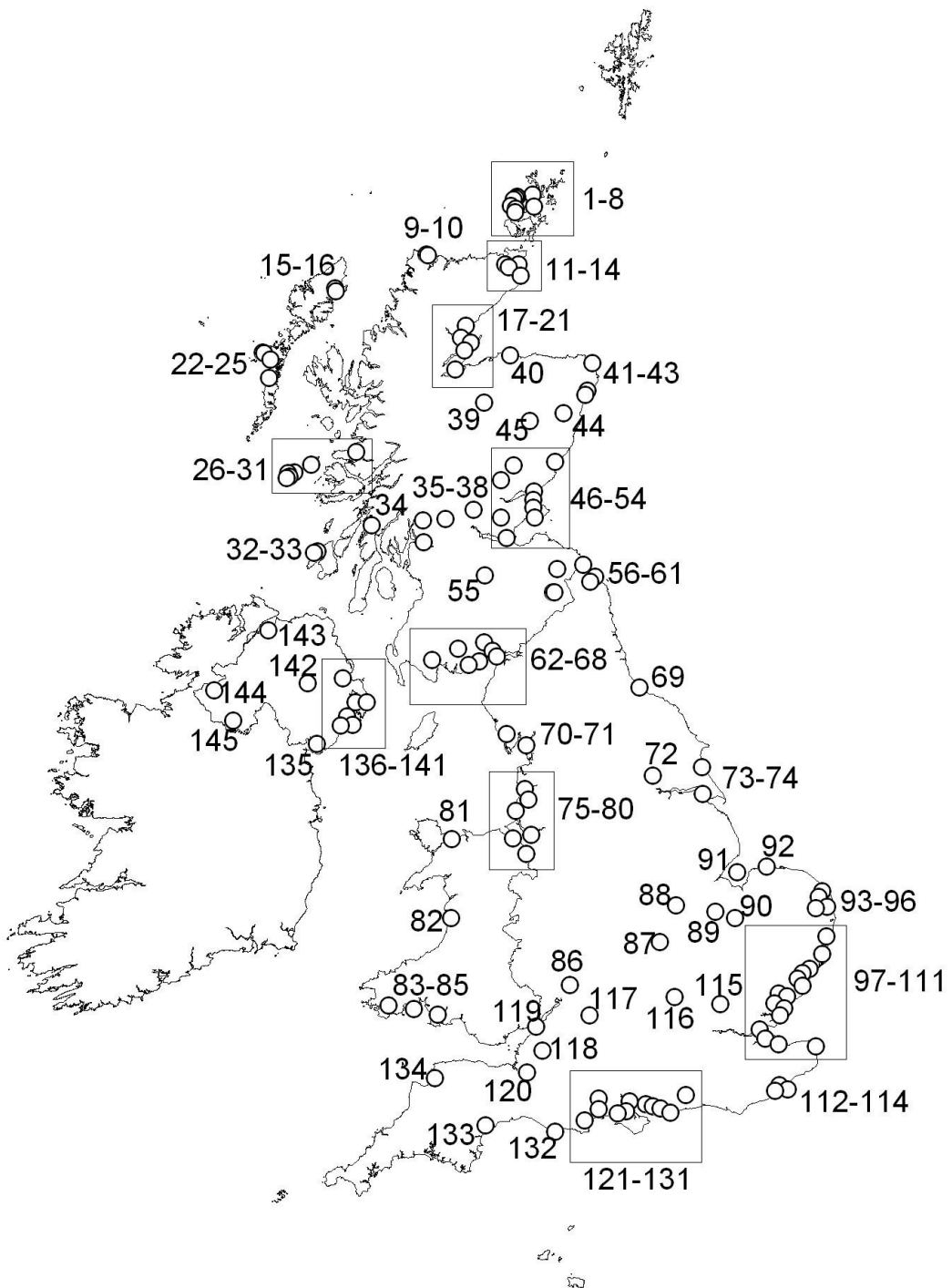


Figure A1. Locations of Core WeBS sites supporting more than 10,000 waterbirds or which support internationally important numbers of one or more waterbird species (see *PRINCIPAL SITES*). Numbers refer to sites listed in Table A2.