WeBS

GSMP

Waterbirds in the UK 2023/24

The annual report of the Wetland Bird Survey and the Goose & Swan Monitoring Programme

BTO Birds Science People

RSPB

JNCC

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WATERBIRDS IN THE UK 2023/24

The Wetland Bird Survey (WeBS) is the principal scheme for monitoring the UK's wintering waterbird populations, providing an important indicator of their status and the health of wetlands. The Goose & Swan Monitoring Programme (GSMP) monitors the abundance and breeding success of the UK's native geese and migratory swans during the non-breeding season. *Waterbirds in the UK 2023/24* is the 42nd annual report and comprises this summary report and data at: www.bto.org/webs-reporting

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THE WeBS PARTNERSHIP

WeBS is a partnership jointly funded by BTO, RSPB and JNCC, with fieldwork conducted by volunteers and previous support from WWT.

The permanent members of the WeBS Steering Committee in 2023/24 were Teresa Frost (BTO), Dawn Balmer (BTO), James Pearce-Higgins (BTO), Kirsi Peck (JNCC) and Simon Wotton (RSPB).

THE GSMP PARTNERSHIP

GSMP is a partnership, run by and jointly funded by BTO, JNCC and NatureScot with fieldwork conducted by both volunteer and professional surveyors.

The permanent members of the GSMP Steering Committee in 2023/24 were Teresa Frost (BTO), Neil Calbrade (BTO), Kirsi Peck (JNCC) and Jess Shaw (NatureScot).

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We are indebted to the time and skills of the thousands of WeBS and GSMP Counters who collected the data used in this report and to the invaluable efforts of the WeBS Local Organisers who are listed on the back cover.

The WeBS Local Organiser Advisory Committee (LOAC) (members listed on page 43) provided advice on behalf of Counters and Local Organisers. The BTO Information Systems team delivered essential technical assistance and continues to develop and provide assistance for WeBS Online and WeBS Report Online.

We are also grateful to the following for providing supplementary information, data inputting, proof-reading and particularly invaluable help in 2023/24: Deborah Newman, Viola Ross-Smith, Niall Burton, Dawn Balmer, Simon Wotton, Kirsi Peck and Royal Air Force Ornithological Society (RAFOS). Grateful thanks to all and apologies to anyone who has been inadvertently missed.

Report content, analysis and production was by Teresa Frost, Neil Calbrade, Gillian Birtles, Bridget Hiza, Emma Caulfield, Mark Hammond, Steve Pritchard, Steven Harrop, Alastair Feather and Ian Woodward.

The painting of the Eurasian Wigeon used on the cover of this report is by Wigtown Bay WeBS Local Organiser Paul Collin. All other artists and photographers are acknowledged on the pages of this report.

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Online Resources

More information, including site tables and trends for all regular WeBS species, is available online at: **www.bto.org/webs-reporting**

This summary report can be downloaded from the WeBS website at: **www.bto.org/webs-publications**

The online and summary outputs in conjunction constitute the report *Waterbirds in the UK 2023/24*

GREAT WHITE EGRET BY NEIL CALBRADE

CITATION

Calbrade, N.A., Birtles, G.A., Woodward, I.D., Feather, A., Hiza, B.M., Caulfield, E.B., Balmer, D.E., Peck, K., Wotton, S.R., Shaw, J.M. & Frost, T.M. 2025. *Waterbirds in the UK 2023/24: The Wetland Bird Survey and Goose & Swan Monitoring Programme*. BTO/RSPB/JNCC/NatureScot. Thetford.

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Waterbird headlines from the WeBS year

3,947 registered WeBS volunteers

Just a small selection of notable stories from 2023/24.

See all the numbers and trends at: **www.bto.org/webs-reporting**

Welcome to the 42nd Wetland Bird Survey (WeBS) report, Waterbirds in the UK 2023/24, which also includes results for the Goose & Swan Monitoring Programme (GSMP). 2023/24 saw another record number of participants in WeBS Core Counts, we received more key data for the Icelandic-breeding Goose Survey (IGC) than in 2022/23, and counters on some of our key estuaries, including Morecambe Bay, Firth of Forth and Mersey Estuary (see page 38–39) carried out Low Tide Counts. We also welcomed many new WeBS Core Count and IGC Local Organisers, joining the fantastic team we have around the country helping us coordinate surveys locally and supporting the volunteer networks who collect the data underpinning this report. We also welcomed a new member to the HQ team, Bridget Hiza, who is supporting the WeBS and GSMP national organisers Gillian Birtles and Neil Calbrade, and who helped put together this report.

Key stories from this report include more updates on the impacts of the avian influenza outbreak of 2021–2022 on migratory Barnacle Geese (page 37) and Mute Swan (page 24). The results of Naturalised Barnacle Goose census carried out in 2022/23 are reported on page 33, but there has been a decline in the 2023/24 index, and so annual monitoring through WeBS and tracking studies will help us learn more about this interesting population. We have updated the 1% international thresholds used in our reporting to those adopted at AEWA Meeting of Parties 8 (see page 32). These are based on the latest estimates of flyway populations. For example, the Black-tailed Godwit threshold for the *islandica* (Iceland/Western Europe) population has increased by 600 to 1,700 birds, so sites such as Exe Estuary (five-year site mean 1,586) and Ouse Washes (five-year site mean 1,567) will now be flagged as nationally rather than internationally important in the peaks table on the WeBS Report Online. Conversely, the Knot threshold has decreased by 2,000 to 3,300, so that Swale Estuary (five-year site mean 4,501), Forth Estuary (five-year site mean 3,709) and Strangford Lough (five-year site mean 3,702) will be flagged as internationally rather than nationally important.

We have just completed a major stock take of protected waterbirds on Special Protection Areas (SPAs) and Sites/Areas of Special Scientific Interest (SSSIs/ASSIs), WeBS Alerts, last carried out six years ago. An overview is given on pages 16–21 and detailed results and interpretation are available on the WeBS Report Online for feature species on individual sites – 300 combinations in England, 30 in Northern Ireland, 119 in Scotland and 23 in Wales. The number of Alerts are published as a separate Official Statistic for protected sites, complementary to the annual Official Statistic on waterbird trends from this report.

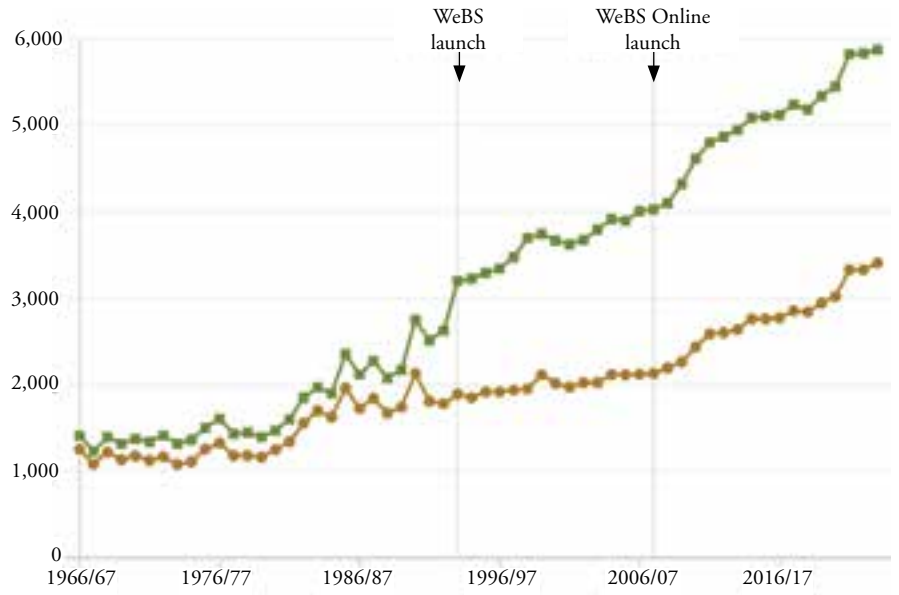
BIRDER COUNTING SWANS BY NEIL CALBRADE; KNOT BY ALLAN DREWITT/BTO; FORTH ESTUARY BY ANNE COTTON/BTO

WeBS Core Counts 2023/24 – in numbers

Core Counts were carried out on 5,877 WeBS sectors (count units) at 3,411 sites from July 2023 to June 2024.

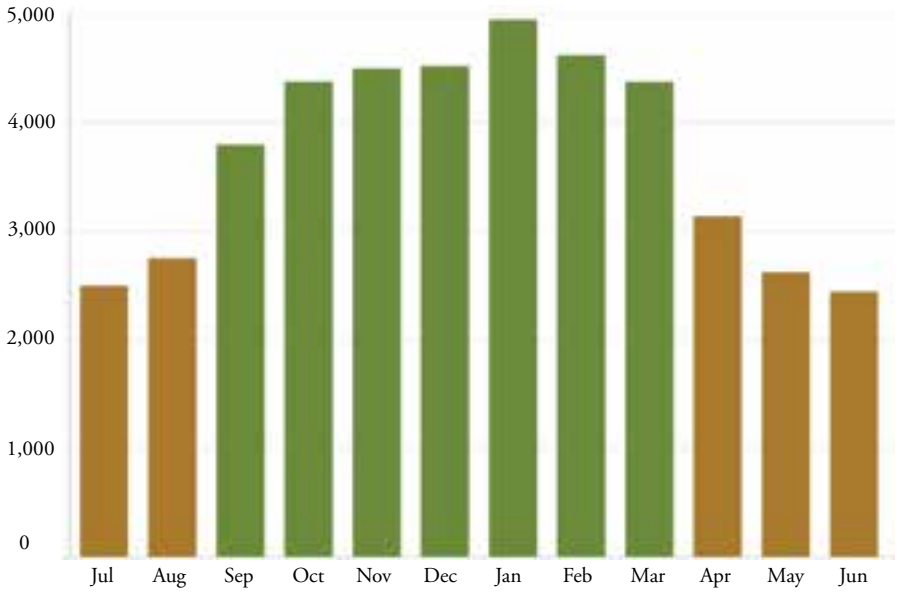
Not all Core Counts are linked to individual Counters in the WeBS Online database, but most are; 2,699 Counters named as the lead counter were associated with WeBS Core Count visits made in 2023/24. Including additional team members, the number of registered WeBS volunteers was 3,947.

There were 44,539 count visits, 70% in the core September–March period (green bars on lower graph).



▲ **Number of WeBS count sectors (green squares) and sites (gold circles) covered at least once annually 1966/67–2022/23.**

▼ **Number of WeBS Core Count visits in 2023/24 by month during the core winter period (green bars) and the rest of the year (gold bars).**



Core Count dates in 2023/24

2023	2024
9 July	14 January
20 August	11 February
17 September	10 March
15 October	7 April
19 November	12 May
17 December	9 June

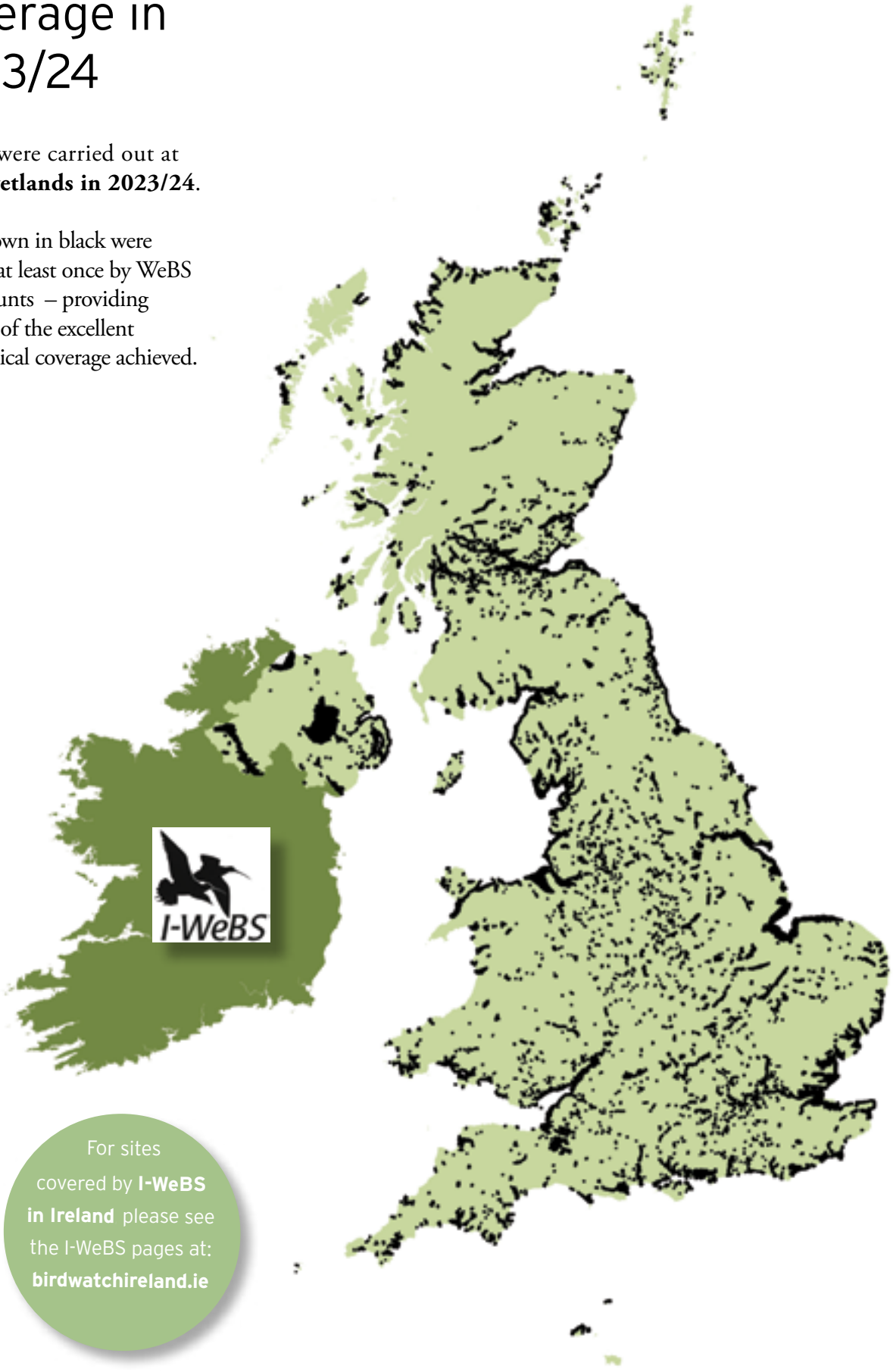
A new high of 3,411 WeBS sites were visited for the WeBS Core Count scheme in 2023/24.

CURLEW BY LIZ CUTTING/BTO

WeBS coverage in 2023/24

Counts were carried out at **3,411 wetlands in 2023/24**.

Areas shown in black were counted at least once by WeBS Core Counts – providing a picture of the excellent geographical coverage achieved.



For sites covered by **I-WeBS in Ireland** please see the I-WeBS pages at: **birdwatchireland.ie**

UK Low Tide Counts 2023/24

Eighteen UK estuaries were counted at low tide, generating important data about feeding areas.

The WeBS Low Tide Count scheme facilitates the collection of information about use of the UK's estuaries by waterbirds at low tide. The scheme has flourished since its inception in the winter of 1992/93, with all the major estuaries in the UK having been counted at least once since then. The scheme aims to monitor, assess and regularly update information on the relative importance of intertidal feeding areas of UK estuaries for wintering waterbirds, and in doing so complements information gathered on populations through the WeBS Core Counts.

Information collected at low tide represents an important contribution to the conservation of waterbirds, by providing supporting information for the management of UK Ramsar Sites and SPAs, other site designations, and whole estuary conservation plans. Numbers of waterbirds present in predefined sectors are counted. Most individual estuaries are counted at low tide once every six years, although on some sites more frequent counts are undertaken.

Further information about WeBS Low Tide Counts is available online via **www.bto.org/websreporting-lowtide** including data summaries and dot density distribution maps for different estuaries and species. Dot density maps are now available for all species and years, including the facility to show any combination of site, species and year side by side for comparison. Presentation of WeBS low tide information typically takes two forms: (i) tabulated statistics of peak numbers and mean densities, and (ii) dot density maps to give a visual representation of species' foraging densities across a site. Dots do not represent the precise positions of birds; they are assigned to habitat components proportionally and placed randomly within those areas. No information about distribution of birds at a finer scale than the count sector level should be inferred. For all maps on the online reporting interface, one dot is equivalent to one bird.

During 2023/24, complete WeBS Low Tide Counts were carried out at 16 estuaries, and on selected sectors on a further two estuaries.

The Morecambe Bay Low Tide site encompasses five smaller estuaries – Kent, Leven, Lune, Wyre Estuaries and Morecambe Bay (West). On several sites – Poole Harbour, Kingsbridge Estuary and Helford Estuary – Core Counts are carried out annually at low tide and data feed into both schemes, allowing assessment of distributional changes. Results from the counts on the Mersey Estuary are presented on pages 38–39 of this report.

▲ **Estuaries counted as part of the WeBS Low Tide Count scheme in 2023/24.**

2023/24: A warm and wet winter

Weather, phenology, productivity and migration context for 2023/24.

Understanding the weather conditions around WeBS Core Count dates allows us to have a better understanding of numbers and trends, as wetland bird distribution and abundance is heavily influenced by weather and water availability. Extreme weather conditions such as storms and flooding can also affect WeBS trends through a decline in coverage if volunteers are unable to carry out their counts.

The weather for the 2023/24 WeBS season was warmer and wetter than average. Flooding can often result in birds increasing their distribution due to more water available. Furthermore, since this year was also warmer than average, ice cover was low, again meaning bird distributions were expected to be greater due to having more available open water.

Autumn 2023 was warmer and wetter than average. Four named storms affected the UK from mid-September to November, however none of the storms landed on Core Count dates. Early September brought many warm days, with a September record of 30°C being reached on seven consecutive days. The south Midlands and southern England experienced severe flooding on the September Core Count date.

Winter was wetter than average, with southern England having 153% of the 1991–2020 average rainfall. Overall, this winter was the second warmest winter on record for England and Wales combined. Four further named storms affected weather this winter. Ice cover was low the majority of the year, with January Core Counts reporting the highest of the year at 8%.

Spring 2024 was the warmest spring on record for the UK. Spring was extremely wet, with many areas of the UK seeing more than double usual rainfall levels, and in some places triple the average monthly rainfall.

CONTINENTAL CONDITIONS

UK wintering waterbird numbers can be influenced by conditions in Europe. Similarly to the UK, Europe also experienced warmer and wetter conditions from July 2023–May 2024.

ARCTIC BREEDING SEASON

Spring 2023 came early in the Arctic, with temperatures varying depending on location. But in general, weather conditions seemed favourable for breeding birds.

The number of Arctic Foxes was variable across research stations, but generally low, with voles being fairly average/abundant.

Breeding success of waders across multiple research stations was average. Yerkutayakha and Payutayakha Rivers had the highest duck brood counts on the lakes since 2016.

A record 1,068 records of age ratios was received by WeBS for 34 species, helping to increase our knowledge of waterbird productivity.

Percentage of ice cover reported on WeBS Core Count dates from November to March 2019/20–2023/24.

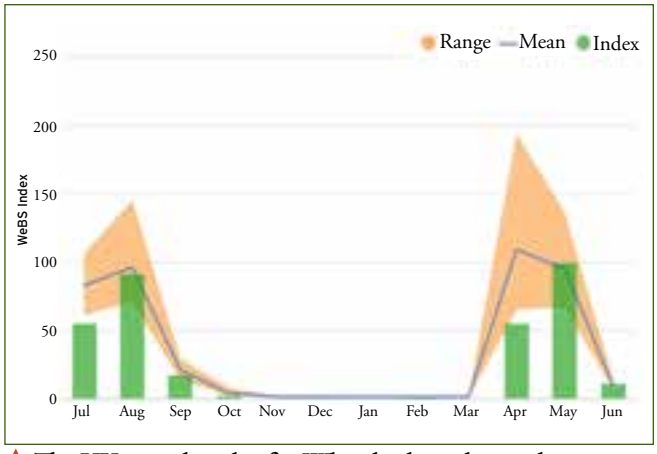
SOURCES

Climate summaries from: **metoffice.gov.uk, en.ilmatieteenlaitos.fi** and **climate.copernicus.eu/surface-air-temperature-maps**

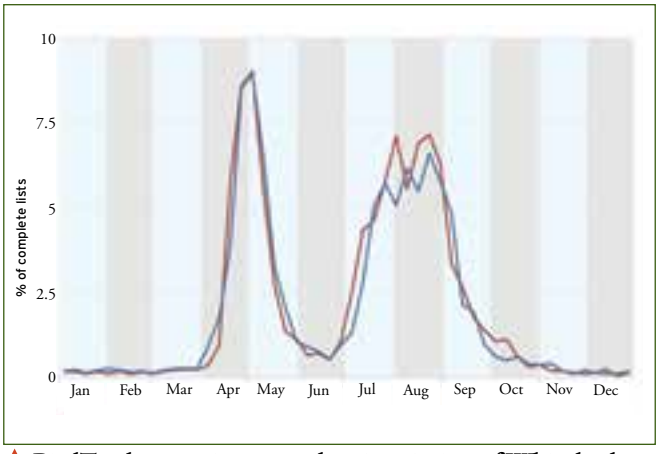
Hydrological summaries from: **nrfa.ceh.ac.uk**

Arctic breeding information from: **www.arcticbirds.net**

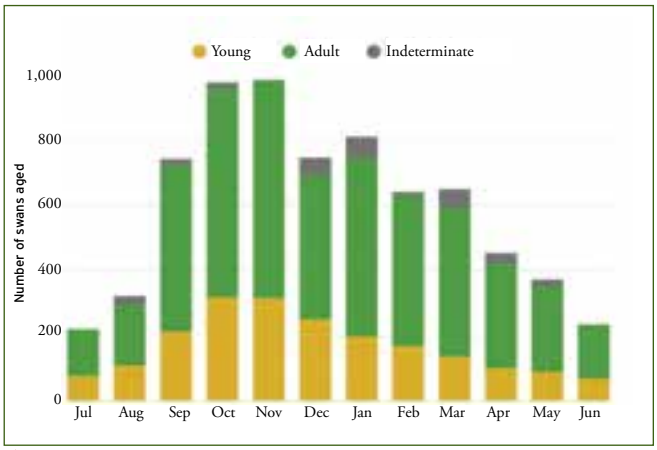
With the Core Count priority dates falling on 9 July and 7 April, the July 2023 and April 2024 WeBS Counts were both too early in the month for Whimbrel to have arrived on passage, so numbers were lower than in some years.



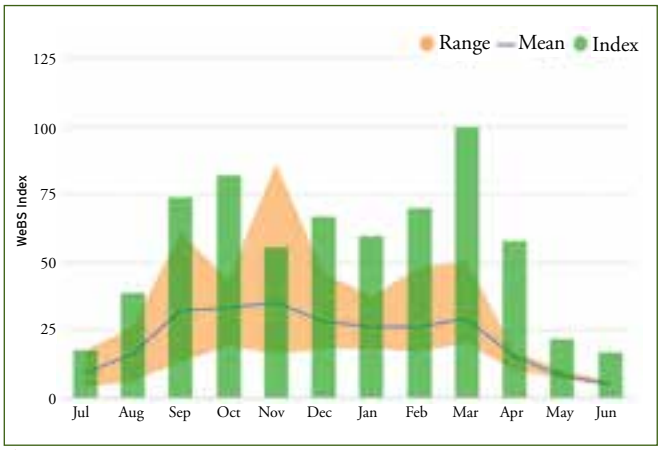
The UK month index for Whimbrel was lower than average in July and April. Green bars = 2023/24; blue line/orange hatched area = previous five-year mean/range.



BirdTrack reporting rates showing timing of Whimbrel passage in autumn 2023 and spring 2024. Blue (2023) and red (2024) lines = weekly percentage of complete lists where the species was recorded.



The number of adult and juvenile Mute Swan recorded in WeBS each month. The average juvenile ratio over October and November, where most ratios were received, was 33%.



With increasing numbers breeding and now resident in the UK, it is expected that the monthly index for Cattle Egret was higher than average. Green bars = 2023/24; blue line/orange hatched area = previous five-year mean/range.

WHIMBREL BY CHRIS KNIGHTS/BTO

National trends

A concise summary of how the UK's most familiar waterbirds fared in 2023/24.

Indices and smoothed indices are plotted in the WeBS Report Online for all waterbird species with sufficient data for the UK, Great Britain, Wales, Scotland, England and Northern Ireland. Annual species indices, smoothed indices, and 25- and 10- year trends are available under an Open Government Licence from **www.bto.org/webs-annual-report** as a spreadsheet download. Population trends are also published as Official Statistics on the JNCC website and have been produced to the high professional standards set out in the Code of Practice for Statistics.

Table 1 contains 25- and 10-year trends for the most abundant waterbird species for the UK and Table 2 contains the equivalent trends for Scotland, Northern Ireland, England and Wales.

We are now only presenting a single Eider figure whereas previously we reported Eider (Shetland) and Eider (non-Shetland).

GEESE & SWANS

The Mute Swan (10-year trend -4%) index continued to fall in 2023/24 and was the lowest value since 1996/97, resulting in a close-to-stable 25-year trend of +2%. Index values for Bewick's Swan (10-year trend -89%) and Whooper Swan (10-year trend +20%) were similar to recent years.

Non-native Canada Goose saw a slight increase in its 10-year trend (+30%), with Egyptian Goose seeing a record high index (10-year trend +100%). British/Irish Greylag Goose also saw an increase in the 10-year trend (+26%).

The three Brent Goose populations all have negative 10-year trends of between -11% and -4%. There was a drop in the naturalised Barnacle Goose (10-year trend +33%) index between 2023/24 and 2022/23, making 2023/24 the lowest since 2012/13, so it will be interesting to see what happens in future years. For more on goose census results, see pages 34–37.

DUCKS

Mallard had another record low index in 2023/24 (25-year trend -34%). Shoveler continue to increase, reaching yet another record high in 2023/24 (25-year trend +71%). Year-on-year numbers of Gadwall (10-year trend +8%) and Teal (10-year trend -1%) were slightly down on the previous year, but their 10-year trends increased slightly compared to the last report. The Pintail 10-year trend is now +38%, and the 25-year trend -10%, thanks to higher index numbers in 2022/23 and 2023/24.

Diving duck declines continued. Eider recorded yet another record low (10-year trend -20%). Tufted Duck (10-year trend -19%), Goldeneye (10-year trend -21%), Goosander (-2%), Red-breasted Merganser (10-year trend -25%) and Scaup (10-year trend -52%) all showed declines in both 25- and 10-year trends, with Scaup having its lowest index since 1989/90 and Red-breasted Merganser the lowest since 1975/76.

WADERS

Avocet and Black-tailed Godwit continued to increase, reaching their highest indices on record (10-year trends +37% and +18% respectively). Curlew continued its decline, with the lowest index since 1980/81 (10-year trend -23%, 25-year trend -38%).

Some wader species with negative 25-year trends have stabilised or increased in recent years, including Ringed Plover (10-year trend +8%), Grey Plover (10-year trend -2%), Dunlin (10-year trend +20%), Purple Sandpiper (10-year trend +8%), Redshank (10-year trend +3%) and Turnstone (10-year trend +4%). The Bar-tailed Godwit index was higher than the 2021/22 low, but the 10-year trend is -24%.

OTHER WATERBIRDS

Little Egret (10-year trend +58%), Great White Egret, Cattle Egret and Spoonbill again saw record high indices.

Gulls continue their declines, with record low indices for Black-headed Gull, Great Black-backed Gull, Lesser Black-backed Gull and Herring Gull.

Moorhen (10-year trend -10%) and Coot (10-year trend -20%) also had record low index values in 2023/24.

For all trend graphs see the online report:

www.bto.org/webs-reporting

Table 1 Population trends of non-breeding waterbirds in the UK.

	Species/population	25-year trend (1997/98-2022/23)	10-year trend (2012/13-2022/23)		Species/population	25-year trend (1997/98-2022/23)	10-year trend (2012/13-2022/23)
▲	Dark-bellied Brent Goose	-11	-11	▲	Scaup	-70	-52
▲	Svalbard Light-b. Brent Goose	44	-4	n/a	Eider	-30	-20
▼	Nearctic Light-b. Brent Goose	44	-5	▼	Goldeneye	-54	-21
n/a	Canada Goose	70	30	▬	Goosander	-23	-2
n/a	Naturalised Barnacle Goose	232	33	▬	Red-breasted Merganser	-47	-25
▬	Greenland Barnacle Goose	38	-17	▬	Little Grebe	29	12
▬	Svalbard Barnacle Goose	65	8	▬	Great Crested Grebe	-23	-4
n/a	British/Irish Greylag Goose	170	26	▲	Little Egret	764	58
▼	Icelandic Greylag Goose	-24	-42	▼	Cormorant	51	28
▲	Pink-footed Goose	96	33	▬	Moorhen	-19	-10
▼	Greenland White-fronted Goose	-53	-6	▬	Coot	-28	-20
▬	European White-fronted Goose	-71	-30	▬	Oystercatcher	-17	-1
n/a	Mute Swan	2	-4	▲	Avocet	210	37
▼	Bewick's Swan	-96	-89	▼	Lapwing	-45	-13
▲	Whooper Swan	191	20	▼	Golden Plover	-26	-8
n/a	Egyptian Goose	562	100	▼	Grey Plover	-31	-2
▬	Shelduck	-25	4	▬	Ringed Plover	-42	8
n/a	Mandarin	147	31	▼	Curlew	-38	-23
▲	Shoveler	71	40	▲	Bar-tailed Godwit	-30	-24
▲	Gadwall	62	8	▲	Black-tailed Godwit	138	18
▬	Wigeon	-8	-5	▬	Turnstone	-16	4
▼	Mallard	-34	-18	▬	Knot	7	-2
▬	Pintail	-10	38	▲	Sanderling	55	22
▲	Teal	17	-1	▬	Dunlin	-24	20
▼	Pochard	-74	-40	▼	Purple Sandpiper	-17	8
▼	Tufted Duck	-18	-19	▬	Redshank	-21	3

Trends are % changes of smoothed population index values for 52 of the most abundant waterbirds in the UK for which robust trends can be produced.

The longer term smoothed trend refers to the 25-year period 1997/98 to 2022/23. The shorter term smoothed trend refers to the 10-year period 2012/13 to 2022/23. Note, it is customary to truncate the final year when reporting smoothed trends, so whilst data from 2023/24 have been used in creating the smoothed index values, the trend period assessed and reported is until 2022/23.

Preceding each species is an indication of flyway population trend, based on: Nagy, S. & Langendoen, T. 2022. *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area, Eighth Edition*. Wetlands Int., NL. ▲ increasing, ▼ decreasing, ▬ stable, n/a not applicable as population is non-native (Canada Goose, Egyptian Goose, Mandarin) or non-migratory (Mute Swan, British/Irish Greylag Goose, Naturalised Barnacle Goose and Eider).

Trends use WeBS data except for Pink-footed Goose, Greenland White-fronted Goose, Icelandic Greylag Goose, Greenland Barnacle Goose and Svalbard Barnacle Goose, for which dedicated censuses are undertaken (see pages 35–36). The Icelandic-breeding Goose census include birds residing in other countries at the time of the census.

GADWALL BY EDMUND FELLOWES/BTO

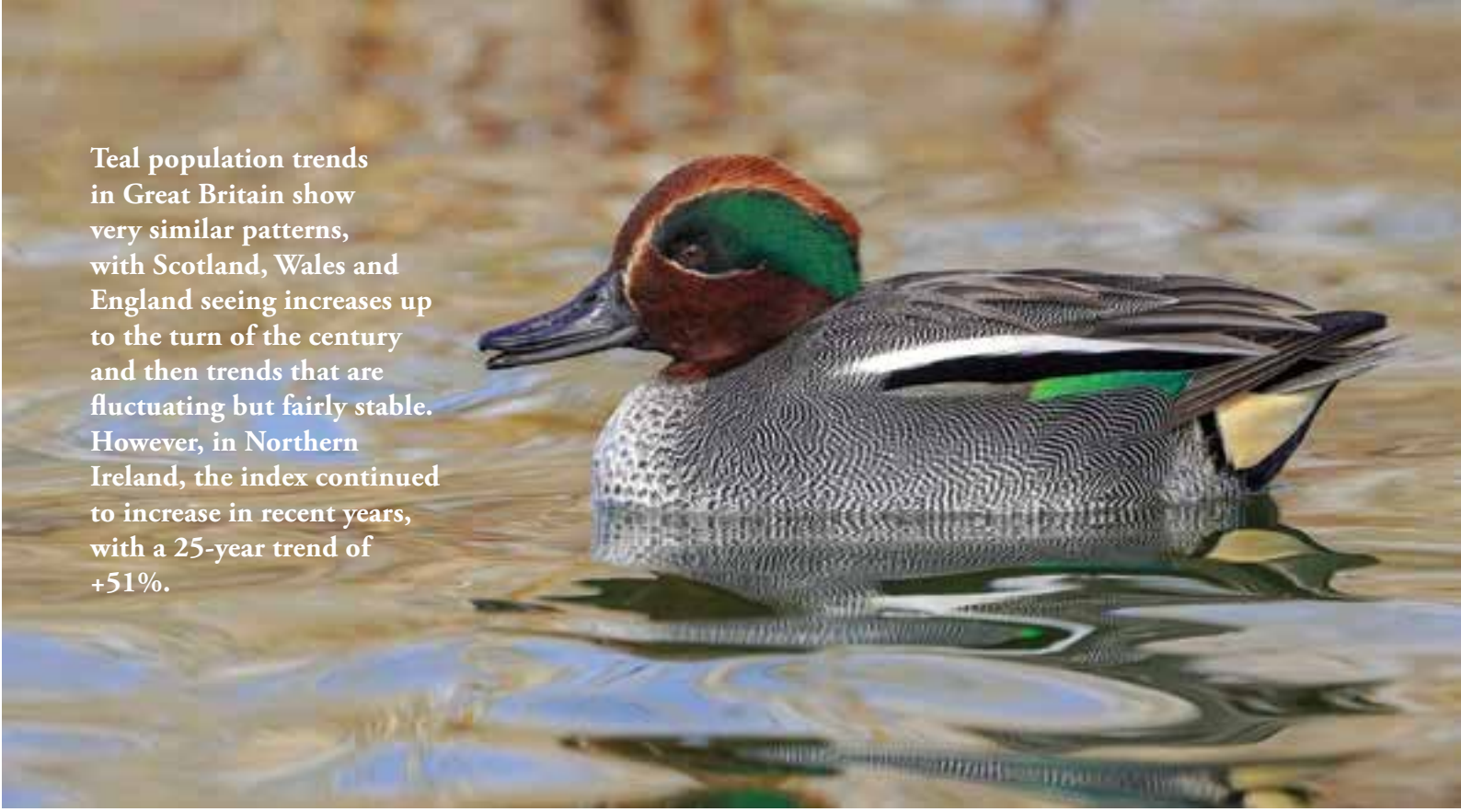
Table 2 Population trends of non-breeding waterbirds in the constituent countries.

Species/population	Scotland		Northern Ireland		England		Wales	
	25-year trend (1997/98-2022/23)	10-year trend (2012/13-2022/23)	25-year trend (1997/98-2022/23)	10-year trend (2012/13-2022/23)	25-year trend (1997/98-2022/23)	10-year trend (2012/13-2022/23)	25-year trend (1997/98-2022/23)	10-year trend (2012/13-2022/23)
Dark-bellied Brent Goose					-10	-11	-54	-40
Svalbard Light-bellied Brent Goose	391	11			40	-5		
Nearctic Light-bellied Brent Goose	1,950	148	27	-10	3,750	79	2,733	67
Canada Goose	433	40	-43	-47	58	30	191	43
Naturalised Barnacle Goose			68	-10	237	30	9,100	109
Greenland Barnacle Goose	38	-17						
Svalbard Barnacle Goose	55	1			65	8		
British/Irish Greylag Goose					160	24	40	43
Icelandic Greylag Goose	-24	-42						
Pink-footed Goose	91	13			102	19		
Greenland White-fronted Goose	-53	-6						-23
European White-fronted Goose					-77	-24		
Mute Swan	-4	-10	-39	26	8	-5	26	-12
Bewick's Swan			-100	-100	-95	-87	-100	-100
Whooper Swan	26	-23	70	0	267	25	182	-13
Egyptian Goose					562	100		
Shelduck	-20	-5	-15	-5	-25	8	-16	-3
Mandarin					116	27		
Shoveler	-47	0	-31	11	86	43	-13	-20
Gadwall	71	36	61	52	57	5	184	17
Wigeon	-15	3	-49	2	-6	-6	2	2
Mallard	-41	-12	-31	-18	-32	-20	-24	-1
Pintail	11	26	102	24	-17	34	-1	27
Teal	-2	4	51	14	19	-5	4	8
Pochard	-84	-53	-88	-66	-66	-30	-90	-63
Tufted Duck	-24	-24	-76	-39	6	-15	19	-14
Scaup	-56	-42	-82	-72	-90	-79	-84	-21
Eider	-37	-25	131	-1	-31	-2	-2	81
Goldeneye	-37	-9	-87	-57	-41	-20	-61	-40
Goosander	-12	-1			-32	-5	97	35
Red-breasted Merganser	-40	-13	-31	4	-53	-38	-62	-31
Little Grebe	91	37	14	58	22	3	44	10
Great Crested Grebe	-41	-8	-60	37	-11	-6	0	-12
Little Egret		1,250		383	631	42	1,243	92
Cormorant	-13	22	6	29	67	28	36	6
Moorhen	1	33	-26	12	-22	-16	-8	28
Coot	-55	-26	-45	25	-24	-22	-35	-15
Oystercatcher	-38	-17	-37	-21	-17	3	5	-5
Avocet					225	42		
Lapwing	-67	-4	-69	-27	-42	-12	-21	-35
Golden Plover	-37	11	-70	-26	-14	-4	58	-23
Grey Plover	-68	-30	-73	-3	-30	-1	-40	-28
Ringed Plover	-28	9	-29	8	-47	-1	-16	13
Curlew	-42	-24	-46	-26	-36	-24	-34	-18
Bar-tailed Godwit	-47	-30	-42	-32	-26	-21	-34	-43
Black-tailed Godwit	386	229	550	38	132	19	150	-15
Turnstone	-32	-10	-27	-17	-10	9	35	33
Knot	-44	-22	-43	73	14	-2	-4	-50
Sanderling	125	20	1,925	138	48	19	-2	-4
Dunlin	-22	52	-35	74	-21	19	-45	-11
Purple Sandpiper	8	-2	-57	20	-26	7		
Redshank	-28	7	-33	7	-16	2	31	9

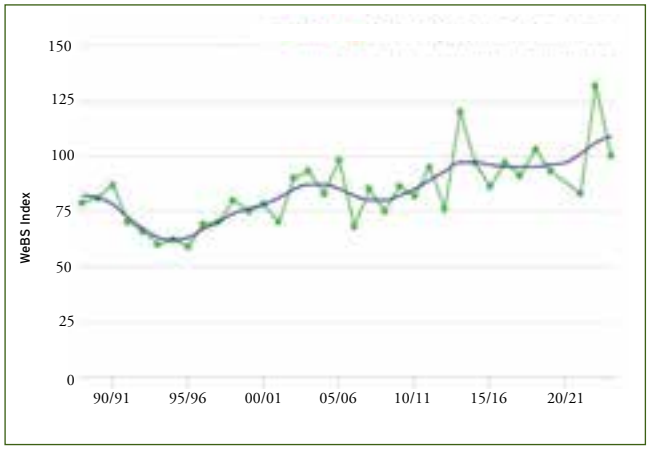
Trends are % changes of smoothed population index values for 52 of the most abundant waterbirds in the UK for which robust trends can be produced; note these may only be present in small numbers in some countries.

The longer term smoothed trend refers to the 25-year period 1997/98 to 2022/23. The shorter term smoothed trend refers to the 10-year period 2012/13 to 2022/23. Note, it is customary to truncate the final year when reporting smoothed trends, so whilst data from 2023/24 have been used in creating the smoothed index values, the trend period assessed and reported is until 2022/23.

Trends use WeBS data except for Pink-footed Goose, Greenland White-fronted Goose, Icelandic Greylag Goose, Greenland Barnacle Goose and Svalbard Barnacle Goose, for which dedicated censuses are undertaken (see pages 35–36).



Teal population trends in Great Britain show very similar patterns, with Scotland, Wales and England seeing increases up to the turn of the century and then trends that are fluctuating but fairly stable. However, in Northern Ireland, the index continued to increase in recent years, with a 25-year trend of +51%.



▲ **WeBS trend for Teal in Northern Ireland.**
Green dots = annual index; blue line = smoothed trend.

▲ **WeBS trend for Teal in Scotland.**
Green dots = annual index; blue line = smoothed trend.

▲ **WeBS trend for Teal in Wales.**
Green dots = annual index; blue line = smoothed trend.

▲ **WeBS trend for Teal in England.**
Green dots = annual index; blue line = smoothed trend.

TEAL BY BIROL DINCER/ADOBESTOCK

Largest waterbird aggregations

The UK's wetlands support millions of waterbirds each winter.

WeBS site totals indicate which sites support the largest aggregations of waterbirds each year. Understanding precisely how many individual birds use a site is clearly very difficult to ascertain from counts alone, as many sites are used by migrants on passage and consequently there can be high turnover rates.

Table 3 lists the Principal Sites for non-breeding waterbirds. The totals are the summed counted maxima for each species during the course of the WeBS year (missing counts are not imputed; supplementary counts are included). Sites with a five-year average of 20,000+ waterbirds are listed. Non-native species (*e.g.* Canada Goose and Mandarin) have been excluded from the totals. Although an important component of a site's waterbird fauna, gulls and terns are also excluded, since the recording of them during WeBS Counts is optional.

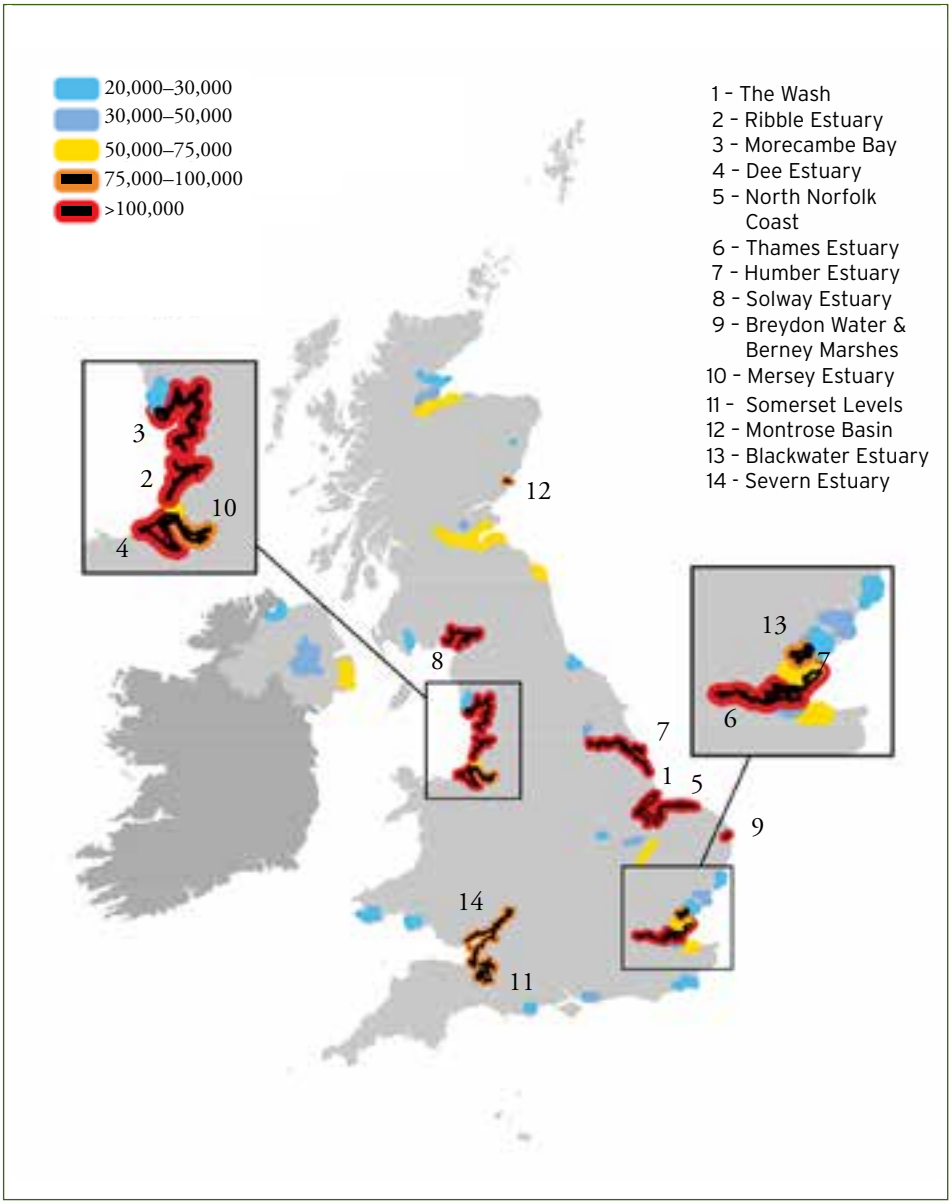
In addition to Table 3, it is possible to view the totals for all WeBS sites via the WeBS Online Report 'Totals' tab. In the interactive table of sites, non-native species, gulls and terns and supplementary counts can be included or omitted as desired by the user. By default only the major sites with over 1,000 birds are listed, but the filter can be changed to all sites in a county or country. Selecting a site will show the species for which that site holds more than the national or international importance thresholds.

IMPORTANT NOTE

Some monthly surveys in 2020 and 2021 were affected by COVID-19 restrictions. As a result, this may have depressed site-species peaks, and in turn, the site waterbirds aggregation total for the 2019/20 and 2020/21 years, and hence the five-year mean for certain sites in Table 3. The site-species peak for each site is available on the WeBS Report Online. If the species peak for a given site has typically been from a month affected by COVID-19 restrictions during 2019/20 or 2020/21, the month of the peak is bracketed online. Furthermore, the peak count value itself has been bracketed to indicate that it would be expected to have been higher had complete counts been available from the months affected by the COVID-19 restrictions and may in turn have affected (generally depressing) the five-year mean. See page 41 for more information.

SITE FOCUS

The number of sites with a five-year average in excess of 100,000 birds remained at nine. In 2023/24, 47 sites had a five-year average in excess of 20,000 birds, two fewer than in 2022/23. Both The Wilderness - Ladybank and Carsebreck & Rhynd Lochs have dropped off the list due to lower numbers of Pink-footed Geese being counted on these sites than in recent years. The Exe Estuary has also dropped off the list from 2022/23.



▲ **Sites with a five-year average of 20,000+ waterbirds. Sites above 75,000 birds are listed.**

Table 3 Principal Sites for non-breeding waterbirds in the UK.

Site	2019/20	2020/21	2021/22	2022/23	2023/24	5-year mean
The Wash	401,679	431,763	406,134	460,991	417,853	423,684
Ribble Estuary	202,867	247,255	228,915	173,730	167,637	204,080
Morecambe Bay	151,175	144,186	168,169	187,972	199,710	170,242
Dee Estuary (England and Wales)	145,220	169,894	166,457	158,140	170,214	161,985
North Norfolk Coast	147,957	153,657	124,203	133,752	164,842	144,882
Thames Estuary	173,072	126,551	120,106	125,252	148,053	138,606
Humber Estuary	115,997	129,758	171,403	124,078	146,192	137,485
Solway Estuary	132,251	128,377	132,628	118,290	145,618	131,432
Breydon Water and Berney Marshes	141,204	125,988	123,104	31,272	89,716	102,256
Mersey Estuary	72,612	77,098	82,741	128,898	100,697	92,409
Somerset Levels	99,120	90,413	72,417	81,572	80,359	84,776
Montrose Basin	87,695	96,899	93,048	70,816	73,999	84,491
Blackwater Estuary	93,723	60,131	71,731	63,781	104,424	78,758
Severn Estuary	64,866	66,589	84,153	82,056	92,818	78,096
Swale Estuary	66,897	65,279	89,865	69,225	81,832	74,619
Forth Estuary	79,057	84,147	65,083	67,009	62,515	71,562
Inner Moray and Beauly Firths	81,475	65,413	44,699	57,608	47,617	59,362
Lindisfarne	72,542	69,773	46,374	46,242	60,390	59,064
Strangford Lough	59,653	52,168	62,881	58,859	53,296	57,371
Crouch-Roach Estuary	59,332	53,413	42,748	52,550	70,868	55,782
Alt Estuary	67,167	67,794	41,370	42,687	43,873	52,578
Ouse Washes	39,722	49,829	64,266	50,572	46,912	50,260
Medway Estuary	43,327	45,285	42,485	53,612	57,094	48,360
Nene Washes	39,728	47,929	37,596	34,993	43,802	40,809
Stour Estuary	38,119	34,512	42,877	40,237	39,741	39,097
Cromarty Firth	38,769	41,077	35,815	38,611	37,084	38,271
Chichester Harbour	33,658	33,134	36,941	38,432	42,503	36,933
Abberton Reservoir	37,601	46,987	38,264	36,796	24,261	36,781
Loughs Neagh and Beg	46,257	34,883	32,390	33,424	36,363	36,663
Loch Leven	39,016	29,162	33,270	40,297	-	35,436
Lower Derwent Ings	34,493	35,914	31,165	36,514	35,226	34,662
Hamford Water	41,233	32,412	32,318	23,342	34,819	32,824
Lough Foyle	29,991	26,665	27,565	32,569	27,688	28,895
Alde Estuary	30,416	16,876	29,176	28,185	35,446	28,019
Dengie Flats	36,487	16,521	18,206	39,177	29,090	27,896
Langstone Harbour	26,132	22,906	26,428	30,404	31,317	27,437
Loch of Skene	25,113	17,159	20,413	44,553	20,031	25,453
Poole Harbour	27,797	22,185	25,106	23,827	25,397	24,862
Dornoch Firth	25,712	27,385	23,834	24,805	21,111	24,569
Wigtown Bay	16,421	31,170	21,338	25,087	26,337	24,070
Burry Inlet	18,208	31,347	29,061	22,345	17,830	23,758
Rutland Water	25,213	23,042	26,142	24,071	19,395	23,572
Dungeness and Rye Bay	23,818	16,367	27,125	22,406	23,799	22,703
Cleddau Estuary	21,931	26,236	22,979	21,679	13,457	21,256
Tees Estuary	18,187	19,523	20,246	22,895	25,030	21,176
Duddon Estuary	29,474	19,062	17,840	22,749	14,859	20,796
Colne Estuary	18,005	20,301	23,493	20,263	20,821	20,576

- Totals are the sum of species maxima during the WeBS year at each site, using data from all months. **This summary does not account for missed visits or reduced coverage, from COVID-19 restrictions or otherwise.**
- Some totals may differ slightly from those published in previous annual WeBS reports due to late or amended data.
- Non-native species (such as Canada Goose and Mandarin), are excluded, as are gulls and terns due to incomplete coverage.
- A more comprehensive table showing all sites is available online via: **www.bto.org/webs-reporting-site-totals**

WeBS Alerts

Monitoring the status of non-breeding waterbirds at protected wetland sites.

By **Emma Caulfield, Teresa Frost** and **Ian Woodward** BTO

WeBS Alerts are an important monitoring tool used to evaluate the condition and conservation performance of protected wetland sites across the UK. These sites are designated for their importance to non-breeding waterbirds – species that rely on them during winter or migration stopovers. Many of these sites are part of national and international conservation networks, including SSSIs, ASSIs, SPAs and Ramsar sites.

WeBS Alerts provide an evidence-based method to assess whether these protected sites continue to support the bird populations for which they were designated. The WeBS Alerts track changes in waterbird numbers at individual sites, with assessments carried out over multiple timeframes. The time periods assessed are short-term, medium-term, long-term and, for SPAs only, the period since baseline. The short-term period is from five years prior to the current Alerts reporting year, 2021/22. The medium-term period is from 10 years prior to the current reporting year, and the long-term period is from 25 years prior. The period since baseline is from the baseline winter for the species to the current reporting year. The baseline winter for a species is determined from the designation period used for a species at a site. In most cases, the designation is based on counts over five winters and the baseline winter will be the middle winter within that period.

Alerts are assigned based on the scale of population decline. Medium Alerts, denoted by an amber warning, are triggered when there has been a 25%–50% decline over a given period. High Alerts, highlighted in red, are triggered due to declines of more than 50%. No Alert is issued if populations are stable or increasing. These thresholds act as conservation triggers, prompting closer inspection and potential intervention by conservation agencies and site managers.

To provide accurate assessments, WeBS Alerts use smoothed population trends. These trends are calculated by applying statistical smoothing to annual bird counts at each site, reducing the influence of short-term fluctuations – such as those caused by extreme weather events (e.g. a severe winter) or localised disturbances. Missing or incomplete counts are estimated following a statistical approach using site and regional data. This approach provides a clearer picture of long-term population trajectories.

WeBS Alerts act as an early warning system, identifying where counts are declining, highlighting species at risk, and supporting the UK's commitment to maintaining and restoring vital habitats for waterbirds.

The WeBS Report Online details site-species accounts for each SPA, offering insights into the trends of wintering waterbird species for which the sites are designated. These accounts place the site's results within the broader context of regional and national trends, helping to interpret whether observed changes are likely driven by local or wider-scale pressures. By comparing trends at the site level with those at the regional and national levels, it becomes possible to suggest whether changes might reflect local site-specific pressures (such as habitat degradation, disturbance, or water management), which could potentially be addressed through improved site management, or broader-scale environmental or ecological changes, such as species redistribution in response to climate change, altered migratory patterns, or flyway-scale population declines.

In addition to tracking designated wintering 'feature species' (i.e. species for which the site has been formally recognised), the wintering trends of breeding features of the SPA and non-feature species are provided in supplementary tables, primarily for contextual information. WeBS methodology does not cover the breeding ecology of most species with enough consistency to be able to produce summer trends for breeding features.

Analysis of species trends across UK SPAs highlights long-term declines for many features. Across the four assessment periods, the most frequent outcome has been 'relative' stability, with 841 out of 1,995 assessments where a 25% decrease to 33% increase is observed. However, declines are significant. There were 404 instances of High Alert, representing decreases of 50% or more, with the highest number of these seen in the long-term data (147 alerts triggered). Medium Alerts, indicating 25–50% declines, were recorded 365 times.

FIND OUT MORE

Caulfield, E.B., Feather, A., Smith, J.A., Frost, T.M. & Woodward, I.D. 2025. *Wetland Bird Survey Alerts 2021/2022: Changes in numbers of wintering waterbirds in the Constituent Countries of the United Kingdom, Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) and Areas of Special Scientific interest (ASSIs)*. BTO Research Report 786. BTO, Thetford.

www.bto.org/webs-reporting-alerts

Alerts status for designated wintering features

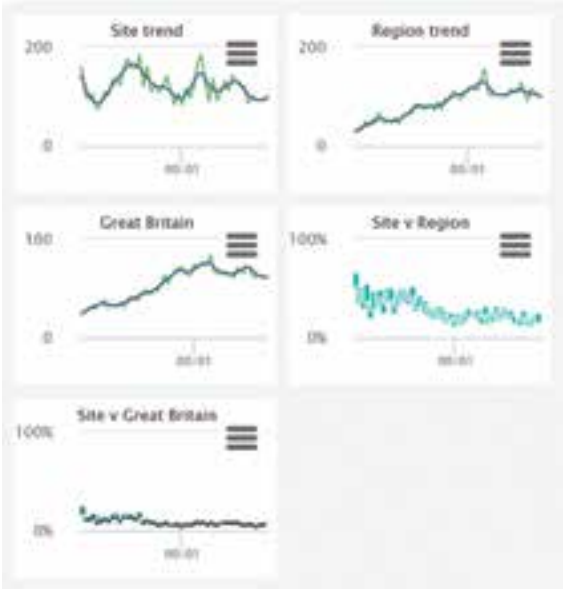
Species	Info	First Winter	Ref Winter	Short-term % Δ	Med-term % Δ	Long-term % Δ	Baseline Winter	% Δ since baseline
Bewick's Swan	-	96/97	21/22	-91	-96	-98	88/89	-98
Whooper Swan	-	96/97	21/22	5	21	445	88/89	742
Shoveler	-	96/97	21/22	78	133	180	88/89	167
Gadwall	-	96/97	21/22	26	16	54	88/89	244
Wigeon	-	96/97	21/22	-17	-21	-20	88/89	-43
Pintail	-	96/97	21/22	-23	-12	-75	88/89	-88
Teal	-	96/97	21/22	-18	31	44	88/89	31
Ruff	-	96/97	21/22	4	-16	-48	88/89	-
Waterbird assemblage	-	96/97	21/22	-21	-14	-19	88/89	-

▲ **Example site Alerts table, for Ouse Washes SPA. Alerts are only issued for designated features, indicated with red and amber, but percentage change is also given for other species where possible. Here two swan species showing differing fortunes, with Bewick's Swan suffering large declines in all three periods while Whooper Swans have increased.**

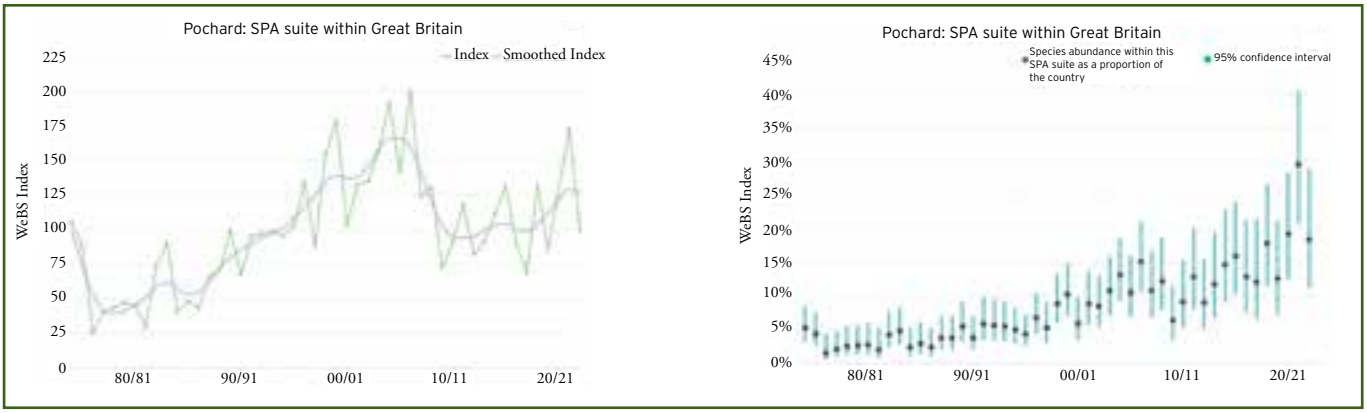
Species accounts for this site

Wigeon

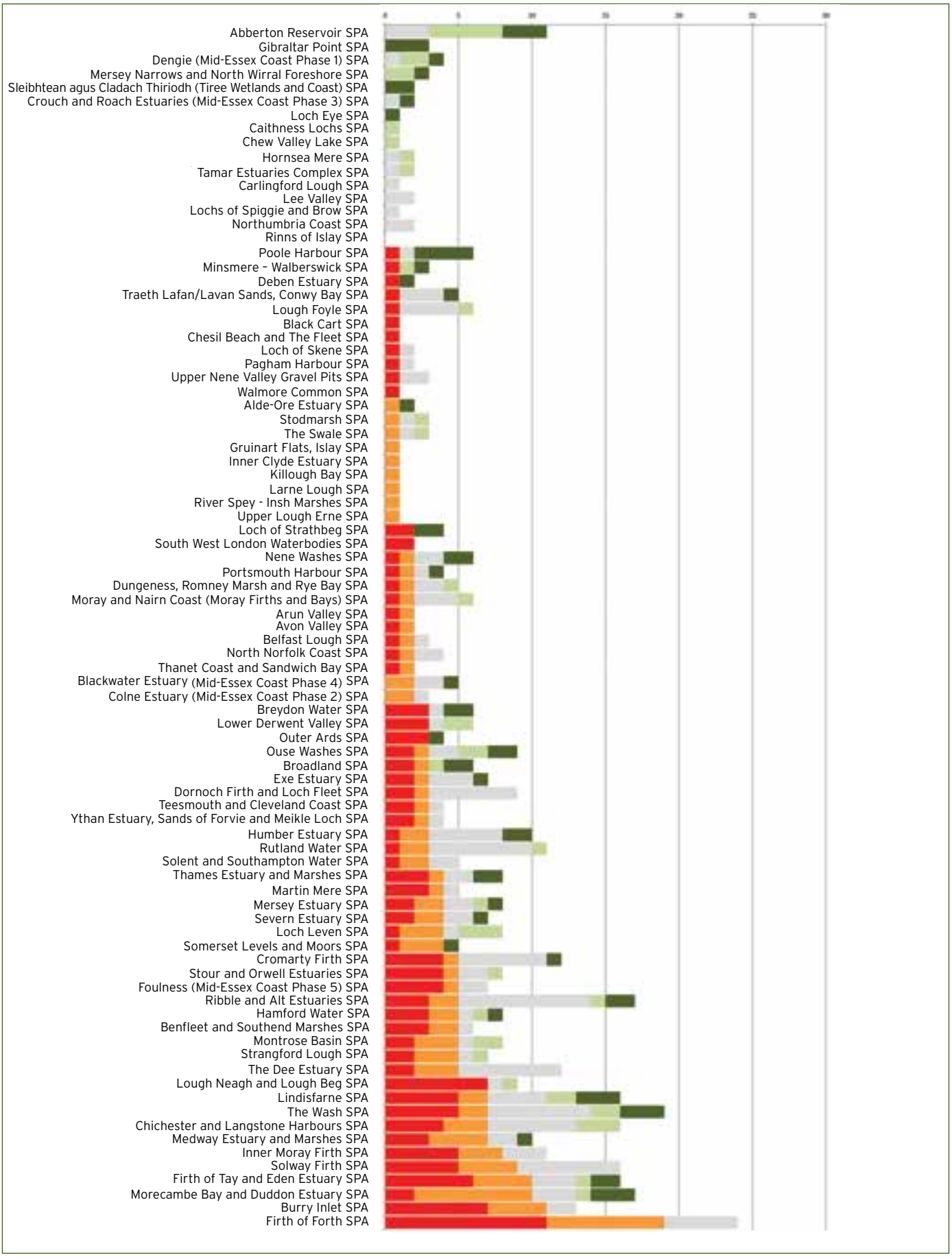
Numbers of Wigeon over-wintering on Ouse Washes SPA have fluctuated throughout the period recorded by WeBS making interpretation of the underlying trend difficult. Accordingly, although Alerts have been triggered for the period since baseline they should be viewed with caution. The change in numbers underpinning these Alerts are within the range of fluctuation typical for this site and so should not give particular cause for concern. Numbers of this species over-wintering within Anglian Region have been stable in the medium-term having previously increased. Numbers of this species over-wintering in Great Britain have been stable in the long-term having previously increased. The trend on the site does not appear to be tracking that of either the region or the British trend. The declining proportion of regional and country-wide numbers supported by this site suggest that site-specific pressures may be affecting numbers on this site. Although Alerts have been triggered they are difficult to interpret and so it would be prudent to closely monitor numbers of this species on this site in coming winters to assess whether these Alerts are due to fluctuations or local pressures.



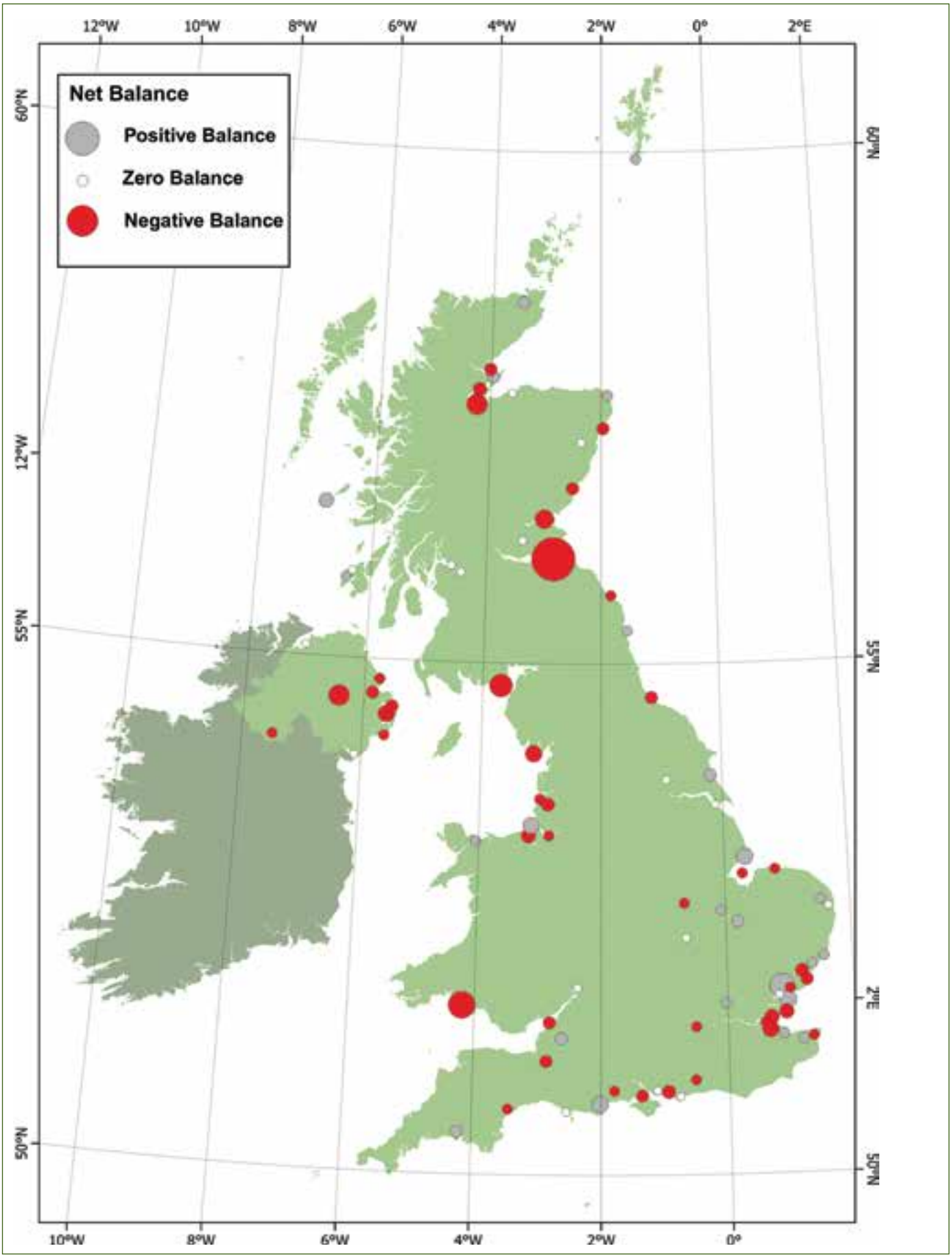
▲ **Example site species interpretation, for Wigeon at Ouse Washes SPA. The plots (right) show the declining site trend that has triggered Alerts at the site does not match the region or country trend, suggesting there might be site-specific pressures. Text on the page interprets the plots (left).**



▲ **Tables and plots of the totals across the SPA suite are available for each species, together with the proportion of these within all WeBS sites. Here, although Pochard has declined on the SPAs for which it is designated since the late 1990s (left), the proportion of Pochard on this suite has increased compared to other WeBS sites (right).**



▲ **Long-term Alerts status at UK wetlands in the SPA network.**
Sites are listed in ascending order by number of species for which negative Alerts were reported by Caulfield *et al.* (2025).
Red = High Alert (large decrease), **orange** = Medium Alert (moderate decrease), **grey** = stable, **pale green** = moderate increase, **dark green** = large increase.



▲ **Summary of long-term Alerts status at UK wetlands in SPA network.**
Map of SPAs showing, for each site, the net balance of the number of designated feature species with a moderate or large long-term increase, minus the number with a moderate or large long-term decrease (i.e. with Alerts).

WEBS ALERTS – COUNTRY SNAPSHOTS

GB SPA Suite

Across the GB SPA network, several species are showing consistent declines across all assessed time periods, suggesting sustained pressures over recent decades. Bewick's Swan has seen the steepest long-term drop, declining by up to 96% across the SPAs on which it is a feature, and is now absent from many sites where it was once a regular winter visitor. Similarly, European White-fronted Goose populations have fallen by 91%, indicating widespread losses across its GB range. Other species showing persistent downward trends include Red-breasted Merganser, Goldeneye, Curlew, Grey Plover, and Ringed Plover. These patterns are consistent with broader-scale population changes or shifts in habitat suitability, and they reflect pressures that may not be easily addressed at individual sites.

England

England had the highest number of species-site assessments, with 300 combinations reviewed. Looking at the maximum decline across all time periods assessed, a substantial 106 High Alerts (more than 50% decline) and 75 Medium Alerts (25–49% decline) were recorded.

Bewick's Swan, Grey Plover, and Dunlin emerged as some of the species most frequently triggering Alerts, particularly over the long-term. Bewick's Swan alone accounted for 13 High Alerts in England but this was due to broadscale factors. Grey Plover had the highest number of sites where site-specific factors may be exacerbating local declines, at seven sites.

Looking at Alerts over each time period, 45% of assessed species features showed long-term declines, while medium- and short-term Alerts were triggered in 33% and 27% of features, respectively.

In terms of what is driving these changes across all time scales, 28 Alerts were linked to broader-scale factors, for example, shifts in distribution or climate-related changes, while 79 were likely caused or exacerbated by site-specific issues. In another 70 assessments the comparisons suggest that recent site-specific conditions may be having a positive impact or mitigating broad-scale declines and in four Alerts it was unclear.

Some of the most affected SPAs include The Wash, Medway Estuary and Ribble & Alt Estuaries, all of which recorded a large proportion of High Alerts within the long-term time period.

Scotland

In Scotland, 119 species-site features were assessed. There were 48 High Alerts and 37 Medium Alerts triggered across as the maximum decline over any time period, with species such as Bar-tailed Godwit, Goldeneye, and Red-breasted Merganser appearing frequently among those in decline.

Overall, 59% of features showed long-term declines, 34% medium-term, and 27% short-term. One of the most complex sites is the Firth of Forth, where wader trends vary between species. Grey Plover has declined here by 80% over the long-term. Dunlin and Redshank show fluctuation, likely due to local conditions influencing their patterns.

Fifty-one Alerts were attributed to broad-scale or historic factors, including 37 where more recent site factors may have mitigated these and four where it was difficult to interpret the alerts and there were 34 site-specific Alerts, suggesting that both local pressures and wider environmental changes are playing a role in shaping waterbird numbers.

Redshank had the most SPAs where it was doing better than might be expected, whereas there were six sites with Alerts for Whooper Swan where site-specific factors were a possible influence.

WEBS ALERTS – COUNTRY SNAPSHOTS

Wales

There were a total of 23 species-site combinations assessed across Welsh SPAs, the smallest dataset of the countries assessed. Several SPA feature species showed notable long-term declines within Wales. Across all time periods, there were 11 High Alerts and five Medium Alerts, affecting species like Dunlin, Grey Plover, and Curlew. At Burry Inlet, for example, Dunlin numbers have fallen by 85%, Grey Plover by 89%, and Curlew by 67% over the long-term time period. These steep reductions are echoed by Wigeon and Turnstone which also showed declines across multiple timescales.

The waterbird assemblage at Burry Inlet also indicates long-term reductions of up to 37%, which strengthens the evidence suggesting site-specific factors might be having an impact. These could include both pressures on the site itself and changes at nearby sites.

Out of all the Welsh SPA features assessed, 15 triggered long-term Alerts, eight medium-term Alerts, and five short-term Alerts.

While only four Alerts were attributed to broad-scale factors, in all of these conditions at the site seemed to be stable or recently improved. Twelve Alerts were site-specific (including most of those at Burry Inlet), suggesting that many of the observed declines are influenced by local changes rather than national trends.

Northern Ireland

Northern Ireland with just 30 site-species assessments showed a high proportion of declines. There were 15 High Alerts and nine Medium Alerts across all time periods, affecting species such as Bewick's Swan, Golden Plover, and Light-bellied Brent Goose.

Diving ducks showed large long-term decreases at Lough Neagh and Lough Beg SPA. Pochard declined by 85%, Tufted Duck by 78%, Scaup by 75%, and Goldeneye by 91% since 1996/97. These declines also extended into the short- and medium-term, indicating recent or ongoing negative trends.

Out of all the features assessed, 19 triggered long-term Alerts, 12 medium-term Alerts, and 11 short-term Alerts.

Nine of the Alerts in Northern Ireland were attributed to broad-scale or historic factors, including five where site conditions may have been helping to mitigate declines. Ten alerts were assessed to be driven or exacerbated by site-specific factors, but it was difficult to interpret five other Alerts, highlighting the need to use local knowledge or increased monitoring effort to understand the declines.

▲ Goldeneye has suffered a long-term decline of 90% and a medium-term decline of 71% on Northern Ireland SPAs.

GOLDENEYE BY EDMUND FELLOWES/BTO

Focus on... Golden Plover

By **Bridget Hiza** BTO

The Golden Plover is one of the UK's most charismatic birds, known for its striking breeding plumage of a golden back contrasting with a black breast and belly. During winter, they revert back to their light brown and white plumage.

Golden Plovers are found in the UK all year round, breeding in the uplands in summer and moving to the lowlands during wintering periods. However, there is a peak during autumn migration due to birds of northern and eastern origin arriving in the UK.

During the breeding season, Golden Plovers are most abundant on Scottish islands, breeding widely on the Outer Hebrides and Shetland, with smaller numbers in the Pennines and north Wales.

In winter, their distribution moves to lowland areas, where they typically form large flocks with Lapwings in farmland habitats (Gillings *et al.* 2006).

Following a poor year at Breydon Water and Berney Marshes in 2022/23, when the peak count was only 3,058, counts here peaked at 20,715 in January 2024. Four other sites had peaks in excess of 10,000 birds in 2023/24 – Humber Estuary, Somerset Levels, The Wash and Blackwater Estuary.

Wintering numbers recorded by WeBS across the UK increased from mid 1980s to 2006, however, there was a steep decline from 2007/08 to 2011/12. Since then, numbers have been fluctuating, with a shallow decrease since 2015. Reasons for these changes are unknown, however threats include predation (Fletcher *et al.* 2010), disturbance (Casas *et al.* 2009), loss of habitat, intensification of farming practises, and climate change (Gillings *et al.* 2006).

Although Golden Plovers are ranked as Least Concern on the IUCN Red List of Threatened Species, their numbers have been declining in the UK since 2015.

WeBS data from 2023/24 suggests that populations have declined by 26% since 1997/98 and 8% in the last 10 years.

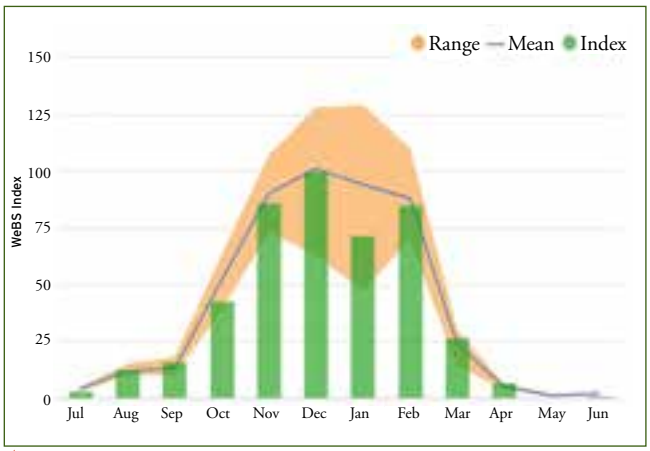
FIND OUT MORE

Casas F., Mougeot F., Vinuela J. & Bretagnolle V. 2009. Effects of hunting on the behaviour and spatial distribution of farmland birds: importance of hunting-free refuges in agricultural areas. *Animal Conservation*. **12**: 346–354.

Fletcher, K., Aebischer, N.J., Baines, D., Foster, R. & Hoodless, A.N. 2010. Changes in breeding success and abundance of ground-nesting moorland birds in relation to the experimental deployment of legal predator control. *Journal of Applied Ecology*. **47**: 263–272.

Gillings, S., Austin, G.E., Fuller, R.J. & Sutherland, W.J. 2006. Distribution shifts in wintering Golden Plover *Pluvialis apricaria* and Lapwing *Vanellus vanellus* in Britain. *Bird Study*. **53**: 274–284.

WeBS trend for Golden Plover in the UK.
Green dots = annual index; blue line = smoothed trend.



Monthly indices for Golden Plover in the UK.
Green bars = 2023/24; blue line/orange hatched area = previous five-year mean/range.

GOLDEN PLOVER BY LIZ CUTTING/BTO

Focus on... Wigeon

By **Bridget Hiza** BTO

Wigeon are most numerous in the UK during the winter, with birds from Iceland, Scandinavia and Russia arriving here at their overwintering grounds.

Although mainly found in the UK during the winter, there is a small breeding population, mainly on the uplands and islands of northern Scotland and along the Pennines in northern England.

Breydon Water and Berney Marshes was the top site in 2023/24, with a five-year average of 39,376. However, peak numbers here have fallen in the last couple of years, with a peak of 26,922 in 2023/24 compared with 44,610 in 2021/22.

From 1966/67 to 2004/05, there was a steady increase in Wigeon wintering numbers in the UK. One reason for this is the increased legislation for hunting as well as increased site protection through nature reserves and Ramsar wetland sites (Fox *et al*. 2016).

However, since then, numbers have fluctuated, with a decrease of 8% since 1997/98, and a decrease of 5% in the last 10 years.

There are a few possible reasons for this decrease. Firstly, since migration is heavily influenced by temperatures/climatic conditions in wintering grounds, due to climate change, birds are shifting their wintering grounds north-easterly (Burton *et al*. 2023). Therefore, it may be that the wintering population in the UK may continue to decrease as they winter closer to their breeding grounds due to milder winters (Fox *et al*. 2016).

On the other hand, the decrease may also be due to a decrease in breeding success/productivity in their breeding grounds. In the summers of 2002–2010 (excluding 2004) there was low reproductive success in Denmark and Finland due to changes in land use, climate change and changes in predator abundance (Fox *et al*. 2016). It was also found that Wigeon seem to have had a 'boom and bust' reproductive output since 1988 (with lower reproductive success and absence of 'booms' in the 2000s, Fox *et al*. 2016), possibly explaining why this population has been fluctuating (with a gradual decline) since 2005.

Although they are listed as being of Least Concern on the IUCN Red List, Wigeon are ranked as Amber-listed in the UK Birds of Conservation Concern due to the importance of the UK population and the fact that a large proportion of the birds winter at a small number of sites. It is therefore important to continue monitoring this species in the UK.

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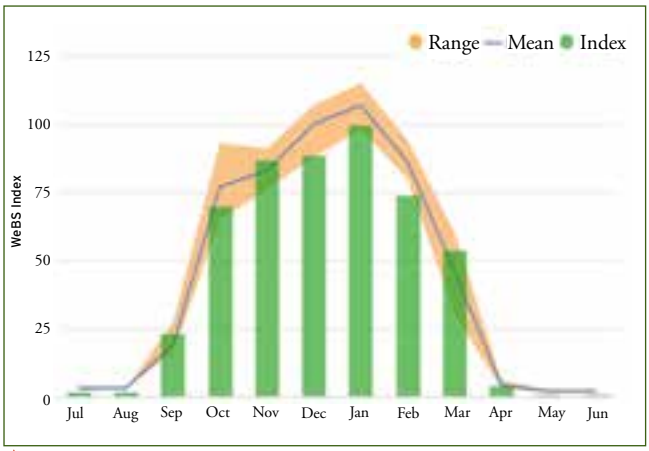
▲ **WeBS trend for Wigeon in the UK.**
Green dots = annual index; blue line = smoothed trend.



▲ **Monthly indices for Wigeon in the UK.**
Green bars = 2023/24; blue line/orange hatched area = previous five-year mean/range.

WIGEON BY JOHN HARDING/BTO

Mute Swan

Trends in our most widespread non-migratory species could relate to changes in the agricultural and wetland environment and impacts of High Pathogenicity Avian Influenza.

By **Teresa Frost** BTO

The Mute Swan is a charismatic indicator of the health of wetland environments and conditions in the wider countryside, susceptible to disease, pollution and landscape change and often living in close proximity to people. Historically in Britain, most populations were managed, and individuals were owned and pinioned; unmarked birds usually belonging to the Crown, which is still the case on the Thames. A long-lived bird, several individuals are known to survive to their late 20s. However, recently High Pathogenicity Avian Influenza appears to have increased mortality rates.

The increase in the British population in the 1980s and 1990s has often been cited as an example of a beneficial outcome from a policy change, with the Control of Pollution (Anglers' Lead Weights) 1986 regulation allowing the recovery of the population. However, recent research suggests that changes in agricultural practices may have benefitted the species over this period. A spatial analysis suggests swans have benefited from the autumn sowing of wheat and oil seed rape providing winter food, this having an even greater impact than the banning of lead weights in fishing, although the latter factor is also likely to be important (Ki *et al.* 2023).

The Great Britain and Ireland populations are both largely resident, and so the national and international thresholds are set at the same for each, currently at 500 and 90 respectively. UK trends are produced, but Great Britain and Northern Ireland trends are particularly pertinent due to the species relatively sedentary habits. Ringing records indicate the resident birds are sometimes augmented by occasional cold-weather movements from the Continent.

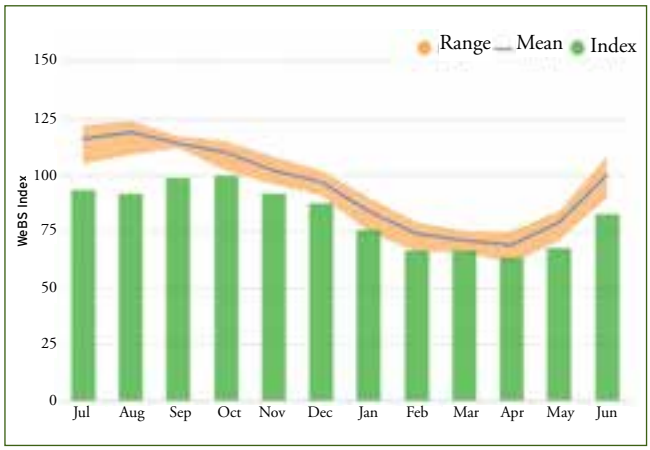
MUTE SWAN BY TERESA FROST

Only a minority of the adult population form breeding pairs, and although it is a very widespread bird, with only Mallard having occurred at more WeBS locations, it can also be seen in groups of hundreds at some sites. Numbers at Loughs Neagh and Beg, Somerset Levels, Fleet and Wey, Loch Leven, Upper Lough Erne and Loch Bee (South Uist) all exceed the relevant importance thresholds.

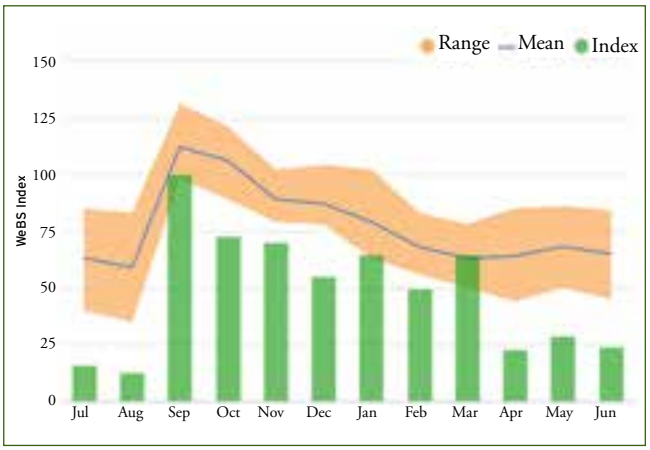
The most recent British index value for winter 2023/24 is the lowest it has been since 1997/98, and the England, Wales, and Scotland indices all show an apparent decline in the most recent years. The 25-year Great Britain trend is +5% but the 10-year trend is -6%. In Northern Ireland, the 25-year trend is -39% and, whilst the 10-year trend to 2022/23 is positive at +26%, numbers appear to be decreasing from the recent peak in 2021/22. For both Great Britain and Northern Ireland, the monthly indices for 2023/24 were less than the recent five-year mean in every month.

The observed declines in index values from 2021/22 to 2022/23 and 2023/24 could possibly relate to population level effects of avian influenza mortality. Perhaps partly influenced by their detectability, more Mute Swan carcasses than any other waterbird species tested positive during 2021, the second most in 2022, and it also had the sixth most positive results of waterbirds in 2023 in national avian influenza surveillance of reported dead wild birds (APHA 2025). In a collation of mortality tallies for 2021–2023 from reports from WeBS counters, BirdTrack and other sources, 965 Mute Swan deaths were collated. Aside from gulls, terns and seabirds, this was the largest number of individuals recorded other than Barnacle Goose (see page 37) (Atkinson *et al.* in press.). The largest groups of dead birds reported were in Glasgow, Scotland: 85 at Hogganfield Loch in November 2022, and 27 in Knightswood Park in January 2023.

MUTE SWAN BY ANDY MUSGROVE/BTO



Monthly indices for Mute Swan in Great Britain. Green bars = 2023/24; blue line/orange hatched area = previous five-year mean/range.



Monthly indices for Mute Swan in Northern Ireland. Green bars = 2023/24; blue line/orange hatched area = previous five-year mean/range.

WeBS trend for Mute Swan in Great Britain. Green dots = annual index; blue line = smoothed trend.

WeBS trend for Mute Swan in Northern Ireland Green dots = annual index; blue line = smoothed trend.

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Icelandic wanderers

The entire Icelandic and Greenland population of Pink-footed Geese winters in the UK.

By **Neil Calbrade** BTO

Skeins of Pink-footed Geese calling loudly as they fly high overhead is a familiar site in much of northern and eastern UK during the autumn and winter, as birds have migrated here in large numbers each autumn from their Icelandic and Greenland breeding grounds.

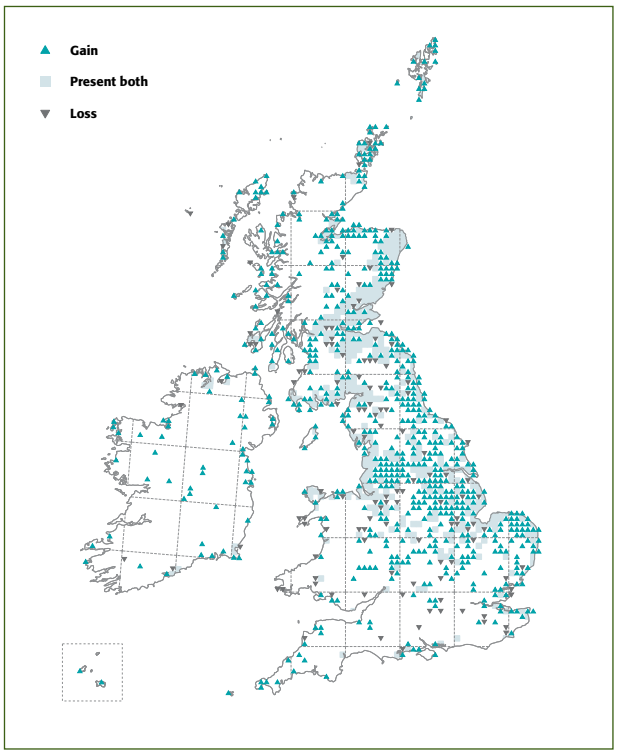
There are two populations of Pink-footed Geese, one that breeds in the remote highlands of central Iceland, some of the northern Icelandic lowlands and in eastern Greenland and winters in the UK, and another which breeds in the Svalbard archipelago of northern Norway and winters predominantly in Denmark, the Netherlands and Belgium. Sightings of marked birds show that these are almost completely discrete except in severe winters when is a small exchange of individuals between the two populations (Brides *et al.* 2021).

The population wintering in Britain is monitored through the Icelandic-breeding Goose Census (IGC), which has been conducted annually since 1960 as part of the GSMP, with the current population around 466,400 individuals (see page 35). Although traditionally Pink-footed Geese wintered predominantly in eastern and southern Scotland and in Lancashire, increasing numbers now winter further south and east around the Humber Estuary and on the North Norfolk Coast. The population which breeds in the Svalbard archipelago numbered around 92,000 birds in autumn 2022 (AEWA 2023).

The increase in the population wintering in Great Britain has been nearly tenfold since the first IGC Counts in 1960 when the population was estimated at 48,000 birds. Numbers since then have steadily increased, peaking in 2015/16 when the population was estimated at 536,871 (Mitchell 2016), although there has subsequently been a decline, likely due to a series of poor breeding seasons.

▲ **WeBS trend for Pink-footed Goose in the UK.**
Green dots = annual index; blue line = smoothed trend.

Table 4 lists the 34 sites which hold internationally important numbers of Pink-footed Geese. Many of the peak counts are due to the IGC counts supplementing the WeBS Core Counts. Two sites, Montrose Basin and North Norfolk Coast, have five-year means in excess of 50,000 birds, while a further eight sites have five-year means in excess of 20,000 birds.



▲ **Winter distribution change map from *Bird Atlas 2007–11* showing the increase in range between the 1981–84 and 2007–11 Atlases (from Balmer *et al.* 2013).**

PINK-FOOTED GEESE BY CHRIS KNIGHTS/BTO

Table 4 Internationally important WeBS sites for Pink-footed Goose.

Site	2019/20	2020/21	2021/22	2022/23	2023/24	Month	5-year mean
Montrose Basin†	66,575	84,400	72,350	42,479	46,705	Oct	62,502
North Norfolk Coast†	52,111	41,052	44,589	59,095	87,075	Dec	56,784
Humber Estuary†	10,963	34,150	(42,409)	18,177	30,945	Oct	27,329
The Wash†	34,870	25,168	27,700	(26,789)	16,877	Nov	26,281
Inner Moray and Beauly Firths†	46,950	24,430	15,650	25,411	13,023	Oct	25,093
Loch of Skene†	24,060	16,140	19,510	42,970	18,700	Nov	24,276
Ribble Estuary†	(25,445)	18,820	(25,642)	(19,730)	(24,336)	Apr	22,795
Middlemuir (New Pitsligo Moss)†	19,050	17,580	28,750	18,130	23,800	Nov	21,462
Dee Estuary (England and Wales)†	21,371	(22,998)	16,000	19,814	23,816	Feb	20,800
Morecambe Bay†	13,210	20,005	18,880	17,230	29,335	Oct	19,732
The Wilderness - Ladybank†	14,336	26,984	21,424	13,046	2,145	Oct	15,587
Carsebreck & Rhynd Lochs†	24,000	17,500	22,500	10,700	2,850	Nov	15,510
R Clyde: Carstairs to Thankerton	15,200	-	-	-	-	-	15,200
Forth Estuary†	14,617	22,125	13,946	12,615	10,160	Oct	14,693
Cromarty Firth†	11,870	16,110	15,000	15,991	10,240	Nov	13,842
Mersey Estuary†	7,420	13,400	9,783	6,244	30,738	Mar	13,517
Hule Moss†	10,000	17,000	14,000	12,000	14,000	Nov	13,400
Alt Estuary†	16,305	33,000	5,626	4,149	3,524	Nov	12,521
Breydon Water and Berney Marshes†	13,450	19,000	12,040	3,000	11,928	Nov	11,884
Wigtown Bay	(4,090)	19,392	7,971	8,898	7,964	Feb	11,056
Solway Estuary†	6,800	(7,102)	(16,975)	5,334	14,985	Oct	11,024
Loch Leven†	14,886	11,407	8,759	8,887	-		10,985
Loch of Strathbeg†	17,275	5,998	12,414	10,422	6,163	Mar	10,454
Slains Lochs (Meikle and Sand and Cotehill)†	5,870	9,400	15,700	12,540	6,220	Oct	9,946
WWT Martin Mere†	7,600	17,400	8,810	6,300	9,478	Oct	9,918
Loch of Lintrathen†	17,125	4,130	15,900	10,675	2	Oct	9,566
Ravenstruther	7,750	-	-	-	-	-	7,750
Bogbank†	11,282	9,240	10,831	1,940	4,500	Oct	7,559
Hatfield Moors†	4,200	2,500	10,000	10,000	(10,000)	Nov	7,340
Pond of Drummond†	7,450	2,750	1,933	10,400	13,400	Dec	7,187
West Water Reservoir†	6,800	7,450	1,810	3,510	9,290	Oct	5,772
Caithness Lochs†	-	-	-	-	5,648	Mar	5,648
Caerlaverock NNR - Blackshaw Bank†	4,575	6,676	4,276	1,591	10,909	Oct	5,605
Ythan Estuary	6,000	230	16,800	2,092	2,000	Oct	5,424

• Annual peaks and month in 2023/24 when recorded are shown. Brackets indicate incomplete coverage. Five-year mean is for period 2019/20 to 2023/24.
† = Counts include supplementary data.

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Focus on... Black-throated Diver

By **Gill Birtles** BTO

Black-throated Divers are a difficult species to monitor for WeBS, being largely found in very remote areas. In the spring and summer months, they are found nesting in small mountainous pools and lochs in northern Scotland. In the winter, they move to coastal waters and occasionally appear on inland waterbodies throughout the UK (Balmer *et al.* 2013).

Furthermore, the remote areas in which they are found, particularly on the west coast of Scotland, have few people living locally. This means it is challenging to find counters who are confident in counting coastal WeBS sectors in the winter on a monthly basis, so it is likely that this species may also be very under-recorded. Counting can be difficult as Black-throated Divers can stay under water for over a minute when they dive for food, such as fish and crustaceans, and can then resurface a good distance away from where they were last seen.

The top WeBS sites for Black-throated Divers in 2023/24 were Sound of Gigha and Rhunahaorine (43), Gerrans Bay (29) and Loch Gairloch (25). Counts made by the RAF Ornithological Society (RAFOS) carrying out their one-off annual counts through their Operation Winter Duck expeditions on the west coast of Scotland are incredibly important – in January 2024 they accounted for over 50% of the Black-throated Divers recorded in all UK WeBS Core Counts for that month.

Numbers of Black-throated Divers increased from 1993/94, peaking in 2013/14, but since then, have decreased dramatically and are now closer to their 1993/94 levels. However, when looking at these trends, it is a fine balance between determining genuine population decline and under-recording due to limited coverage of WeBS sectors, while accurate counting of divers (and seaducks) is very dependent on the sea state.

They are easily disturbed when breeding and their vulnerability to marine pollution makes them vulnerable at their over-wintering sites too (RSPB 2025).

Therefore, it is more important than ever to count these species where we can through WeBS counts and to keep a close eye on their population levels.

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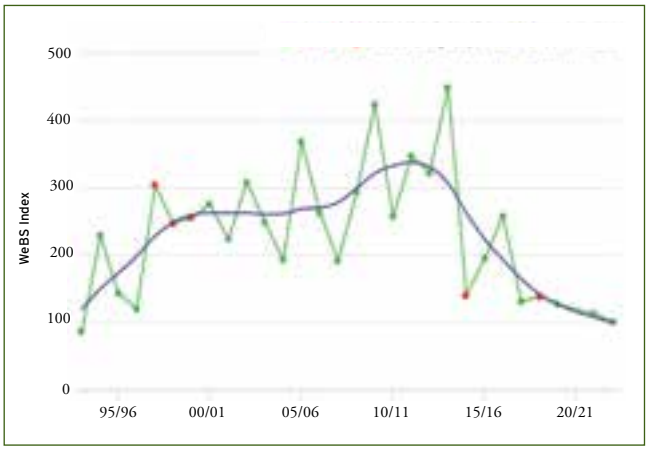
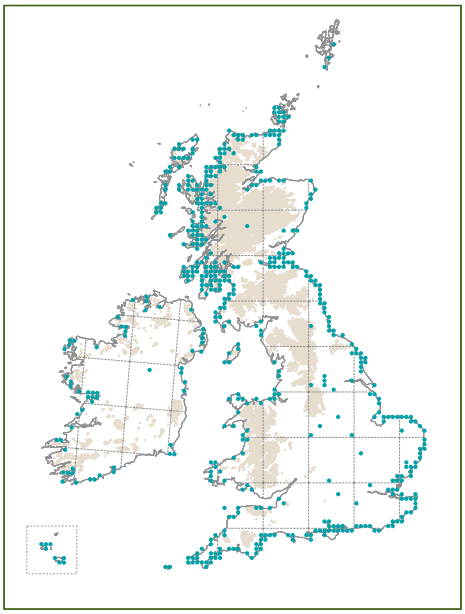


▲ **WeBS trend for Black-throated Diver in the UK.** Green dots = annual index; red dots = sparse data; blue line = smoothed trend.



▲ **Winter distribution map from *Bird Atlas 2007–11* showing a predominently coastal distribution (from Balmer *et al.* 2013).**

BLACK-THROATED DIVER BY CHRIS KNIGHTS/BTO

Focus on... Great White Egret

By **Gill Birtles** BTO

Great White Egrets were once persecuted for the beautiful long, white feathers of their breeding plumages, which were often used to adorn hats and fascinators, and was one of the main reasons the RSPB was founded in 1889. In the United States in the late 1800s, they were almost wiped out completely (The Wildlife Trusts 2025).

Now, however, the days of Great White Egrets being persecuted to extinction feels like a very distant memory, as this species is one of the success stories of recent years, with their rapid expansion throughout the UK.

WeBS data have been pivotal in charting the meteoric rise of Great White Egret numbers since they began colonising the UK. In 2010/11, Great White Egrets were recorded on just 19 sites, with a peak count of five birds on the Somerset Levels. In comparison, in 2023/24, they were recorded on 391 sites with a peak count of 108 on the Somerset Levels.

It is not just the wintering population increasing, they are now becoming established as a breeding bird in the UK, so much so that they were added as a recordable species to the BTO's Heronries Census in 2012 and the 2024 Summary Report confirms at least eight sites where they are breeding (Birtles *et al.* 2025).

WeBS data also shows the true geographical spread of Great White Egrets in the UK now, and although the bulk of the records come from England, it looks as though they will soon be as common and widespread across the UK as Little Egrets have become in recent years.

Like both Little and Cattle Egrets, the expansion of Great White Egret into the UK has followed increases on the continent and an expansion north and west across Europe. The key drivers behind this expansion are unclear, but contributing factors may include increases and improvements to habitat, reduced persecution and improved legal protection and climate change (BTO BirdFacts 2025).

The strength of Great White Egret's success is that they can thrive in a variety of wetland habitats from marshland, riverine and coastal habitats in both rural and urban settings, making WeBS counts key for monitoring this species.

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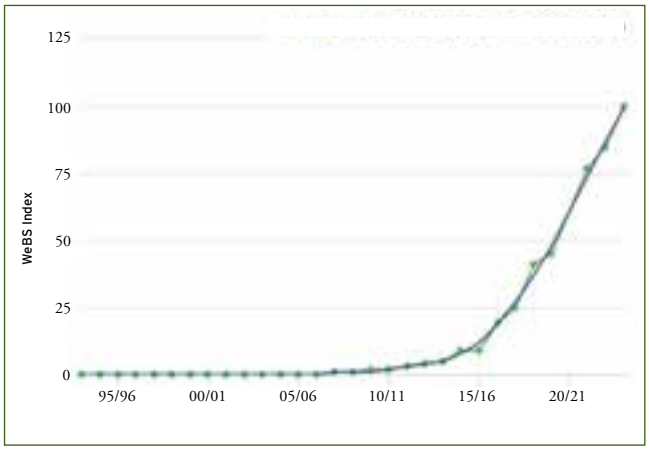
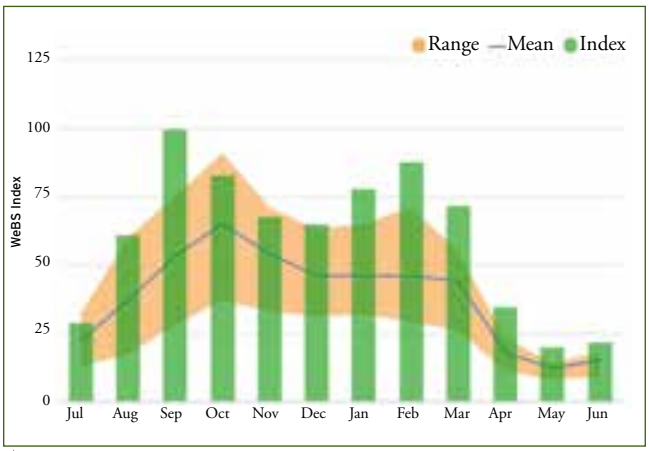


▲ **WeBS trend for Great White Egret in the UK.**
Green dots = annual index; blue line = smoothed trend.



▲ **Monthly indices for Great White Egret in the UK.**
Green bars = 2023/24; blue line/orange hatched area = previous five-year mean/range.

GREAT WHITE EGRET BY NEIL CALBRADE

Decline in Oystercatcher numbers on the Exe Estuary

By **Bridget Hiza** BTO

The Oystercatchers that winter on the UK coast breed across Northwest Europe, Scotland, the Netherlands and Norway (Wernham *et al.* 2002).

Currently, the UK wintering population of Oystercatchers is 290,000, with the population of Oystercatchers wintering on the Exe Estuary SPA decreasing by 58% in the last 25 years (Caulfield *et al.* 2025).

Recent data from WeBS counts have shown that numbers of Oystercatchers wintering in Great Britain have decreased since the late 1980s/early 1990s. However, there has been a steeper decline specifically in the Exe Estuary population, declining from 1,835 birds in 1989 to 1,344 in 2014 (Goss-Custard *et al.* 2024).

A study carried out by Goss-Custard *et al.* (2024) investigated reasons explaining this decline in wintering numbers of Oystercatchers on the Exe Estuary and found there has been kleptoparasitism, with Carrion Crows and European Herring Gulls stealing mussels from Oystercatchers (Goss-Custard *et al.* 2024). Since mussels have been recorded as the main source of food for wintering Oystercatchers (Goss-Custard & Durell 1983), the decline in Oystercatchers' ability to feed on the mussels due to kleptoparasitism is a plausible reason for the decline in Oystercatchers in the Exe Estuary.

This study showed that juvenile Oystercatchers are affected more than adult Oystercatchers by Carrion Crows and Herring Gulls stealing their food, increasing their chance of starvation. Juvenile Oystercatchers were found to choose a different wintering site to the Exe Estuary due to it being harder to meet their food intake here (Goss-Custard *et al.* 2024).

Oystercatchers are a near-threatened species and are declining (BirdLife International 2019). The continuation of WeBS counts is important to understand population trends of species in specific areas to compare with regional and national data, in order to put measures in place to reverse the population declines in the future.

TERMINOLOGY GUIDE

Kleptoparasitism: Feeding technique where one animal steals food off of another animal. In this case, it is interspecific (between species), with Carrion Crows and Herring Gulls stealing mussels off of Oystercatchers.

OYSTERCATCHER BY LIZ CUTTING/BTO

FIND OUT MORE

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Impacts of climate change on waterbirds in the UK and Ireland

By **Bridget Hiza** and **Niall Burton** BTO

Since the 1990s, there has been a decline in UK wintering waterbird indices, considered to be partly due to responses to a warming climate. There have also been decreases in UK breeding waterbird populations. The potential effects of climate change in driving these declines are summarised in the latest 'Marine Climate Change Impacts Partnership' science review (Burton *et al.* 2023).

Waterbirds are increasingly subject to the effects of climate change across the freshwater, coastal and marine habitats that they use. Although many waterbird species breed in the UK, their numbers are greatest during the non-breeding seasons, with birds that breed in northern Europe, Fennoscandia, Russia, Iceland, Greenland and Cananda coming to the UK to winter, or passing through while migrating along the East-Atlantic flyway.

Waterbirds may be impacted by climate change across their annual cycle. For example, populations may be impacted through effects on their breeding success or on their overwintering survival, leading to changes in the numbers seen at all stages of their annual cycle.

With increasing temperatures, species wintering ranges, especially for waders and diving ducks, have been shifting north-eastwards across Europe as winters have become milder. Climate change is also resulting in phenological changes of bird migration or breeding. For example, due to milder winters, Bewick's Swans have been recorded to be 'short-stopping', whereby they are shifting their wintering distributions to be closer to breeding grounds, and spending less time on their wintering areas (short-staying).

Increasing temperatures may increase the breeding productivity and survival of Arctic waterbirds through increased invertebrate abundance and reduced energetic demands. However, these Arctic-breeding populations may also be affected by climate change indirectly, through changes to predator and prey populations and habitat. Waterbird breeding success in the UK and Ireland, in contrast, may be negatively impacted by increasing temperatures and reduced rainfall that may reduce prey abundance or availability. The survival of waterbird species is also particularly related to environmental conditions through the non-breeding seasons, with the reduced severity of winters associated with increased survival.

UK wintering waterbirds that breed in Arctic and sub-Arctic areas are the most vulnerable to climate change, with the breeding areas available predicted to decrease significantly by 2080.

In order to reduce impacts of climate change for waterbirds, it is vital to continue monitoring abundance, breeding success and survival. WeBS counts are vital to understand abundance and population changes of these species in the UK to track effects of climate change on wetland birds and to subsequently put conservation measures in place.

FIND OUT MORE

Burton, N.H.K., Daunt, F., Kober, K., Humphreys, E.M. & Frost, T.M. 2023. Impacts of Climate Change on Seabirds and Waterbirds in the UK and Ireland. *MCCIP Science Review 2023*.

BEWICK'S SWANS BY EDMUND FELLOWES/BTO

International Species Thresholds

Population thresholds help identify potential sites of international importance for waterbird species and populations.

By **Ian Woodward** and **Bridget Hiza** BTO

The 1% thresholds that are used to identify sites of international or national importance are shown on the species pages of the WeBS Report Online, and are used to flag WeBS sites with peak counts that exceed these thresholds and thus potentially qualify for a conservation designation. These thresholds are updated periodically when population estimates are updated and Table 5 shows the changes to the International thresholds which have been applied to the 2023/24 WeBS Report Online following population updates made by the African-Eurasian Waterbird Agreement (AEWA) (2021) and the international trends as defined in that publication (DEC = decrease; INC = increase; STA = stable; UNC = Uncertain).

Table 5 Changes to the 1% international thresholds.

Species	International Population	International Threshold	Threshold change	International Trend
Svalbard Light-bellied Brent Goose	*hrota*, Svalbard/Denmark & UK	130	+30	INC
Greenland Barnacle Goose	East Greenland/Scotland & Ireland	720	-90	STA
Icelandic Greylag Goose	*anser*, Iceland/UK & Ireland	760	-220	DEC
Taiga Bean Goose	*fabalis*, North-east Europe/North-west Europe	890	+370	INC?
Greenland White-fronted Goose	*flavirostris*, Greenland/Ireland & UK	220	+30	DEC
Shelduck	North-west Europe	3,100	+600	STA
Shoveler	North-west & Central Europe (win)	750	+100	INC
Gadwall	*strepera*, North-west Europe	1,400	+200	INC
Pintail	North-west Europe	740	+140	STA/INC
Teal	*crecca*, North-west Europe	6,700	+1,700	INC
Pochard	North-east Europe/North-west Europe	1,500	-500	DEC
Scaup	*marila*, Northern Europe/Western Europe	2,600	-500	INC
Velvet Scoter	Western Siberia & Northern Europe/NW Europe	3,000	-1,000	INC?
Red-breasted Merganser	North-west & Central Europe (win)	1,300	+440	STA/DEC?
Great Northern Diver	Europe (win)	95	+45	INC
Little Grebe	*ruficollis*, Europe & North-west Africa	3,700	-1,000	STA
Spoonbill	*leucorodia*, West Europe/West Mediterranean & West Africa	210	+50	INC
Grey Heron	*cinerea*, Northern & Western Europe	3,500	-1,500	STA/DEC
Great White Egret	*alba*, W, C & SE Europe/Black Sea & Mediterranean	1,500	+720	INC
Cormorant	*carbo*, North-west Europe	970	-230	DEC
Golden Plover	*altifrons*, Iceland & Faroes/East Atlantic	12,000	+2,700	DEC
Whimbrel	*islandicus*, Iceland, Faroes & Scotland/West Africa	7,700	+1,000	STA/INC
Black-tailed Godwit	*islandica*, Iceland/Western Europe	1,700	+600	INC
Turnstone	*interpres*, NE Canada & Greenland/W Europe & NW Africa	2,300	+900	STA
Knot	*islandica*, NE Canada & Greenland/Western Europe	3,300	-2,000	STA
Greenshank	Northern Europe/SW Europe, NW & West Africa	2,900	-400	STA/INC
Little Gull	Central & E Europe/SW Europe & W Mediterranean	1,300	+300	DEC
Great Black-backed Gull	North & West Europe	2,700	-900	STA
Herring Gull	*argenteus*, Iceland & Western Europe	7,600	-2,600	DEC
Lesser Black-backed Gull	*graellsii*, Western Europe/Mediterranean & West Africa	4,900	-600	DEC
Little Tern	*albifrons*, Europe north of Mediterranean (bre)	220	+30	STA

FIND OUT MORE

AEWA. 2021. *Conservation Status Review 8 (CSR8) Report on the conservation status of migratory waterbirds in the agreement area. Eighth edition.* Agreement on the Conservation of African-Eurasian Waterbirds, August 2021.

Naturalised populations of Barnacle Geese in the UK

By **Bridget Hiza** BTO

There are three populations of Barnacle Geese in Britain and Ireland, two of which are migratory: one breeding in Greenland and the other population breeding on Svalbard. The third population is a naturalised population, meaning that it has established as a breeding species outside its natural range, breeding in the UK and found here all year round (Brides *et al.* 2025).

This naturalised population is mainly found in England and Wales, with smaller numbers found in Scotland and Northern Ireland. It is assumed that this naturalised population resulted from a number of different situations, including injured birds that were unable to return to their breeding grounds, escaped birds, and immigrants from the Dutch, German or Russian population (Brides *et al.* 2025).

Since the last census of the naturalised population of Barnacle Geese in 1991, knowledge of the number and distribution of this population was lacking.

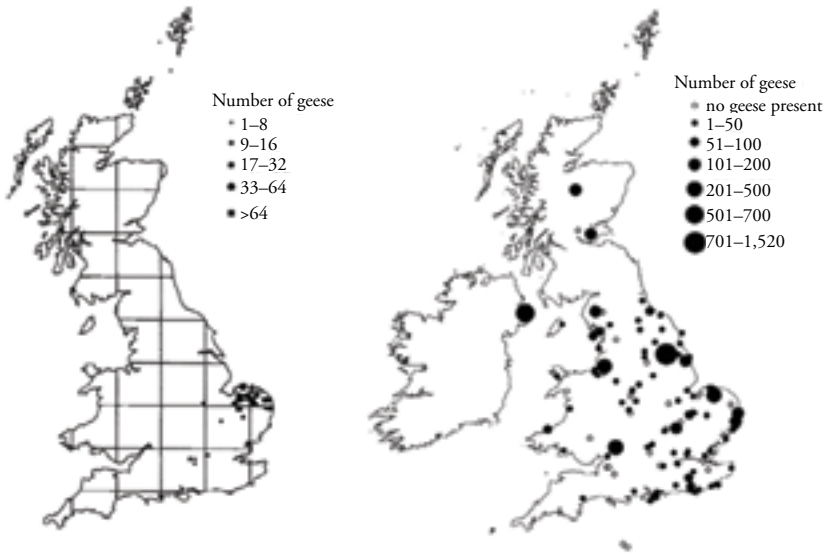
A census was carried out across the UK in 2023 to collect information on abundance and distribution of naturalised Barnacle Goose in the UK to better understand the status of this population. The results are reported in Brides *et al.* (2025).

Prior to this census, a questionnaire was sent out to all county bird recorders in April 2021, collecting information on where regular Barnacle Goose flocks were found, as well as information on breeding colonies and moulting flocks. Data were also collected from WeBS. Once locations of known flocks were established, this census was held on 18/19 February 2023, coinciding with the WeBS Core Count to include WeBS data. To ensure migratory Barnacle Goose flocks were not included, counts from north Cumbria and Northumberland were excluded from this assessment, as these are known sites for migratory Barnacle Geese from the Svalbard population.

Of the 154 sites being studied, 98 had naturalised Barnacle Geese. Most birds were found in England, with smaller numbers in Scotland, Wales, Northern Ireland, and the Isle of Man.

The 2023 census found there were an estimated 5,800 naturalised Barnacle Geese, a 456% increase since the previous census in 1991 (Delaney 1993).

This naturalised population is not thought to be having a negative effect on native birds in the UK, however it is important to continue monitoring numbers, through both ringing and WeBS counts, to get a better understanding of this population.



▲ **Distribution and abundance of naturalised Barnacle Geese in the UK (Brides *et al.* 2025). Left map shows data from summer 1991 census (Delany 1993) and right map shows data from winter 2023 census (Brides *et al.* 2025). Counts at Highland Wildlife Park were undertaken in summer 2022.**

FIND OUT MORE

Brides, K., Petrek, S.W., Gornall, D.I., Ritchie, S.R., Tarodo, A.G., Wood, K.A. & Vickers, S.H. 2025. Naturalised populations of Barnacle Geese in the UK: an update on numbers, distribution and breeding. *British Birds* **118**: 60-71.

Delany, S. 1993. Introduced and escaped geese in Britain in summer 1991. *British Birds* **86**: 591-599.

GSMP Surveys 2023/24

Censuses and age assessments of migratory goose and swan species are carried out in the UK and Ireland.

By **Neil Calbrade** & **Alastair Feather** BTO

GOOSE AND SWAN AGE ASSESSMENTS

Age assessments comprise two measures of annual breeding success (or productivity): the proportion of young (first-winter birds in non-breeding flocks), and the mean brood size (number of young produced by successful breeding pairs).

Table 6 shows the number of birds aged and the breeding success of goose and swan populations wintering in the UK, recorded during various surveys in 2023/24. Note that the number of birds aged may include the same individuals more than once if they have been aged on multiple dates. No age assessments were received for Pink-footed or Svalbard Light-bellied Brent Geese in 2023/24.

ERRATA

Please note that the mean brood size figures previously published for 2022/23 were calculated incorrectly for Dark-bellied Brent Goose (2.6 rather than 2.11), Pink-footed Goose (2.1 rather than 0.83), Bewick's Swan (2.1 rather than 1.44) and Whooper Swan (2.1 rather than 2.04).

The corrected figures are now available together with data from all survey years and time series plots on a new tab of the WeBS Report Online, at **https://app.bto.org/webs-reporting/ratios.jsp**

▲ **Locations from where age assessments of geese and swans were received in 2023/24.**

Table 6 Age assessments of geese and swans.

Population	Number aged	Percentage young (%)	Mean brood size (young per succesful pair)
Dark-bellied Brent Goose	5,683	12.04	1.75
Nearctic Light-bellied Brent Goose	15,946	17.53	2.81
Svalbard Light-bellied Brent Goose	-	-	-
Svalbard Barnacle Goose	10,282	21.9	2.25
Greenland Barnacle Goose	5,130	3.5	1.65
Taiga Bean Goose	196	10.7 (Slamannan)	N/A
Pink-footed Goose	-	-	-
Greenland White-fronted Goose	4,213 (GB) 3,418 (Ireland)	3.04 (GB) 2.87 (Ireland)	1.75 (GB) 1.96 (Ireland)
Bewick's Swan	725	9.66	1.46
Whooper Swan	24,365	9.04	1.93

ICELANDIC-BREEDING GOOSE CENSUS 2023/24

The Icelandic-breeding Goose Census (IGC) annually monitors two migratory goose populations: the Greenland/Iceland Pink-footed Goose and the Icelandic Greylag Goose, the results from which can be found in Table 7.

For Pink-footed Geese, estimates were made for 16 core sites from where no counts were received in October, bringing the total to 466,400 which has been selected as the population estimate for 2023. This represents a 5% increase on the previous year (443,048 birds).

Counts on the IGC weekends in October and November exceeding the international threshold for Pink-footed Geese (5,400) were received from 28 sites in 2023/24, the highest counts being 46,705 at Montrose Basin and 30,945 on Read's Islands Flats on the Humber Estuary, both in October. Additional roost counts were made at several sites in other months, with the highest count away from the standard IGC months being 61,425 at Holkham Bay, Norfolk in December.

A total of 84,809 Greylag Geese were counted during the November census. This figure was adjusted to account for the estimated number of British/Irish Greylag Geese likely to have been counted at sites during the census, resulting in an amended population estimate of 54,992 Icelandic Greylag Geese. This represents a 7.3% decline in the population compared with the previous year (59,303 birds).

Given the increase in the British/Irish population into areas traditionally used by Icelandic birds in winter, accurate assessment of the population of Icelandic Greylag Geese is becoming increasingly difficult. Work is currently ongoing with Icelandic colleagues to improve our understanding of the situation.

TAIGA BEAN GOOSE

Two flocks of Taiga Bean Geese winter in the UK and were monitored during the winter of 2023/24; on the Slammanan Plateau, Falkirk by Bean Goose Advisory Group (BGAG) and the Yare Valley, Norfolk by RSPB reserve wardens.

Table 7 IGC counts of Pink-footed and Greylag Geese.

Region/area	Pink-footed Goose						Greylag Goose		
	October 2023			November 2023			November 2023		
	Count	Sites	Estimates	Count	Sites	Estimates	Count	Sites	Adjustments
Iceland							25,663		
Norway									
Faroe Islands				8			980		
Ireland									
Shetland				7	4	0	7,815	15	-582
Orkney				831	9	0	42,198	30	-27,386
Caithness	2,219	5	0	0	0	146	4,197	10	-500
Highland and Moray	20,280	4	47,936	23,640	6	21,027	1,286	4	
Aberdeenshire	25,510	3	5,506	42,500	2	8,819	80	1	-47
Angus	46,705	1	11,909	23,185	1	580	4	1	
Perth and Central	30,146	12	10,349	8,134	6	7,358	1,052	7	-219
Fife	2,825	2	7,319	1,289	2	8,043	8	1	
Lothian	11,438	6	0	3,336	4	0	381	6	
Argyll and Bute	1	1	0	3	1	0	62	2	
Dumfries & Galloway	13,138	6	3,460	6,231	6	0	16	2	-16
Scottish Borders	17,811	5	0	23,810	4	0	315	4	-315
Cumbria	14,836	7	0	6,177	3	3,650	0	0	
Northumberland	5,393	2	2,938	0	0	120	154	2	-154
Humberside	59,193	6	5,805	2,965	2	16,808	25	1	-25
Lancashire and Merseyside	85,455	10	9,150	55,816	11	6,227	573	3	-573
Norfolk	27,078	10	0	70,281	11	0	0	0	
Raw total	**362,028**			**268,213**			**84,809**		
Estimated	104,372			72,778			0		
Adjustments	0			0			-29,817		
Total	**466,400**			**340,991**			**54,992**		

The peak count on the Slammanan Plateau was 178, but this may not reflect the actual total as this count was made using thermal imagery footage taken from a drone to derive a count of birds arriving at a roost site. If correct this peak represents a radical decrease from the 218 in 2022/23. A total of 196 birds (possibly including some duplication) were aged during the winter. The percentage of juveniles identified was considered to be 10.7%, slightly higher than that recorded in winter 2022/2023 (9.9%) (Minshull 2025).

The Yare Valley population has dwindled considerably over the last two decades, from 485 in 1990/91 to no confirmed records in 2022/23, though in 2023/24, there were two birds seen in late November/early December 2023.

GREENLAND WHITE-FRONTED GOOSE

The 2023/2024 survey represents the 42nd annual census of Greenland White-fronted Geese coordinated in Great Britain by the Greenland White-fronted Goose Study and in Northern Ireland and the Republic of Ireland co-ordinated by the National Parks & Wildlife Service. Table 8 shows the most recent five seasons of total census data available based on the full survey of all known regular winter haunts for this population, broken down by totals for Wexford and the rest of Ireland, and from Islay and the rest of Britain.

The global population of Greenland White-fronted Geese in spring 2023 comprised 14,997 individuals, the lowest since coordinated counts began in 1982 which was made up of 5,577 in Ireland and 9,420 in Britain, down by 16.8% compared to 18,027 counted in spring 2023.

Following a poor breeding season in 2022, summer 2023 proved to be the least productive breeding season on record, especially among birds wintering on Islay. A sample from there of 2,195 birds contained just 51 first-winter birds, 2.3% compared to 3.3% in winter 2022/2023. The percentage of young in Great Britain was 3.04%, compared with 4.9% in 2022/23, although in Ireland, the percentage young was 2.87% compared with 2.5% in 2022/23 (Fox *et al.* 2024).

SVALBARD BARNACLE GOOSE

Counts of Svalbard Barnacle Geese on the Solway and on Budle Bay, Northumberland began in early October and continued through to late April. The peak count recorded was 40,499 on 19 December 2023 (of which 36,249 were on the Solway), with a total of 40,486 having been counted on 25 October (37,486 on Solway).

Counts from Budle Bay were the highest since 2019/20 with a peak count of 6,600 birds in early October.

Age assessments in 2023/24 were carried out on the Solway during the winter, with 10,282 birds assessed, which is equivalent to 25% of population wintering there. The results revealed that young birds comprised 21.9% of the flocks, and mean brood size of 2.25 goslings per successful pair. This better than average breeding success for 2023 came in the season followed 2022, which was at that time also the best on record for the last 25-year period.

These two years of greater than average breeding success have seen the population recover to almost pre-pandemic levels – despite the potential loss of up to 30% of the Solway population in 2021/22 because of the HPAI outbreak – though still below the maximum flyway population of 44,796 recorded on 25 October 2017. Presumably this catastrophic event represented some sort of classic density-dependent release for the remaining population, enabling them to breed more successfully. (Griffin 2024).

NEARCTIC LIGHT-BELLIED BRENT GOOSE

The 2023/24 census in Ireland, Iceland and northern France produced a total of 37,044 birds in October 2023. A total of 15,946 birds were aged, with 17.53% being juveniles, and of 271 broods, the average brood size was 2.81.

FIND OUT MORE

Fox, A., Francis, I., Walsh, A., Norriss, D. & Kelly, S. 2024. *Report of the 2023/24 international census of Greenland White-fronted Geese.* Greenland White-fronted Goose Study report.

Griffin, L. 2024. GSMP winter 2023–24 summary: Barnacle Geese wintering on the Solway Firth & Budle Bay. Unpublished Report to BTO. Prepared by ECO-LG Ltd., Dumfries, Scotland.

Minshull, B.C., Maciver, A., Thomson, W. A., Griffin, L. & Mitchell, C. 2025. *Population and Distribution of the Taiga Bean Goose on the Slamannan Plateau, Winter 2023/2024.* Unpubl. Report to the Bean Goose Advisory Group.

Table 8 Greenland White-fronted Geese counts.

	Spring 2020	Spring 2021	Spring 2022	Spring 2023	Spring 2024
Wexford	8,312	6,262	5,361	5,531	4,283
Rest of Ireland	2,106	2,148	2,928	2,261	1,294
Islay	5,910	6,878	5,297	5,168	4,926
Rest of Britain	5,223	4,898	4,441	5,067	4,494
Population Total	**21,551**	**20,186**	**18,027**	**18,027**	**14,997**

High Pathogenicity Avian Influenza (HPAI) in different populations of Barnacle Geese

By **Bridget Hiza** BTO

The winter of 2020/21 saw one of the worst outbreaks of HPAI in poultry in the UK, and the worst HPAI-related mortality ever recorded in wild birds. The virus H5N1 originated from a goose farm in China in 1996 and has resulted in global damage of poultry and high levels of wild bird mortality, particularly affecting migratory wildfowl. Svalbard Barnacle Geese wintering on the Solway Estuary were particularly affected by this outbreak, which killed approximately 31% of the population (11,400 birds) in 2021/22, with peak mortality in December 2021 and January 2022 (Griffin & Peach 2024).

The virus then crossed into other species groups, decimating many seabird breeding sites in the summer of 2022. In the following winter of 2022/23, many species of bird were affected by HPAI, including a different population of Barnacle Geese than the one that was so badly affected in 2020/21–2021/22 – the population that breeds in Greenland and winters in western Scotland and Ireland was worst hit (Percival *et al.* 2024). The presence of the disease was spatially patchy, with birds at some sites experiencing 30–56% mortality, but with little impact at other sites. This was also found in some seabirds (Atkinson & Baillie 2024; Atkinson *et al.* in press).

As geese produce large broods, recovery of populations can be relatively quick compared with many of the seabirds that were affected which may only raise a single chick each year. Although the 2020/21 outbreak resulted in almost a third of the Solway population dying, due to high breeding productivity in the two years after this outbreak, there has been a recovery of wintering goose numbers on the Solway and hopefully the Greenland population will also recover quickly.

Improved monitoring of survival of waterbirds through ringing will help provide the information needed to assess and predict the impacts of HPAI on populations. There is also immense value in direct monitoring of mortality for more immediate surveillance of the spread of HPAI among bird species and geographically in the UK (Pearce-Higgins *et al.* 2023).

GSMP and WeBS surveyors are urged to record mortalities on their surveys, while dead birds also need to continue to be reported through official channels for testing surveillance.

FIND OUT MORE

Atkinson, P.W. & Baillie, S.R. 2024. Jumping species and seasons – the spread and impact of highly pathogenic avian influenza on seabirds and waterbirds, *Bird Study*, **71**: 289–292.

Atkinson, P.W., Frost, T.M *et al.* (15 co-authors). In press. Evaluating the use of carcass and testing data to assess the high-pathogenicity avian influenza (HPAI) related mortality in wild birds in the United Kingdom and Crown Dependencies between 2021–2023. *Bird Study.* **https://doi.org/10.1080/00063657.2025.2492902**

Griffin, L.R. & Peach, W.J. 2024. Impacts of highly pathogenic avian influenza (HPAI) on a Barnacle Goose *Branta leucopsis* population wintering on the Solway Firth, UK, *Bird Study* **71**: 392–403.

Pearce-Higgins, J.W., Humphreys, E.M., Burton, N.H.K., Atkinson, P.W., Pollock, C., Clewley, G.D., Johnston, D.T., O'Hanlon, N.J., Balmer, D.E., Frost, T.M., Harris, S.J. & Baker, H. 2023. *Highly pathogenic avian influenza in wild birds in the United Kingdom in 2022: impacts, planning for future outbreaks, and conservation and research priorities. Report on virtual workshops held in November 2022*. BTO Research Report 752, BTO, Thetford, UK.

Percival, S., Bowler, J., Cabot, D., Duffield, S., Enright, M., How, J., Mitchell, C., Percival, T. & Sigfússon, A. 2024. Spatial and temporal variation in mortality from avian influenza in Greenland Barnacle Geese *Branta leucopsis* in their wintering grounds. *Bird Study* **71**: 404–411.

ACKNOWLEDGEMENTS

We are extremely grateful to the many IGC Local Organisers and counters, without whom the annual monitoring of Pink-footed and Icelandic Greylag Goose populations would not be possible.

The Greenland White-fronted Goose counts were provided by the Greenland White-fronted Goose Study Group. The Taiga Bean Goose counts were supplied by the Bean Goose Advisory Group. The Greenland Barnacle Goose Census was organised by NatureScot and National Parks & Wildlife Service. The Svalbard Barnacle Goose counts were carried out under contract. The Nearctic Light-bellied Brent Goose counts were provided by Kerry Mackie.

Mersey Estuary at low tide

By **Neil Calbrade** BTO

Located on the coast of northwest England, the Mersey is a large, sheltered estuary which comprises large areas of saltmarsh and extensive intertidal sand- and mud-flats, along with limited areas of brackish marsh, reclaimed marshland, rocky shoreline and boulder clay cliffs. The Mersey has the second highest tidal range in the UK, which has created deep channels and sandbanks throughout the estuary. Large numbers of wildfowl and waders use the Mersey Estuary as both a wintering and staging post for which the site is designated as a SSSI and, as recently as 1995, as a Ramsar site and an SPA. Large conurbations on both banks dominate the site, with Liverpool and Widnes to the north and Birkenhead, Runcorn and Ellesmere Port to the south. Major industry is also a feature of the estuary with adjacent large docks and petrochemical plants, while an ongoing proposal for a tidal barrage is the primary concern.

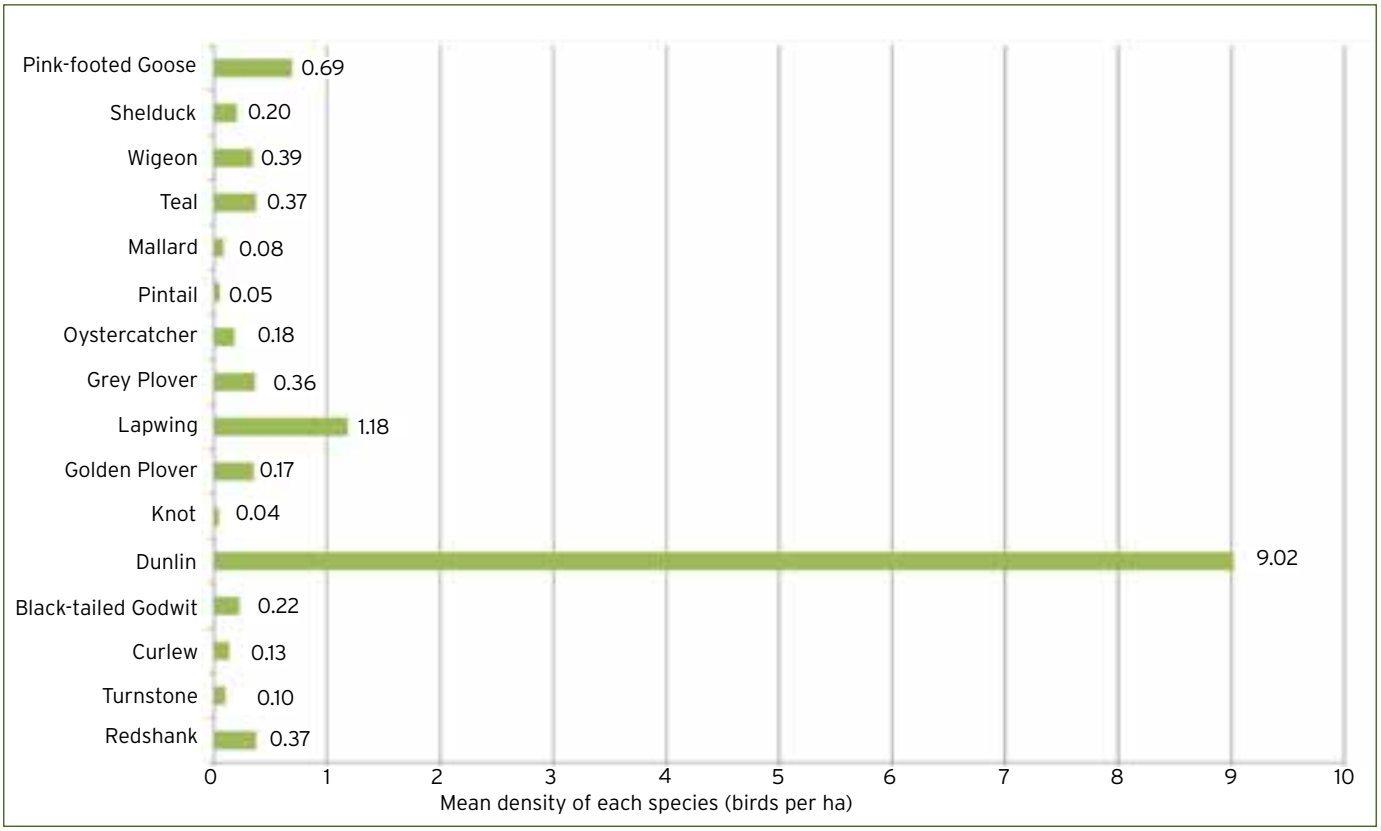
The distribution of two species are mapped on the opposite page: Teal and Curlew, based on WeBS Low Tide Counts undertaken in 2023/24, are displayed alongside distributions from the previous Low Tide Counts from 2012/13 for comparison.

Teal occur in nationally important numbers on the Mersey Estuary, but have declined by 69% since 1997/98 (page 16), and this is reflected in the Low Tide Counts with a mean count of 1,769 (0.37 birds per ha) in 2023/24 compared with 2,465 (1.5 birds per ha) in 2012/13. The largest concentrations of Teal in 2023/24/15 was at Frodham Marsh and Stanlow Banks.

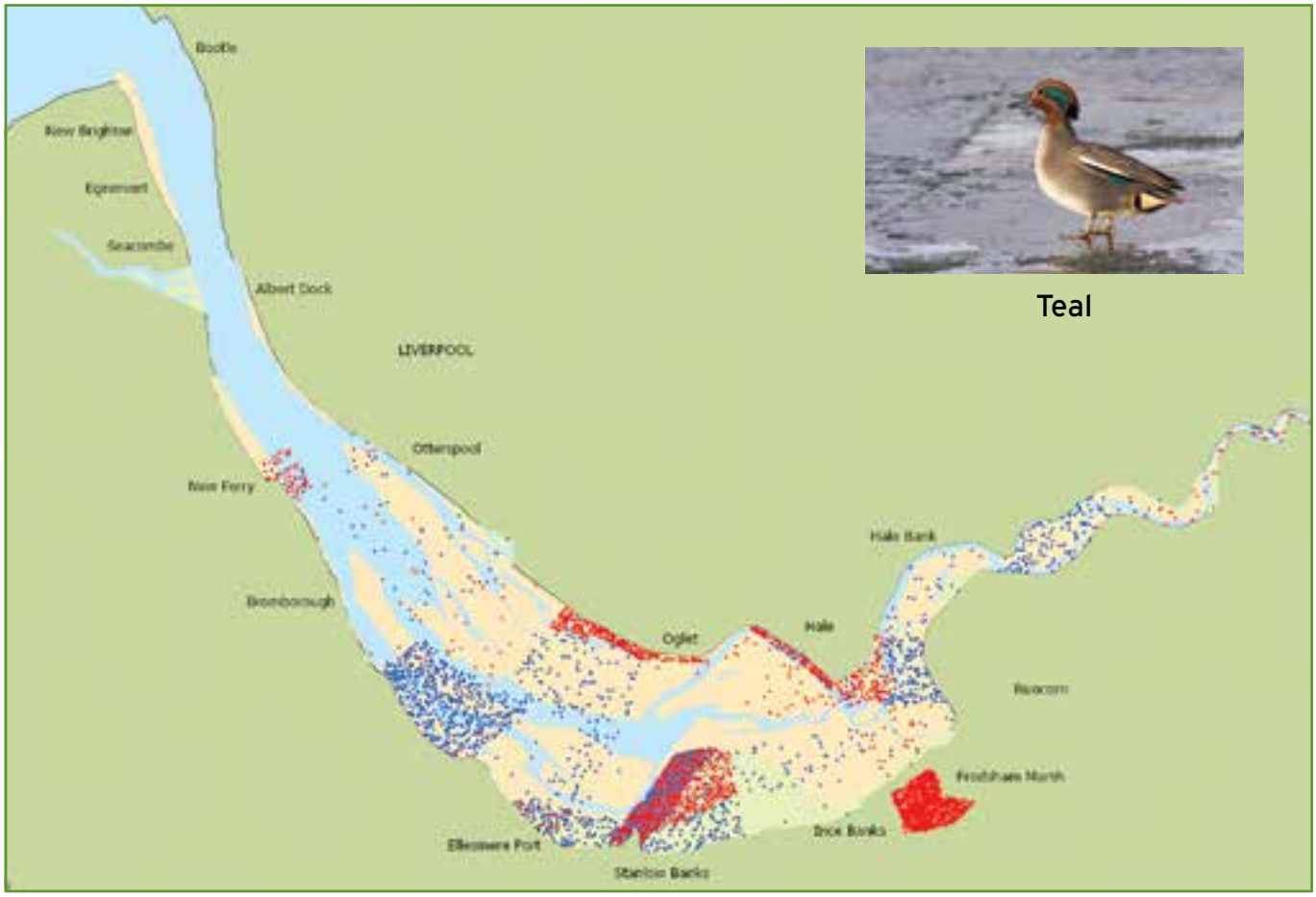
Curlew also occur in nationally important numbers on the Mersey Estuary, although the Core Count peak of 853 in 2023/24 was the lowest for several years. The mean winter counts at low tide however were 651 (0.13 birds per ha) in 2023/24, compared with 454 (0.19 birds per ha) in 2012/13. In 2023/24, birds were mostly distributed between Frodsham Marsh, Hale, Oglet and New Ferry.

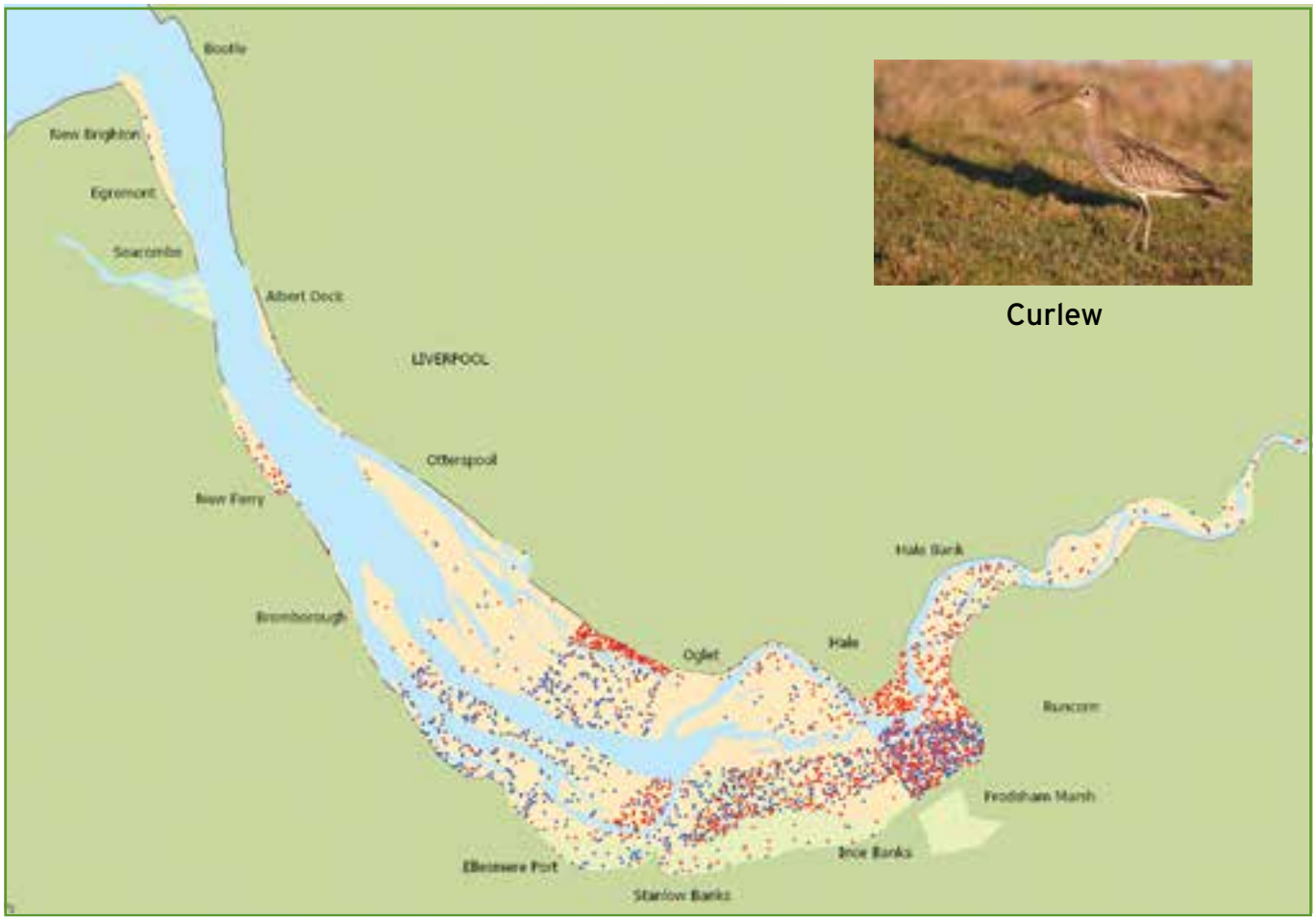
GENERAL STATISTICS FOR THE MERSEY ESTUARY 2023/24

Area covered: 8,144 ha
Mean total birds: 31,076
Mean bird density: 3.82 birds per ha



▲ **Mean densities of waterbirds at low tide on the Mersey Estuary in 2023/24.**





▲ **Low tide distribution of Teal and Curlew on the Mersey Estuary, for the winters of 2023/24 (red) and 2012/13 (blue).**

TEAL BY EDMUND FELLOWES/BTO; CURLEW BY NEIL CALBRADE

WeBS Report Online

Explore species trends, peak counts and more at:
www.bto.org/webs-reporting

This annual report, *Waterbirds in the UK 2023/24*, combines an extensive online data resource, WeBS Report Online, with this summarised written report.

The WeBS Report Online interface provides access to the latest tables of WeBS Core Count data at site and species level via the 'Numbers & Trends' and 'Totals' tabs, together with low tide summaries and distribution density maps for estuaries via the 'Low Tide Counts' tab. GSMP age assessments results are in the 'Ratios' tab. Results from the Non-Estuarine Waterbird Survey (NEWS) are in the 'NEWS' tab and WeBS Alerts in the 'Alerts' tab.

In the 'Numbers & Trends' section, searching for a site of interest from the menu allows users to explore which species have ever been recorded at the site. Users can view and download the peak numbers of each species recorded at the site throughout the year, the five-year mean peak count and the month in which the peak count was recorded. The table can be sorted alphabetically or taxonomically by species or by the peak counts. By scrolling back through the years, contemporary counts and associated five-year averages can be compared with historical counts at the site.

For those looking for information on a particular species (or biogeographic population) of waterbird, every species ever recorded by WeBS features, with each site where the species has been recorded listed. As well as offering the functionality to sort sites in tables either alphabetically, by annual peak, or by five-year average, the interface also allows the user to filter sites by country, county and/or habitat. Annual and monthly trend plots for the UK and constituent countries are shown (where applicable) and the data and plots can be downloaded. Supplementary counts can be included or excluded in the tables, or GSMP-only data displayed. For reference purposes, data from reports for previous years can be accessed by choosing the appropriate WeBS year from the 'Waterbirds in the UK' drop-down menu.

The 'Totals' tab summarises waterbird aggregations at WeBS sites and by country. The default view shows a table of sites with 1,000 or more birds and includes supplementary counts but excludes gulls and terns and non-native species, as is standard in the Principal Sites table (see page 14–15). Users can choose to view all sites, including those with fewer than 1,000 birds, for a county or country and optionally include gulls/terns, non-native species and supplementary counts. Selecting a site name brings up a list in the right-hand panel of species at the site where counts exceed national or international importance thresholds. In the country table, selecting a country will show species totals in the right-hand panel. The country totals can be filtered to species group.

The 'Ratios' tab gives percentage young and mean brood sizes from GSMP Goose and Swan Age Assessments for the current year. Past years can be viewed by changing the WeBS year or via the plots on the right-hand side.

In the Low Tide section, up to four interactive distribution density maps can be viewed simultaneously and maps can be viewed for all waterbird species recorded during the survey. Estuaries can be chosen from the Location menu and the survey year from the Low Tide Count year menu. Selecting a species will display a map with count sectors separated into intertidal, subtidal and non-tidal habitats and random dots indicating the count of birds in the sector.

A special adaptation was added, for the 2019/20 and 2020/21 years only, to allow for COVID-19 restrictions, so that if this could have impacted the peak, the count has been bracketed (see *Waterbirds in the UK 2021/22*). The usual rules with the calculation of the five-year average and completeness are then followed (full details available in the WeBS Survey Methods, Analysis and Presentation documentation).

FIND OUT MUCH MORE

Access WeBS Report Online at: **www.bto.org/webs-reporting**

The 'Numbers & Trends' section features species trends (for the UK and constituent countries) and site tables for all species (with facility to filter by country, county and habitat), alongside sections on NEWS, Low Tide Counts, Site Totals and WeBS Alerts. There is also a 'Help' section containing tutorials, to help you make the most of the resource.

▲ **New sections have been added to the WeBS Report Online with the release of this report. Top: The Ratios tab gives the results from GSMP Age Assessments. Earlier data can be viewed by changing the WeBS Year dropdown or clicking on the trend graphs. Bottom: Country and Region totals have been added to the Totals tab, above the existing site totals table. This gives the raw number of birds counted within each country by WeBS each year and a chart of how this varied between months in the latest year.**

WeBS objectives, aims and methods

The Wetland Bird Survey (WeBS) monitors non-breeding waterbirds in the UK in order to provide the principal data on which the conservation of their populations is based. To this end, WeBS has three main objectives:

- to assess the size of non-breeding waterbird populations in the UK;
- to assess trends in their numbers and distribution;
- to assess the importance of individual sites for waterbirds.

These results also form the basis for informed decision-making by conservation bodies, planners and developers, and contribute to the sustainable use and management of wetlands and their dependent waterbirds. The data and this annual WeBS report also fulfil some of the objectives of relevant international Conventions and Directives to which the UK is a signatory. WeBS also provides data to Wetlands International to assist their function of coordinating and reporting upon waterbird status at an international flyway scale. Full details of the survey's history, field and analytical methodologies are available via the WeBS website: **www.bto.org/webs**

Waterbirds in the UK 2023/24 (comprising this summary report together with numbers and trends available from WeBS Report Online at **www.bto.org/webs-reporting**) presents the results of WeBS in 2023/24. Data from other national and local waterbird monitoring schemes, notably the BTO/JNCC/NatureScot Goose & Swan Monitoring Programme, are included where WeBS data alone are insufficient to fulfil specified aims. The annual *Waterbirds in the UK* report therefore provides a single, comprehensive source of information on waterbird status and distribution in the UK.

Uses of WeBS data 2023/24

226 WeBS Data Requests in 2023/24

With the UK host to internationally important numbers of wintering waterbirds, one of the principal aims of WeBS is to provide data to facilitate their conservation. Indeed, there have been many high-profile examples over the years in which WeBS data have proved to be fundamental in securing the protection of important wetland sites.

A summary of site-based WeBS information is presented on the WeBS Report Online and available for use with an Open Government Licence. Data at a finer level (both spatial and temporal) than the online portals are available in a user-friendly format through a bespoke WeBS Data Request. We recommend that WeBS-based information that is to be incorporated into site evaluation work, such as Environmental Impact Assessments (EIAs), should be sourced through a WeBS Data Request.

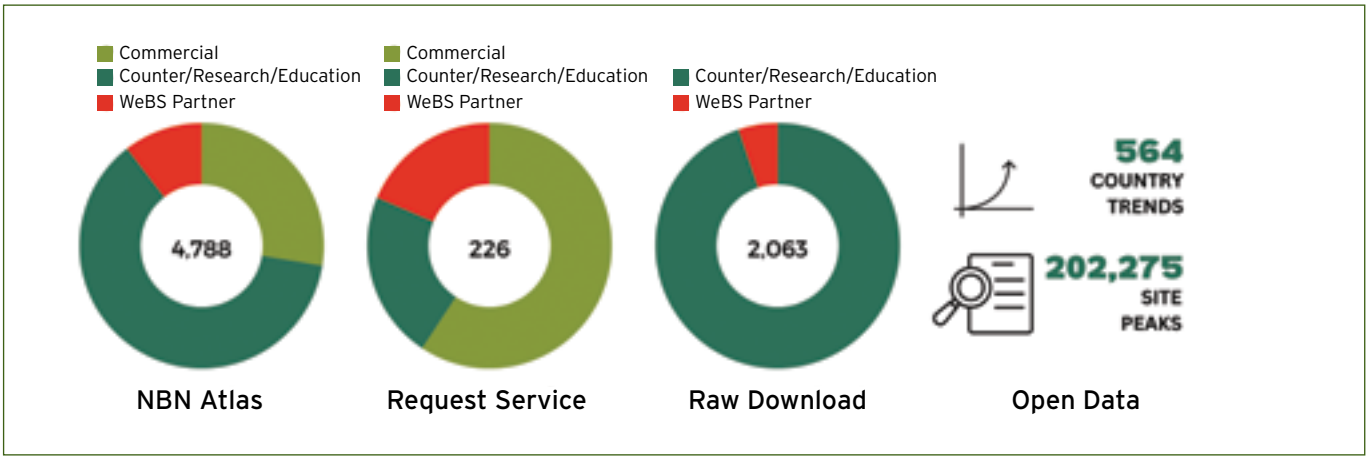
The graphic below shows the number of Data Requests to the WeBS office and downloads from online portals for the financial year April 2023–March 2024. Data users are from a range of stakeholder groups, including country conservation agencies, environmental consultancies, academic researchers and bird clubs.

The WeBS office serviced 134 Commercial, 42 Partner and 50 research/other bespoke Data Requests. In addition, there were 1,967 downloads of unprocessed count data from WeBS Online by Counters, organisers and county bird recorders and 96 downloads by WeBS partners in 2023/24.

Summarised WeBS species presence data is uploaded to the National Biodiversity Network (NBN) Atlas in an Open Government Licenced dataset with other BTO/JNCC/RSPB partnership schemes. Records from this dataset were downloaded 1,321 times in the year for commercial projects, 501 times for statutory projects and 2,966 times for education, research and other reasons. Data downloads of Open Government Licenced data of 564 country species trends and 202,275 site species annual peak data from the WeBS Report Online are also available for anyone to use for any purpose with WeBS acknowledged as the source, but usage of this portal is not tracked.

January WeBS data are supplied to Wetlands International for inclusion in the International Waterbird Census, and summaries are used in outputs such as waterbird population estimates and AEWA Conservation Status reports.

The WeBS Partnership is keen to encourage WeBS data use within environmental research. A number of scientific papers and reports that have used WeBS data in recent years are referenced within the pages of this annual report, and there is of course an extensive suite of other research questions relating to waterbird ecology and wider wetland management issues to which WeBS data would lend themselves, at both national and international scales.



▲ **WeBS data uses in 2023/24.**

WeBS DATA REQUESTS

More information about the WeBS Data Request Service is available from **www.bto.org/webs-data** where you can see coverage by WeBS of different sites, check data request charges, and view examples of the data that can be provided.

WeBS Local Organisers in 2023/24

Continued from back page

WALES

Anglesey	Ian Sims
Breconshire	Andrew King
Burry Inlet	Alan Seago
Caernarfonshire	Rhion Pritchard
Caernarfonshire (Foryd Bay)	Simon Hugheston-Roberts
Carmarthenshire	Alan Seago
Ceredigion (incl Dyfi Estuary)	Russell Jones
Clwyd (coastal)	VACANT
Clwyd (inland)	VACANT
East Glamorgan	Daniel Jenkins-Jones
Gwent (excl Severn Estuary)	Richard M Clarke
Merioneth (estuaries)	Jim Dustow
Merioneth (other sites)	Jim Dustow
Montgomeryshire	VACANT (now Tony Coatsworth)
Pembrokeshire	Annie Haycock
Radnorshire	Peter Jennings
Severn Estuary (Wales)	Kevin Dupé
West Glamorgan	VACANT

NORTHERN IRELAND

Antrim (Larne Lough)	Doreen Hilditch
Antrim (other sites)	Adam McClure
Armagh (excl Loughs Neagh and Beg)	Stephen Hewitt
Belfast Lough	VACANT (now Ian Enlander)
Down (Carlingford Lough)	Aiobheann Morrison
Down (Dundrum Bay)	VACANT
Down (other sites)	Kez Armstrong
Down (Outer Ards)	NIEA
Down (South Down Coast)	Kez Armstrong
Down (Strangford Lough)	Kerry Mackie
Fermanagh	Michael Stinson
Londonderry (Bann Estuary)	Dean Jones
Londonderry (Lough Foyle)	Matthew Tickner (now NIEA)
Londonderry (other sites)	Claire Hassan
Loughs Neagh and Beg	NIEA
Tyrone (excl Loughs Neagh and Beg)	Ciara Laverty
Upper Lough Erne	NIEA

CHANNEL ISLANDS

Alderney	Alderney Wildlife Trust Ecologist
Guernsey Coast	Mary Simmons
Jersey (inland)	VACANT
Jersey Coast	Roger Noel

ISLE OF MAN

Isle of Man	David Kennett

We would be grateful for help organising WeBS in areas currently without a Local Organiser (marked **VACANT**). If you live in one of these areas and would be interested in taking on the role, please let us know. Email: **webs@bto.org**

In 2023/24, the WeBS Local Organiser Advisory Committee (WeBS LOAC) comprised Alan Burnham, Chris Gunn, Phil Hampson, Dan Jenkins-Jones, Kerry Mackie, Brian Moore, Andy Riches and Eve Tigwell. Many thanks to them for representing the wider LO network. Further information about the WeBS LOAC can be found at: **www.bto.org/webs/loac**

The IGC Local Organisers in 2023/24 were Malcolm Ross (Borders), Sinclair Manson (Caithness), Gillian Ogg (Fife), Stephen Welch (Lothian), Jim Scott (North Norfolk), Paul Massey (Northumberland), Tim Dodman (Orkney), Mike Bell (Perthshire and Central), Rory Tallack (Shetland), Frank Mawby (Solway Firth South), Richard Averiss (Montrose Basin), Andy Riches (Solway Firth North), David Mallett (Lancashire, North Merseyside and Morecambe Bay) and Mike Pilsworth (East Yorkshire and North Lincolnshire). We are grateful for their help in organising the census.

Selected further reading

Recent and key studies that have used WeBS & GSMP data

Woodward, I.D., Calbrade, N.A., Birtles, G.A., Feather, A., Peck, K., Wotton, S.R., Shaw, J.M., Balmer, D.E. & Frost, T.M. 2024. *Waterbirds in the UK 2022/23: The Wetland Bird Survey and Goose & Swan Monitoring Programme*. BTO/ RSPB/JNCC. Thetford.

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Atkinson, P.W., Frost, T.M *et al*. (15 co-authors). In press. *Evaluating the use of carcass and testing data to assess the high-pathogenicity avian influenza (HPAI) related mortality in wild birds in the United Kingdom and Crown Dependencies between 2021–2023. Bird Study.* **https://doi.org/10.1080/00063657.2025.2492902**

Brides, K., Petrek, S.W., Gornall, D.I., Ritchie, S.R., Tarodo, A.G., Wood, K.A., Vickers, S.H. 2025. Naturalised populations of Barnacle Geese in the UK: an update on numbers, distribution and breeding. *British Birds* **118**: 60–71.

Burke, B., Lewis, L.J., Fitzgerald, N., Frost, T., Austin, G. & Tierney, T.D. 2018. Estimates of waterbird numbers wintering in Ireland, 2011/12-2015/16. *Irish Birds* **41**: 1–12.

Burton, N.H.K., Daunt, F., Kober, K., Humphreys, E.M. & Frost, T.M. 2023. Impacts of Climate Change on Seabirds and Waterbirds in the UK and Ireland. *MCCIP Science Review 2023*.

Caulfield, E.B., Feather, A., Smith, J.A., Frost, T.M. & Woodward, I.D. 2025. *Wetland Bird Survey Alerts 2021/2022: Changes in numbers of wintering waterbirds in the Constituent Countries of the United Kingdom, Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) and Areas of Special Scientific interest (ASSIs)*. BTO Research Report 786. BTO, Thetford.

Goss-Custard, J.D., Austin, G.E., Frost, T.M., Sitters, H.P. & Stillman, R.A. 2024. Decline in the numbers of Eurasian Oystercatchers Haematopus ostralegus on the Exe Estuary Special Protection Area. *Ardea* **112**: 267–283. **doi:10.5253/arde.2023.23**

Griffin, L.R. & Peach, W.J. 2024. Impacts of highly pathogenic avian influenza (HPAI) on a Barnacle Goose *Branta leucopsis* population wintering on the Solway Firth, UK. *Bird Study* **71**: 392–403.

Frost, T.M. & Calbrade, N.A. (eds.). 2022. *Wetland Bird Survey News 2020/21 Special Edition*. BTO, RSPB and JNCC. British Trust for Ornithology, Thetford.

Frost, T.M., Austin, G.E., Hearn, R.D., McAvoy, S.G., Robinson, A.E., Stroud, D.A., Woodward, I.D. & Wotton, S.R. 2019. Population estimates of wintering waterbirds in Great Britain. *British Birds* **112**: 130–145.

Ki, T.L.T., Pain, D.J., Gill, J.A., & Green, R.E. 2023. The relationship between Mute Swan *Cygnus olor* population trends in Great Britain and environmental change. *Bird Study* **70**: 99–112.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. & Win, I. 2021. The fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* **114**: 723–747.

Woodward, I., Aebischer, N., Burnell, D., Eaton, M., Frost, T., Hall, C., Stroud, D. & Noble, D. 2020. Population estimates of birds in Great Britain and the United Kingdom. *British Birds* **113**: 69–104.

SPECIAL THANKS

We wish to thank all surveyors and Local Organisers for making WeBS the success it is today. Unfortunately space does not permit all observers to be acknowledged individually, but we would especially like to credit the Local Organisers for their efforts.

WeBS Local Organisers in 2023/24

ENGLAND

Avon (excl Severn Estuary)	Rupert Higgins
Bedfordshire	Richard Bashford
Berkshire	Sean Murphy
Buckinghamshire (North)	Martin Routledge
Buckinghamshire (South)	VACANT
Cambridgeshire (incl Huntingdonshire)	Bruce Martin
Cambridgeshire (Nene Washes)	Charlie Kitchin
Cambridgeshire (Ouse Washes)	Paul Harrington
Cheshire (North)	Phil Hampson (now VACANT)
Cheshire (South)	Paul Miller
Cleveland (excl Tees Estuary)	Chris Sharp
Cleveland (Tees Estuary)	Adam Jones
Cornwall (excl Tamar Complex)	Derek Julian
Cornwall (Tamar Complex)	Charles Nodder
Cotswold Water Park	VACANT (now Claire Carpenter)
Cumbria (Duddon Estuary)	Colin Gay
Cumbria (excl estuaries)	Dave Shackleton
Cumbria (Irt/Mite/Esk Estuary)	Dave Shackleton
Dee Estuary	Colin Wells
Derbyshire	Phil Hampson (now Kelvin Lawrence & Layla Alexandra)
Devon (other sites)	Peter Reay
Devon (Exe Estuary)	Martin Overy
Devon (Taw/Torridge Estuary)	Chris Dee
Dorset (excl estuaries)	Nicola Hoar
Dorset (Poole Harbour)	Paul Morton
Dorset (Radipole and Lodmoor)	Stephen Hales (now Carol Philipps)
Dorset (The Fleet and Portland Harbour)	Steve Groves
Durham	Anne Donnelly
Essex (Crouch/Roach Estuaries and South Dengie)	Sean Murphy
Essex (Hamford Water)	Leon Woodrow
Essex (North Blackwater)	John Fell
Essex (other sites)	Anthony Harbott
Essex (South Blackwater & North Dengie)	Anthony Harbott
Gloucestershire	Michael Smart
Greater London (excl Thames Estuary)	VACANT (now Ben Hillier)
Greater Manchester	Tim Wilcox
Hampshire (Avon Valley)	John Clark
Hampshire (estuaries/coastal)	Geoff Butler
Hampshire (excl Avon Valley)	Keith Wills
Herefordshire	Chris Robinson
Hertfordshire	VACANT (now Martin Ketcher)
Humber Estuary (inner South)	Keith Parker
Humber Estuary (mid South)	Mike Pilsworth
Humber Estuary (North)	Nick Cutts
Humber Estuary (outer South)	Owen Beaumont
Isle of Wight	Jim Baldwin (now VACANT)
Kent (Dungeness area)	David Walker
Kent (East)	Heather Mathieson (now Murray Orchard)
Kent (Medway Estuary))	Bob Knight
Kent (Pegwell Bay)	Steffan Walton
Kent (Swale Estuary)	Brian Watmough
Kent (Thames Estuary - Hoo)	Murray Orchard
Kent (West)	VACANT
Lancashire (East Lancs and Fylde)	David Jeffries
Lancashire (North inland)	Peter Marsh
Lancashire (Ribble Estuary)	Ken Abram
Lancashire (River Lune)	Jean Roberts
Lancashire (West inland)	Phil Hampson (now Mark & Heather Walsh)
Lee Valley	Cath Patrick
Leicestershire and Rutland (excl Rutland Water)	Brian Moore
Leicestershire and Rutland (Rutland Water)	Tim Sexton
Lincolnshire (North inland)	Chris Gunn
Lincolnshire (South inland)	VACANT (now Joanne Whitley)
Merseyside (Alt Estuary)	Steve White
Merseyside (inland)	Phil Hampson (now David Broome)
Merseyside (Mersey Estuary)	Dermot Smith
Morecambe Bay (North)	Mike Douglas
Morecambe Bay (South)	Jean Roberts
Norfolk (Breydon Water)	Anthony Bentley
Norfolk (excl estuaries)	Mark Clay
Norfolk (North Nofolk Coast)	Neil Lawton
Northamptonshire (excl Nene Valley)	VACANT
Northamptonshire (Nene Valley)	Steve Brayshaw
Northumberland (coastal)	Kathy Evans
Northumberland (inland)	Tim Daley
Northumberland (Lindisfarne)	Andrew Craggs
Nottinghamshire	Michael Hill
Oxfordshire (North)	Sandra Bletchly
Oxfordshire (South)	Ben Carpenter
Severn Estuary (England)	Harvey Rose
Shropshire	Martin George
Solway Estuary (inner South)	David Blackledge
Solway Estuary (outer South)	Dave Shackleton
Somerset (other sites)	Eve Tigwell
Somerset (Somerset Levels)	Eve Tigwell
Staffordshire	Scott Petrek
Suffolk (Alde Complex)	Ian Castle
Suffolk (Alton Water)	John Glazebrook
Suffolk (Blyth Estuary)	Will Russell
Suffolk (Deben Estuary)	Nick Mason
Suffolk (Orwell Estuary)	Mick Wright
Suffolk (other sites)	Alan Miller
Suffolk (Stour Estuary)	Rick Vonk
Surrey	Penny Williams
Sussex (Chichester Harbour)	Peter Hughes
Sussex (other sites)	Helen Crabtree
Sussex (other sites - coastal)	Dave Boddington
Thames Estuary (Foulness)	Chris Lewis
The Wash	Jim Scott
Warwickshire	Matthew Griffiths
West Midlands	VACANT (now Jamie Hicken)
Wiltshire	Jenny Stunnell
Worcestershire	Chris North
Yorkshire (East and Scarborough)	Alan Burnham
Yorkshire (Harrogate and Yorkshire Dales)	Daniel Skeats (now VACANT)
Yorkshire (Huddersfield/Halifax area)	VACANT
Yorkshire (Leeds area)	Paul Morris
Yorkshire (South)	Grant Bigg
Yorkshire (Wakefield area)	Peter Smith

SCOTLAND

Aberdeenshire	Patrick Cook and Lynne McKenzie
Angus (excl Montrose Basin)	Jonathan Pattullo
Angus (Montrose Basin)	Anna Cowie
Argyll Mainland	Nigel Scriven
Arran	Jim Cassels
Ayrshire	Dave Grant
Badenoch and Strathspey	VACANT
Borders	Neil Stratton
Bute	Ian Hopkins
Caithness	Sinclair Manson
Central (excl Forth Estuary)	Neil Bielby
Clyde Estuary	John Clark
Dumfries and Galloway (Auchencairn and Orchardtown Bays)	Euan MacAlpine
Dumfries and Galloway (Fleet Bay)	Ian Bainbridge
Dumfries and Galloway (Loch Ryan)	Paul Collin
Dumfries and Galloway (other sites)	Andy Riches
Dumfries and Galloway (Rough Firth)	Andy Riches
Dumfries and Galloway (Wigtown Bay)	Paul Collin
Fife (excl estuaries)	Allan Brown
Fife (Tay and Eden Estuaries)	Paul Blackburn
Forth Estuary (inner)	Michael Bell
Forth Estuary (outer North)	VACANT
Forth (outer South)	Duncan Priddle
Glasgow/Renfrewshire/Lanarkshire	John Clark
Harris and Lewis	Yvonne Benting (now VACANT)
Islay, Jura and Colonsay	David Wood
Isle of Cumbrae	VACANT
Lochaber	Kirstie & Callum Ross
Lothian (excl estuaries)	Shawn Waddoups
Lothian (Tyninghame Estuary)	Duncan Priddle
Moray and Nairn (inland)	David Law
Moray and Nairn (Lossie Estuary)	Bob Proctor
Moray Basin Coast	Bob Swann
Mull	Nigel Scriven
Orkney	Tom Wells (now VACANT)
Perth and Kinross (excl Loch Leven)	Michael Bell
Perth and Kinross (Loch Leven)	Jeremy Squire
Shetland	Rory Tallack
Skye and Lochalsh	Jonathan Jones
Solway Estuary (North)	Andy Riches
Sutherland (excl Moray Basin)	VACANT
Tiree and Coll	John Bowler
Uists and Benbecula	Yvonne Benting (now VACANT)
West Inverness/Wester Ross	Andy Douse

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