Llywodraeth Cymru
Welsh Government

Cyfoeth Naturiol Cymru
Natural Resources Wales

Habitats Regulations Technical Appendix for the reporting period 2019-2024

Wales

Regulation 9A of the Conservation of Habitats and Species Regulations 2017 (as amended)

Bird Guild Summaries

About Natural Resources Wales

Natural Resources Wales' purpose is to pursue sustainable management of natural resources. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

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Contents

Crynodeb gweithredol

Ar gyfer tair urdd o adar (adar môr sy'n bridio, adar dŵr sy'n bridio ac adar coetiroedd), lluniwyd crynodebau ar y sail bod Cymru yn cynnal poblogaethau sydd o bwys rhyngwladol neu gyfran sylweddol o boblogaethau'r Deyrnas Unedig. Nid oes crynodebau manwl ar gyfer yr urddau eraill (adar hirgoes sy'n bridio, adar tir ffermio ac adar ucheldir), ond cânt eu cynnwys yn adran Adar y prif Adroddiad Cryno Rheoliadau Cynefinoedd 9A.

Adar môr sy'n bridio

Mae Cymru yn cynnal 21 o'r 26 rhywogaeth o adar môr sy'n bridio'n rheolaidd yn y DU, gyda thros 700,000 o barau yn cynrychioli oddeutu 16% o boblogaeth y DU. Mae gan Gymru gyfrifoldeb mawr yn y DU am aderyn drycin Manaw, gyda 61% o'r boblogaeth yn bridio yng Nghymru. Mae AGA Gwales yn cynnal 13% o boblogaeth rhwydwaith AGA huganod y DU a 6% o boblogaeth y byd. Mae'r safleoedd hyn yn hanfodol i gadwraeth adar môr, o safbwynt eu poblogaeth a'u hamrediad, yng Nghymru a'r DU. Dangosodd y pedwerydd cyfrifiad o adar môr sy'n bridio (Cyfrifiad Adar Môr, 2015–2021) fod 14 rhywogaeth wedi cynyddu yn eu nifer a saith wedi lleihau yng Nghymru o'i gymharu â'r cyfrifiad blaenorol (Adar Môr 2000). Bu lleihad yn nifer rhai rhywogaethau o wylanod, megis yr wylan goesddu, yr wylan gefnddu leiaf a gwylan y penwaig, o ganlyniad, mae'n debyg, i lai o bysgod yn cael eu taflu yn ôl gan bysgodfeydd a safleoedd tirlenwi yn cau. Mewn cyferbyniad, gwelwyd cynnydd sylweddol yn niferoedd rhywogaethau megis aderyn drycin Manaw (+186%), y pâl (+197%), a môr-wennol y gogledd (+133%).

Mae'r ffliw adar pathogenig iawn (HPAI), yn enwedig straen H5N1, wedi cael effaith ddinistriol yng Nghymru ers 2020, yn enwedig ar boblogaethau'r hugan, môr-wennol y gogledd, a'r wylan benddu. Mae poblogaethau'r fôr-wennol bigddu wedi adlamu ar ôl HPAI, ond mae eraill yn parhau i fod wedi gweld effaith ddifrifol. O'r holl rywogaethau o adar y môr sy'n bridio yng Nghymru, poblogaeth yr wylan benddu Gymreig a welodd y gostyngiad mwyaf mewn niferoedd (oddeutu 77%) ers y Cyfrifiad Adar Môr. Mae angen cynnal arolygon blynyddol parhaus er mwyn deall effaith lawn HPAI ar fridio llwyddiannus, toreithrwydd a dosbarthiad adar môr.

Adar môr sy'n parhau i fod ar frig y rhestr o ran pryder cadwraeth yng Nghymru: mae wyth o 21 o rywogaethau ar restr goch adar o bryder cadwraethol (BoCC4) Cymru, 11 ar y rhestr oren, a dau ar y rhestr werdd. Mae asesiadau Undeb Rhyngwladol dros Gadwraeth Natur Prydain Fawr yn dangos bod 13 o'r rhywogaethau hyn o dan fygythiad o ddiflannu. Fodd bynnag, mae llawer o'r rhywogaethau a aseswyd, megis y rhai sydd mewn perygl o ddiflannu ar lefel Prydain Fawr, wedi cynyddu yng Nghymru dros y ddau ddegawd diwethaf, megis y pâl.

Mae'r pwysau allweddol yn yr asesiad hwn yn cynnwys newid hinsawdd (sy'n effeithio ar 90% o rywogaethau), echdynnu adnoddau biolegol, clefydau ac ysglyfaethu. Mae dros hanner yr adar môr sy'n bridio yng Nghymru yn dibynnu ar ynysoedd, sy'n gwneud bioddiogelwch yn hanfodol. Mae'r mesurau cadwraeth yn cynnwys y rhaglen Biosecurity for LIFE (Bioddiogelwch i Gymru) a Strategaeth Cadwraeth Adar Môr Cymru sydd ar ddod, sy'n targedu rhywogaethau goresgynnol,

clefydau, aflonyddwch a dirywiad cynefinoedd. Mae angen camau gweithredu strategol i bennu blaenoriaethau o ran adar môr, deall ysgogwyr newid, ac alinio polisi a deddfwriaeth i gefnogi adferiad.

Adar dŵr nad ydynt yn bridio

Mae'r dangosydd adar dŵr sy'n treulio'r gaeaf yn y DU yn dangos cynnydd mewn niferoedd o 92% ers 1975–1976, er bod gostyngiad o 4% wedi bod rhwng 2018–2019 a 2023–2024. Cynyddodd nifer yr adar hirgoes 7% yn y tymor byr, tra gostyngodd nifer yr adar gwyllt 9%. Mae tueddiadau rhywogaethau'n amrywio: cynyddodd nifer y cambigau a'r gwyddau llwydion sy'n treulio'r gaeaf yma, tra bod nifer y gylfinir ac alarch y twndra ('Alarch Bewick') wedi dirywio. Mae'r tueddiadau hyn yn adlewyrchu dynameg gymhleth, gan gynnwys newidiadau mewn dosbarthiad o ran y lleoliadau lle treulir y gaeaf, a newidiadau yn ansawdd cynefinoedd a gaiff eu gyrru gan yr hinsawdd.

Mae rhybuddion WeBS ar gyfer ardaloedd gwarchodaeth arbennig Cymru yn dangos tueddiadau cymysg. Er enghraifft, mae AGA Cilfach Tywyn yn dangos dirywiad hirdymor yn nifer y chwiwellod (−80%) a phibyddion y mawn (−85%), tra bod AGA Aber Afon Dyfrdwy yn dangos cynnydd yn nifer y piod môr Ewroasiaidd (+26%) a phibyddion yr aber (+32%). Defnyddir y rhybuddion hyn i lywio'r gwaith o reoli safleoedd a chynnal asesiadau cenedlaethol, ac i dynnu sylw at bwysigrwydd safleoedd AGA fel llochesi yn ystod gaeafau caled.

Mae asesiadau BoCC Cymru yn rhestru 17 o rywogaethau adar dŵr nad ydynt yn bridio ar y rhestr goch, a 27 o rywogaethau adar dŵr nad ydynt yn bridio ar y rhestr oren. Symudodd y pibydd du o'r rhestr werdd i'r rhestr goch oherwydd dirywiad yn y niferoedd o 68% ers 1996–1997. Mae newid hinsawdd yn sbarduno newidiadau dosbarthiadol, gyda rhywogaethau'n treulio'r gaeaf mewn lleoliadau sy'n agosach at feysydd bridio. Mae gaeafau byr a mwynach yn dylanwadu ar doreithrwydd a'r defnydd o safleoedd, yn enwedig yn achos y rhywogaethau sy'n bridio yn yr Arctig.

Mae'r pwysau'n amrywiol iawn, o fygythiadau i fudo, hela anghyfreithlon, llyncu bwledi plwm i effeithiau newid hinsawdd. Mae rhai rhywogaethau'n wynebu pwysau sy'n anhysbys, yn enwedig hwyaid y môr a gwyachod. Mae'r mesurau cadwraeth yn cynnwys adlinio rheoledig, adfer gwlyptiroedd, a rheoleiddio gollyngiadau carthffosiaeth ac amaethyddol. Mae adfer ar raddfa tirwedd, megis fel y gwelwyd ar Wastadeddau Gwent, yn cynorthwyo poblogaethau sy'n bridio a phoblogaethau nad ydynt yn bridio.

Mae Cymru yn cynnal 69% o boblogaeth Prydain o'r ŵydd ddu fol-olau (rhywogaeth Svalbard / Denmarc), a >20% o boblogaeth Prydain o'r pibydd coeswyrdd, y bioden fôr ewroasiaidd, a'r pibydd coesgoch brith. Mae'r ffigurau hyn yn tynnu sylw at bwysigrwydd Cymru o ran cadwraeth adar dŵr nad ydynt yn bridio ym Mhrydain.

Adar coetiroedd

Mae mynegai adar coetiroedd y DU yn dangos gostyngiad o 32% mewn niferoedd ers 1970, wedi'i achosi gan golledion mewn rhywogaethau arbenigol ac adar mudol pellter hir. Yng Nghymru, cynyddodd niferoedd llwyd y berth ychydig (+5% rhwng

2013 a 2023), tra bod niferoedd y telor penddu a'r siff-siaff wedi cynyddu'n sylweddol (+189% a +117% yn y drefn honno rhwng 1995 a 2023). Fodd bynnag, mae llawer o rywogaethau coetiroedd yn parhau i ddirywio, yn enwedig y rhywogaethau arbenigol hynny sy'n dibynnu ar gynefinoedd penodol, gofynion o ran cilfachau neu lwybrau mudo.

Mae BoCC4 Cymru yn rhestru sawl rhywogaeth coetir ar y rhestr goch, gan gynnwys titw'r wern, titw'r helyg, gwybedog mannog, telor y coed, a'r gnocell fraith leiaf. Ymunodd y dryw eurben â'r rhestr goch oherwydd gostyngiad yn ei niferoedd ers 1995.

Mae asesiadau Undeb Rhyngwladol dros Gadwraeth Natur Prydain Fawr yn dangos bod pum rhywogaeth sy'n bridio yng Nghymru mewn perygl cynyddol o ddiflannu, gan gynnwys y ji-binc ewroasiaidd a'r gwybedog mannog. Mae'r pwysau'n cynnwys newid hinsawdd (sy'n effeithio ar 38% o rywogaethau), arferion coedwigaeth, a phwysau anhysbys y tu allan i'r DU, sy'n effeithio ar fewnfudwyr Affro-Palearctig yn arbennig. Gall anghydweddiad ffenolegol oherwydd newid hinsawdd effeithio ar lwyddiant bridio, er bod y dystiolaeth yn y DU yn gyfyngedig. Mae darnio cynefinoedd a rhoi'r gorau i reoli coetiroedd hefyd yn cyfrannu at ostyngiad mewn niferoedd.

Mae'r mesurau cadwraeth yn cynnwys nodi rhywogaethau y mae angen eu blaenoriaethu, deall ysgogwyr newid, a gweithredu camau i adfer cynefinoedd ar raddfa tirwedd. Mae angen gweithredu wedi'i dargedu ar naw rhywogaeth o adar coetiroedd sydd wedi'u blaenoriaethu yn y DU. Mae wyth o'r rhain yn bridio yng Nghymru. Mae angen tystiolaeth ychwanegol ar frys i sicrhau bod ymyriadau rheoli cywir yn cael eu defnyddio.

Mae Cymru yn cynnal >30% o boblogaeth chwe rhywogaeth o adar coetiroedd y DU. Er enghraifft, mae Cymru'n cynnal >50% o boblogaeth y gylfinbraff yn y DU, ac 80% o boblogaethau'r gwybedog brith Ewropeaidd a thelor y coed yn y DU, gan wneud gweithredu cadwriaethol yng Nghymru yn hanfodol i statws poblogaeth y DU. Mae deall ac ymdrin â'r ysgogwyr amlffactorau sy'n achosi dirywiad yn hanfodol i atal a gwrthdroi gostyngiadau mewn poblogaethau.

Executive summary

For three bird guilds (breeding seabirds, breeding waterbirds and woodland birds) summaries have been produced on the basis that Wales holds internationally important populations or significant proportions of the United Kingdom (UK) populations. The other guilds (breeding waders, farmland birds and upland birds) do not have detailed summaries, but are covered within the Birds section of the main Habitats Regulations 9A Summary Report.

Breeding Seabirds

Wales supports 21 of the 26 regularly occurring breeding seabird species in the UK, with over 700,000 pairs representing approximately 16% of the UK population. Wales holds major UK responsibility for Manx Shearwater, with 61% of the UK population breeding in Wales. The Grassholm SPA holds 13% of the UK Gannet SPA network population and 6% of the global population. These sites are critical to seabird conservation, both from population and range perspectives, in Wales and the UK. The fourth census of breeding seabirds (Seabirds Count, 2015–2021) showed that 14 species increased and seven decreased in Wales compared to the previous census (Seabird 2000). Gull species such as Black legged kittiwake, Lesser Black-backed Gull and Herring Gull declined, likely due to reduced fishery discards and landfill closures. In contrast, species like Manx Shearwater (+186%), Atlantic Puffin (+197%), and Arctic Tern (+133%) showed significant increases.

Highly Pathogenic Avian Influenza (HPAI), particularly strain H5N1, has had devastating effects since 2020, notably on Welsh populations of Northern Gannet, Arctic Tern, and Black-headed Gull. Sandwich Tern populations have rebounded post-HPAI, but others remain severely impacted. The Welsh Black-headed Gull population suffered the largest decrease (c.77%) of all breeding seabird species in Wales since the Seabirds Count census. Continued annual surveys are needed to understand the full impact of HPAI on seabird productivity, abundance and distribution.

Seabirds remain the group with the highest conservation concern in Wales: eight of 21 species are Red-listed, 11 Amber-listed, and two Green-listed in BoCC4 Wales. Great Britain (GB) IUCN assessments show 13 of these species are threatened with extinction. However, many species assessed as at risk of extinction at the GB level have increased in Wales over the last two decades, such as Atlantic Puffin.

Key pressures in this assessment include climate change (impacting 90% of species), extraction of biological resources, disease, and predation. Over half of Wales' breeding seabirds are dependent on islands, making biosecurity critical. Conservation measures include the Biosecurity for LIFE programme and the forthcoming Welsh Seabird Conservation Strategy, which targets invasive species, disease, disturbance, and habitat degradation. Strategic actions are needed to determine seabird priorities, understand drivers of change, and align policy and legislation to support recovery.

Non-Breeding Waterbirds

The UK wintering waterbird indicator shows a 92% increase since 1975/76, though a 4% decline occurred between 2018/19 and 2023/24. Waders increased by 7% in the short term, while wildfowl declined by 9%. Species trends vary: wintering Avocet and Greylag Goose increased, while Eurasian Curlew and Tundra Swan ('Bewick's Swan') declined. These trends reflect complex dynamics, including climate-driven shifts in wintering distribution and changes in habitat quality.

WeBS Alerts for Welsh SPAs show mixed trends. For example, Burry Inlet SPA shows long-term declines in Eurasian Wigeon (−80%) and Dunlin (−85%), while The Dee Estuary SPA shows increases in Eurasian Oystercatcher (+26%) and Red Knot (+32%). These alerts are used to inform site management and national assessments, and highlight the importance of SPA sites as refuges during harsh winters.

BoCC Wales assessments list 17 Red-listed and 27 Amber-listed non-breeding waterbird species. Purple Sandpiper moved from Green to Red due to a 68% decline since 1996/97. Climate change is driving distributional shifts, with species wintering closer to breeding grounds. Short-stopping and milder winters are influencing abundance and site use, particularly for Arctic-breeding species.

Pressures are wide-ranging, from threats on migration, illegal hunting, ingestion of lead ammunition to the impacts of climate change. Some species face unknown pressures, particularly sea ducks and grebes. Conservation measures include managed realignment, wetland restoration, and regulation of sewage and agricultural discharges. Landscape-scale restoration, such as on the Gwent Levels, supports both breeding and non-breeding populations.

Wales holds 69% of the British population of Light-bellied Brent Goose (Svalbard/Denmark race), and >20% of the British population of Common Greenshank, Eurasian Oystercatcher, and Spotted Redshank. These figures highlight Wales' importance for British non-breeding waterbird conservation.

Woodland Birds

The UK woodland bird index shows a 32% decline since 1970, driven by losses in specialist species and long-distance migrants. In Wales, Dunnock increased slightly (+5% from 2013–2023), while Blackcap and Chiffchaff increased significantly (+189% and +117% respectively from 1995–2023). However, many woodland species remain in decline, particularly those specialist species that are dependent on specific habitats, niche requirements or migratory routes.

BoCC4 Wales lists several woodland species as Red-listed, including Marsh Tit, Willow Tit, Spotted Flycatcher, Wood Warbler, and Lesser Spotted Woodpecker. Goldcrest joined the Red list due to declines since 1995.

GB IUCN assessments show increased extinction risk for five species breeding in Wales, including Eurasian Chaffinch and Spotted Flycatcher. Pressures include climate change (impacting 38% of species), forestry practices, and unknown pressures outside the UK, particularly affecting Afro-Palearctic migrants.

Phenological mismatch due to climate change may affect breeding success, though evidence in the UK is limited. Habitat fragmentation and cessation of woodland management also contribute to declines.

Conservation measures include identifying priority species, understanding drivers of change, and implementing landscape-scale habitat restoration. Nine UK priority woodland bird species require targeted action, eight of which breed in Wales. Additional evidence is urgently needed to ensure correct management interventions are deployed.

Wales supports >30% of the UK population for six woodland bird species. For example, Wales supports >50% of the UK Hawfinch population and 80% of the UK populations of European Pied Flycatcher and Wood Warbler, making conservation action in Wales critical to UK population status. Understanding and addressing the multifactorial drivers of decline is essential to halt and reverse population losses.

1. Breeding seabirds

1.1 Population Change

The seabird index for the United Kingdom (UK) includes individual trend changes for 13 species of seabird: five species are surface feeders; three species are subsurface feeders; and five forage in other ways (Figure 1.1). When interpreting these indicator trends, it should be noted that each ecological trend is derived from relatively few species' trends and also that there is no Wales specific seabird indicator.

The UK seabird indicator has declined by 37% since 1986 (Defra, 2025). The population showed a steady decline between 2000 and 2013 but has since shown an accelerated sharp decline of 15% in the five-year short-term period since 2019. This decrease, not replicated in Wales, may predominantly be associated with higher density seabird populations in north and east Scotland. This discrepancy may be due to the difference in fisheries, between the four UK countries, with Welsh waters having low impact fishery and climate change pressures which in other UK country waters have led to significant reductions in bait fish populations.

Seabirds populations are impacted by a range of pressures including climate-change and fisheries-induced changes in prey availability, disease and natural toxins, predation by mammalian predators on islands, and disturbance. Since 2020, the onset of Highly Pathogenic Avian Influenza (HPAI) in Britain's seabirds has had devastating effects on many species. Trends in some seabird species have been negatively impacted by the onset of HPAI since 2020, and large annual differences in the numbers of affected birds at different colonies has added to the instability in some trends.

Specify HPAI impacts were seen among many of the tern species, such as Sandwich Tern *Thalasseus sandvicensis* and Northern Gannet *Morus bassanus* (Tremlett *et al*., 2024). According to the UK seabird colony counts in 2023, declines of Northern Gannet were seen across Scotland and Wales, but with corresponding increases in England. It is unlikely that the full impact of this disease is reflected in these

indicators, especially as some of the most impacted species, such as breeding Great Skua *Stercorarius skua* (a species that does not breed in Wales) are not included in the production of the UK seabird indicator.

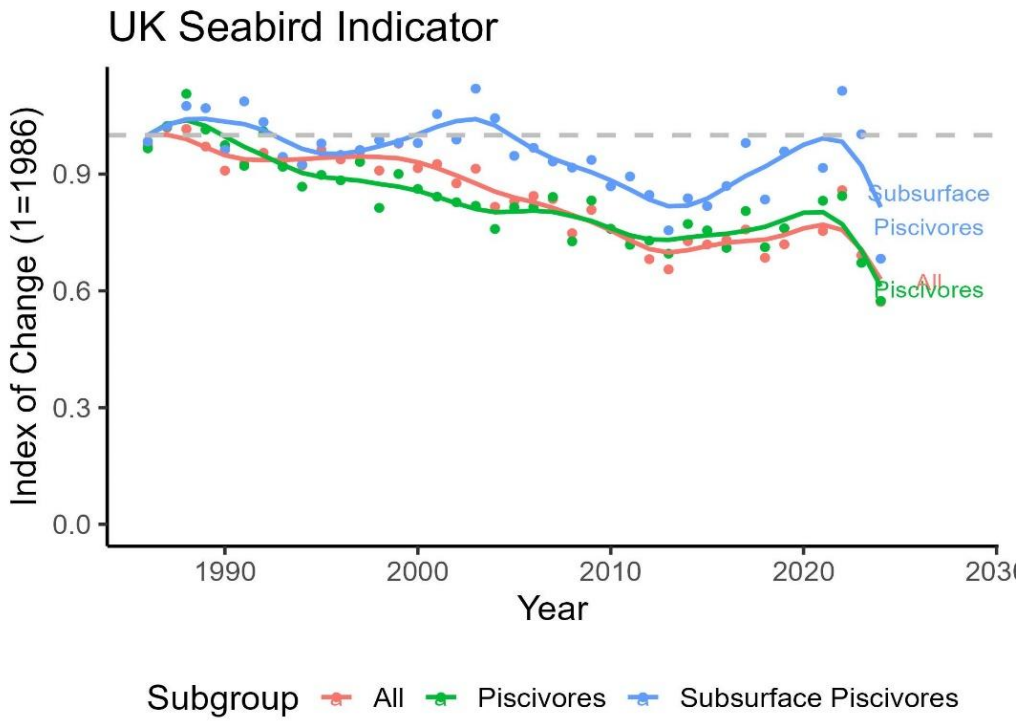

Figure 1.1. Changes in the abundance of breeding seabirds (13 species) between 1986–2024 in the UK, including subgroups surface feeders (5 species) and subsurface feeders (3 species). Dots represent the unsmoothed trend and the solid line is the smoothed trend (95% confidence intervals not included). Defra (2025).

Overall, there are 26 regularly occurring breeding seabird species in the UK, of these, 21 species regularly breed in Wales. None of Wales' breeding seabirds are endemic yet several species are of significant international importance, such as Manx Shearwater *Puffinus puffinus*, and Northern Gannet.

The fourth census of the breeding seabirds of Britain and Ireland was undertaken during 2015 to 2021 (Seabirds Count). Trend changes between Seabird Count (Burnell *et al*., 2023) and the third seabird census: Seabird 2000 (Mitchell *et al.,* 2004) suggest in Wales the populations of 14 species had increased and seven species had decreased (Table 1.1). Of these species, three were gulls: Black-legged kittiwake *Risa tridactyl*, Lesser Black-backed Gull *Larus fuscus* and Herring Gull *Larus argentatus*. All three species have benefited from fishery discards, including those from finfish fisheries, and open land fill sites. In Wales, the inshore fishery industry is now much smaller than it was at the time of the Seabird 2000 census and it is thought that the reduction in fishery discards in combination with the closure of landfill sites may have contributed to the declines in these populations.

Other breeding seabird species in Wales (Northern Gannet, Black-headed Gull, Sandwich Tern Arctic Tern *Sterna paradisaea* and Common Tern *Sterna hirundo*)

were badly impacted by HPAI mass mortality events, particularly by the very infectious strain H5N1, after the seabird census period. Since these out breaks the population of Sandwich terns in Wales seems to have bounced back with an increase in numbers back to pre-avian flu levels coupled with high productivity. However, populations of Artic tern and Northern Gannet numbers are approximately half of what they were before the HPAI epizootic. The Welsh Black-headed Gull population has suffered the biggest decrease (c.77%, Tremlett *et al.,* 2024) of all breeding seabird species in Wales since Seabirds Count (2015-2021). To further understand the full impact of Avian Influenza (AI) pathways and resulting population effects annual surveys of seabird productivity, abundance and distribution will need to continue.

Table 1.1 Changes (%) in breeding seabird numbers in Wales between Seabird 2000 (1998-2002 (Mitchell *et al*., 2004) and Seabirds Counts: 2015-2021 (Data source: Burnell *et al.,* 2023) and BoCC4 Wales and GB IUCN 2 Red List assessment.

Species	**% Change since Seabird 2000**	**BoCC4 Wales (Johnstone *et al.,* 2024)**	**GB IUCN 2 (Stanbury *et al.,* 2024)**
Northern Fulmar	-27	Amber	Critically Endangered (Breeding)
Manx Shearwater	+186	Amber	Least Concern (Breeding)
European Storm Petrel	+11	Amber	Least Concern (Breeding)
Northern Gannet	+12	Red	Least Concern (Breeding)
Great Cormorant	+6	Green	Least Concern (Breeding)
European Shag	-29	Amber	Vulnerable (Breeding)
Mediterranean Gull	Increased from 0 AON to 17 AON	Amber	Least Concern (Breeding)
Black-headed Gull	-16	Red	Vulnerable (Breeding and Non-breeding)
Lesser Black-backed gull	-56	Amber	Least Concern (Breeding)
Herring Gull	-23	Red	Near Threatened (Breeding); Endangered (Non-breeding)
Great Black-backed Gull	+49	Amber	Critically Endangered (Breeding); Endangered (Non-breeding)
Black-legged Kittiwake	-34	Red	Endangered (Breeding)
Sandwich Tern	+15	Amber	Least Concern (Breeding)
Roseate Tern	-50	Red	Critically Endangered (Breeding)
Common Tern	+21	Amber	Vulnerable (Breeding)
Arctic Tern	+133	Red	Endangered (Breeding)
Little Tern	+129	Red	Vulnerable (Breeding)
Common Guillemot	+76	Amber	Vulnerable (Breeding)
Razorbill	+82	Amber	Vulnerable (Breeding)
Black Guillemot	+15	Green	Near Threatened (Breeding)
Atlantic Puffin	+197	Red	Critically Endangered (Breeding)

1.2 Birds of Conservation Concern Wales

Seabirds were reported in the fourth assessment of Birds of Conservation Concern (BoCC) Wales (Johnstone *et al*., 2022) and was updated as an addendum to BoCC4 Wales in 2024 (Johnstone *et al.,* 2024) once the full data on abundance of breeding

seabirds in Wales were published (Burnell *et al*., 2023). A total of 21 breeding species was assessed. Gannet moved from the Amber list to the Red list for the first time as a result of a severe population crash caused by HPAI. Black Guillemot *Cepphus grylle* was lowered from Amber to Green and Lesser Black-backed Gull *Larus fuscus* was corrected to Amber, and remains unchanged since BoCC3 Wales in 2016 (Johnstone *et al.,* 2024).

The findings of the seabird addendum to BoCC4 Wales show that eight of the 21 breeding seabirds are Red-listed, 11 are Amber-listed and two are Green-listed (Table 1.1), this suggests seabirds remain the species group with the highest levels of conservation concern in Wales. However some of the changes to Red and Amber listings are not necessarily due to decreases in Welsh populations. For example, Atlantic Puffin *Fratercula arctica* is Red listed in Wales due to its inclusion on the European IUCN Red list and the Red list of BoCC5 UK (Stanbury *et al.,* 2024), though in Wales Puffin populations has increased by 197% between Seabird 2000 and Seabird Count (Burnell *et al.,* 2023). Common Guillemot *Uria aalge* and Razorbill *Alca torda* are Amber-listed in BoCC4 Wales due to the criterion: Wales holds at least 2% of the European or East Atlantic flyway population (Johnstone *et al.,* 2024).

1.3 GB IUCN Assessment of extinction risk

Similar to BoCC, seabird species were assessed for their risk of extinction in Great Britain (GB) using standardised criteria set by the IUCN (Stanbury *et al*., 2021). This assessment was updated in 2024 for 28 seabird species in Great Britan (GB) by way of a two-stage addendum to the second GB IUCN Red List review of extinction risk (Stanbury *et al.,* 2024). The first stage was a pre-HPAI baseline and the second was an examination of apparent HPAI impacts up to 2024. However, this is a GB IUCN assessment and there is no equivalent assessment of extinction risk for birds in Wales.

There was an overall decrease in the status of seabirds since 2017, with 13 (62%) of the 21 regularly occurring Welsh breeding seabird species assessed in GB as threatened with extinction (Table 1.1). Black Guillemot was assessed as Near Threatened and seven seabird species that breed in Wales qualified at a GB level as Least Concern (Manx Shearwater, European Storm Petrel *Hydrobates pelagicus*, Northern Gannet, Great Cormorant *Phalacrocorax carbo*, Mediterranean Gull *Icthyaetus melanocephalus*, Lesser Black-backed gull *Larus Fuscus* and Sandwich Tern. However, many of these species have increased in Wales over the last two decades (Table 1.1).

The findings of the latest reviews of BoCC4 Wales (Johnstone *et al*., 2024) and GB IUCN 2 (Stanbury *et al.,* 2024) show that some Welsh seabird populations are in trouble and reinforce the UK Government's Biodiversity Indicator (Figure 1.1). However, 14 seabird species (67% of the 21 seabird species that breed in Wales) have increased between the two recent seabird censuses (Burnell *et al*., 2023) and the GB IUCN Red list assessment and the UK Seabird Indicator reflect seabird populations across the UK.

1.4 Pressures Assessment

There are many potential drivers of seabird population change that affect species population trends in different ways. However, broadly, most pressures are considered to affect breeding productivity by influencing the availability of nest sites or food provisioning during chick rearing and or the survival rates of fledged young, immatures and adults (Mitchell *et al*., 2004; Burnell *et al.,* 2023).

Out of the ten key Pressure Categories associated with all breeding seabird species in Wales, six impact >10 species. Of these, Climate change was the highest active pressure category impacting 19 out of 21 breeding seabird species, representing 90% of all seabird species assessed in Wales. There were two joint second highest ranked Pressures, these were *Extraction and cultivation of biological living resources* and *Plant and animal disease, pathogens and pests*, both impacting 18 breeding seabird species respectively. Wildlife disease can have significant and negative impacts on biodiversity. Recent trends towards an emerging range of diseases impacting avian species across the UK, and indeed globally, are likely to continue to be a serious issue for both population maintenance and recovery. For example, the sustained transmission of HPAI H5N1 through populations of breeding seabirds in Wales and elsewhere resulted in high mortality events in Northern Gannet, Black-headed Gull, Arctic Tern and Common Tern populations.

Predation by native predators (e.g. Peregrine *Falco peregrinus*), non-native predators (e.g. American Mink *Neovison vison*) or a combination of the two are considered to be one of the most important drivers of some species of seabird change. Burnell *et al*. (2023) suggests of the 25 species of UK breeding seabirds where the potential causes of seabird population change were assessed, predation by either native or non-native predators influenced population change in 21 species. In Wales, this pressure (*Alien and problematic species*) was related to 16 breeding seabird species. In the face of this predation pressure, conservation interventions are required, for example the provision of nest boxes for breeding Roseate Terns *Sterna dougallii* to off-set predation by native avian predators. More than 50% of Wales' breeding seabirds are dependent on islands. In these cases, other interventions may require seabird island biosecurity measures, where the eggs and chicks of ground-nesting seabirds are vulnerable to rodent predation.

The top ranked pressures reported here broadly reflect the top five pressures identified in the imminent Welsh Seabird Conservation Strategy (WSCS)[1] of: i) Introduction or spread of invasive non-indigenous species, ii) Introduction of microbial pathogens, iii) visual disturbance, iv) Reduction in availability, extent, or quality of supporting habitat and v) uncontrolled increase of native competitor/predatory species. The only difference was that "Extraction and cultivation of biological living resources" is currently not considered to be a key pressure due to the small size and nature of fisheries in Wales.

[1] The Welsh Seabird Conservation Strategy will focus on the protection, conservation and restoration of seabirds in Wales by providing: a framework for a continuous assessment of the status of seabirds and conservation action in Wales; recommendations where conservation action needs to be improved or adjusted; and, enabling and safeguarding deliverable conservation actions through collaboration with stakeholders.

1.5 Conservation Measures Assessment

If action is implemented effectively, this will increase trends in most species, whilst a smaller subset of at-risk species will require additionally targeted and bespoke action to avoid species extinction.

To aid seabird recovery requires a collaborative approach that sets the strategic direction of potential conservation interventions to aid recovery. More specifically, there is a need to:

- Determine and agree what are our seabird priorities and to establish better alignment between the various ways of measuring progress in species recovery.
- Determine main drivers of seabird population change through diagnostic autecological studies.
- Identify how can policy and legislation measures maximise opportunities.

Three ground-nesting seabird species: Atlantic Puffin, Manx Shearwater and European Storm-petrel are particularly vulnerable to predation by invasive mammals such as Brown Rat *Rattus norvegicus*. In Wales, biosecurity of our seabird islands is extremely important. The Biosecurity for LIFE programme was a five-year (2018-2023) partnership project led by the RSPB. The project improved biosecurity measures at 42 UK SPAs, including six Welsh islands within five SPAs: Ynys Seiriol/Puffin Island SPA, The Skerries (Anglesey Terns SPA), Bardsey Island (Aberdaron Coast and Bardsey Island SPA), Skomer and Skokholm (Skomer, Skokholm and the Seas off Pembrokeshire SPA) and Grassholm SPA. Surveillance and incursion response efforts have prevented new populations of non-native predators becoming established on these islands. There are now legacy projects in place in Wales, including other important seabird islands such as SSSIs.

Following a recent consultation (December 2024) Welsh Government are developing the Welsh Seabird Conservation Strategy that will set the strategic direction for seabird conservation in Wales. To date, recommendations have been proposed to predominantly address the five key pressures (see above). These include measures to: increase and expand biosecurity for seabird islands; management of seabird sites to decrease disturbance; increase protection from various predators; facilitate education and stakeholder engagement and improve data collection to facilitate a statistically robust dataset to understand change. To add population level resilience, other measures include determining the feasibility of aiding seabird colonisation/assisted recolonisation of islands that are currently free of invasive mammals and working proactively with the renewable energy industry to develop greater understanding of the impacts of offshore wind and tidal turbine arrays.

1.6 Wales proportion of UK seabird populations

The Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA holds Wales largest aggregation of breeding seabirds in Wales, with nearly a million breeding individuals and internationally important

numbers of Manx Shearwater, European Storm petrel, Razorbill *Alca torda*, Atlantic Puffin and Lesser Black-back Gull.

Confined to a few offshore islands, the Welsh Manx Shearwater breeding populations predominately resides in the Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA. With a GB breeding population of just over 1 million Apparently Occupied Sites (AOS) this Welsh SPA with a population of 455,156 AOS represents 45% of the GB breeding population and 37% of the global population (Burnell *et al*., 2023). Northern Gannet is another Welsh breeding seabird of international importance. This species is highly colonial with the two Welsh colonies on offshore islands (Grassholm SPA and Ynys Badrig / Middle Mouse). Applying data presented by Burnell *et al*., (2023), the last GB and Ireland seabird census (2015-2021) suggested Grassholm SPA held 13% of the UK Northern Gannet SPA network population, 19% of the British, Isle of Man and Channel Islands Gannet population and 6% of the global population.

1.7 Overall conclusion

If we look at the UK seabird indicator it shows that many seabird species, particularly specialist piscivore species, e.g. European Shag *Gulosus aristoltelis*, have steadily decreased in the long-term. However, from the recent 2015-2021 census of breeding seabirds the majority of seabird species in Wales increased with most of the species declines associated to Gull species. Declines in Lesser Black-backed Gull and Herring Gull are considered to be predominantly related to reduction in fisheries discards and legislative changes to waste management (Burnell *et al.*, 2023).

The drivers of decline for seven seabird species in Wales, similar to elsewhere in the UK, is probably multi-factorial There appears to be broad agreement on the key pressures that are impacting seabird populations between this assessment and that of the Welsh Seabird Conservation Strategy, namely disease transmission, uncontrolled predation and changes in habitat quality due to anthropogenic activities. Some pressures impacting our breeding seabirds, such as climate change are outside our control in Wales, whilst others such as island biosecurity can be addressed with targeted conservation interventions such as maintaining strict island biosecurity.

Wales holds over 700,000 pairs of breeding seabirds across 21 species, representing 16% of the UK seabird population estimate for these same species (data source: Burnell *et al.,* 2023) and holds major UK responsibility for Manx Shearwater, where 61% of the UK population breeds in Wales (Burnell *et al*., 2023). The results of the Seabird Monitoring Programme (SMP) and the recent national seabird census (Seabirds Count: 2015-2021) and their interpretation will provide the evidence base for seabird conservation during the next decade in Wales and elsewhere. This will be assessed quinquennially by the Welsh Seabird Conservation Strategy.

2. Non-breeding waterbirds

2.1 Population Change

The wintering waterbird indicator monitors the internationally important numbers of waders, ducks, geese, swans and other waterbirds that winter on the UK coasts and wetlands from the mid-1970s – 2023/24 (Figure 2.1). Non-breeding waterbirds are monitored annually, by volunteers, through the Wetland Bird Survey (WeBS)[2], and uses the most recent available data. This long-term, standardised dataset gives robust population trend and range information.

Wintering waterbirds in the UK are comprised of birds from breeding populations that fall both within and outside the UK. For example, the wintering Eurasian Curlew *Numenius arquata* population is made up of birds that breed in the UK's uplands and wet grasslands as well as birds that breed in Continental Europe. The wintering waterbird index for the UK includes individual measures for 46 species, races or populations of wintering waterbirds split into two groupings, of which 15 species are waders and 31 species are wildfowl. There is no Wales equivalent wintering waterbird indicator.

In the winter of 2023/24, the wintering waterbird index was 92% higher than in the winter of 1975/76 (Defra, 2025). However, numbers have been in decline since the peaks of the 2000s and the indicator fell further, by 4%, between the winters of 2018/19 and 2023/24. The recent ongoing downturn is caused by declines in the wildfowl subgroup index (down by 9% between 2018/19 and 2023/24). In contrast, the wader subgroup index has increased by 7% over the same period. Whilst the increase for waders is encouraging, short-term fluctuations in wintering waterbird numbers do sometimes occur.

Examining the indicators for species groups, wildfowl have shown more overall increase than waders, but the indicators for both are broadly parallel. However, more recently waders appear to be on the upturn due to increases for several Arctic breeding wader species that have previously declined including Purple Sandpiper *Calidris maritima* and a particularly big upturn for Dunlin *Calidris alpina*. This is in addition to species showing ongoing increases (e.g. Avocet *Recurvirostra avosetta*, Black-tailed Godwit *Limosa limosa* and Sanderling *Calidris alba*). Most other wader species have been stable in recent years.

Many species of wintering wildfowl have shown recent declines (17 species), nine of which have had long term increases. Individual species trends vary, with some species populations in strong decline, some species increasing 10 fold and other species changing very little since 1975/1976, for example, Avocet and the British/Irish wintering Greylag Goose *Anser anser* have increased in contrast to declines in Eurasian Curlew and Tundra Swan (Bewick's Swan) *Cygnus columbianus*.

[2] WeBS is a partnership between JNCC (on behalf of the Country Statutory Conservation Agencies), BTO and RSPB.

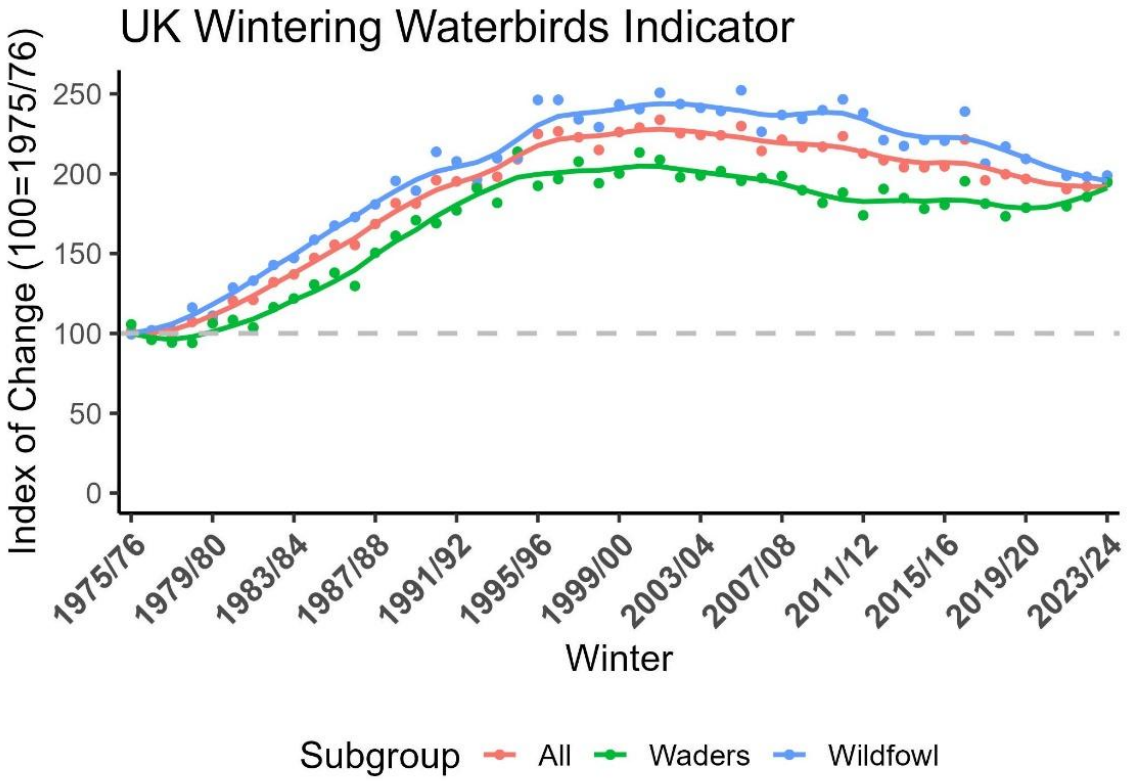

Figure 2.1. Changes in the abundance of wintering waterbirds between the winters of 1975/76 and 2023/24 in the UK, including subgroups wildfowl (31 species) and waders (15 species). Dots represent the unsmoothed trend and the solid line is the smoothed trend. Source: Defra (2025).

Population trend alerts for non-breeding waterbirds on Special Protection Areas (SPAs)[3] of international importance applies WeBS data to assess the performance of UK SPAs that are classified for one or more non-breeding waterbird feature. WeBS Alerts therefore provide an evidence-based method to assess whether these protected sites continue to support the populations of non-breeding waterbirds for which they were classified for. The WeBS Alerts for SPAs in Wales classified for wintering waterbirds are presented in Table 2.1. The Alert status for the Dyfi Estuary / Aber Dyfi Estuary SPA has not been assessed for the Greenland White-fronted Goose *Anser albifrons flavirostris*, the single SPA feature of this site

[3] Where a species that is a feature of an SPA has undergone a major decline in numbers within that SPA, this is flagged by the issuing of an Alert. High (red) Alerts are issued where declines exceed 50%, and Medium (amber) Alerts are issued where declines are 25-50%. Change is assessed over the short term (5yr), medium term (10yr) and long term (25yr), as well as since the baseline data collection that was used for site classification.

Table 2.1 WeBS Alerts for a) Burry Inlet SPA, b) The Dee Estuary SPA, c) Severn Estuary SPA and d) Traeth Lafan / Lavan Sands, Conway Bay SPA. Each cell presents a trend for each classified feature – Red = High Alert (>50% decrease) and Amber = Medium Alert (25-50% decrease). Source: WeBS Alerts 2023/24. Welsh *et al*., 2025

a) Burry Inlet SPA

Species	**Short-term % change**	**Mid-term % change**	**Long-term % change**
Shelduck	30	39	-7
Shoveler	109	30	-62
Wigeon	-52	-40	-80
Pintail	25	2	-26
Teal	30	32	-51
Oystercatcher	-12	13	-28
Grey Plover	-64	-80	-89
Curlew	-23	-42	-67
Turnstone	-46	71	-91
Knot	-8	359	1
Dunlin	-74	-82	-85
Redshank	-10	-21	-26
Waterbird Assemblage	-19	-8	-37

b) The Dee Estuary SPA

Species	**Short-term % change**	**Mid-term % change**	**Long-term % change**
Shelduck	-6	-9	-12
Pintail	3	48	-34
Teal	-2	20	-6
Oystercatcher	36	10	26
Grey Plover	-17	-13	-54
Curlew	9	-11	-34
Bar-tailed Godwit	-54	-74	-86
Black-tailed Godwit	-23	-44	29
Knot	35	-20	32
Dunlin	33	74	-19
Redshank	-18	-12	-33
Waterbird Assemblage	14	13	2

c) Severn Estuary SPA

Species	Short-term % change	Mid-term % change	Long-term % change
White-fronted Goose (European)	18	-30	-91
Bewick's Swan	-19	-59	-68
Shelduck	14	39	25
Gadwall	-20	-19	-31
Dunlin	-18	-15	-41
Redshank	1	18	102
Waterbird Assemblage	-14	-7	-12

d) Traeth Lafan / Lavan Sands, Conway Bay SPA

Species	Short-term % change	Mid-term % change	Long-term % change
Red-breasted Merganser	-54	-67	-87
Great Crested Grebe	-6	-34	-13
Oystercatcher	4	-23	-6
Curlew	-10	-22	-4
Redshank	4	14	134

Alerts are widely used both in a local context, e.g. to inform site management and casework, and in informing trend change at a country level. For example in determination of changes at a national scale data from other European countries show some waterbirds are increasingly wintering further east, so some of the declines (and hence Alerts), particularly at sites in the west, are likely to be caused by birds wintering at sites further east in the UK or in other countries. For example, there have been distributional shifts in wintering range of Bewick's Swan (Beekman *et al*., 2019) and has disappeared completely from Northern Ireland. However, WeBS monitoring shows that SPA sites remain very important, especially as refuges in years with colder than average weather in eastern Europe.

2.2 Birds of Conservation Concern Wales

Conservation priority for wintering waterbird populations (including divers, seaducks and grebes) were reported in both the third and fourth Wales Birds of Conservation Concern assessments (Johnstone and Bladwell, 2016, Johnstone *et al*., 2022). Of these, 17 are Red-listed and 27 are Amber-listed. Both recent assessments in Wales (BoCC 3 and BoCC 4) highlight the plight of wintering waterbirds, such as White-

fronted Goose *Anser albifrons*, Bewick's Swan *Cygnus columbianus bewickii*, Greater Scaup *Aythya marila*, Common Pochard *Aythya ferina,* Bar-tailed Godwit *Limosa lapponica,* Grey Plover *Pluvialis squatarola* and Common Ringed Plover *Charadrius hiaticula*. These are species that are shifting their distribution in response to milder winters on the continent.

One of three species that moved from Green to Red list in BoCC4 Wales was non-breeding Purple Sandpiper *Calidris maritima*. Wintering Purple Sandpiper populations have been estimated four times since winter 1984/85 but only show severe abundance decline (-68%) since the third survey in winter 1996/97, a pattern also seen in other UK countries (Austin *et al.,* 2017). Birds may be wintering farther north, closer to Arctic breeding areas as UK winters have become milder, so called 'short-stopping' (Burton *et al.,* 2020), although it remains possible that poor performance in Arctic breeding areas has resulted in global population decline (also possibly linked to climate, Summers *et al.,* 2012).

2.3 GB IUCN Assessment of extinction risk

In total 54 non-breeding waterbird populations have been assessed for their risk of extinction in GB using standardised criteria set by the IUCN. The prospects of six species improved, i.e. their extinction risk reduced, between the first assessment (Stanbury *et al.*, 2017) and second (Stanbury *et al.,* 2021 and 2024), these were Bean Goose *Anser fabalis*, Great Cormorant *Phalacrocorax carbo carbo*, Great Crested Grebe *Podiceps cristatus*, Northern Lapwing *Vanellus vanellus*, Dunlin *Calidris alpina alpina* and White-fronted Goose *Anser albifrons*. However, 11 species showed an increased risk of extinction, including Tufted Duck *Aythya fuligula* and Mallard *Anas platyrhynchos*.

Unlike *BoCC*, the IUCN process does not consider the international significance of our populations or species showing severe declines prior to the three-generation-length assessment period; therefore, there is less commonality between GB IUCN2 and UK BoCC5 assessments.

2.4 Pressures Assessment

Pressures were wide-ranging, from threats on migration, illegal hunting, ingestion of lead ammunition to the impacts of climate change. Assessing drivers is further complicated by the fact that many wintering waterbird populations in the UK have been affected by 'short-stopping', whereby species have shifted their wintering grounds north eastwards in response to increased temperatures.

The assessment of pressures concluded that 31 non-breeding waterbirds currently have no pressures currently acting on them (out of 61 species populations assessed) that are limiting population growth at the Wales-scale. These include new colonists such as Cattle Egret *Bubulcus ibis* and Great White Egret *Ardea alba*, and waders with strongly increasing populations such as Avocet *Recurvirostra avosetta* and Black-tailed Godwit *Limosa limosa*. Some species were reported to have unknown pressures, this was particularly related to several sea ducks e.g. Greater Scaup and Red-necked Grebe *Podiceps grisegena*, which are difficult to survey, and so trends

are unknown and pressures unclear. It may be that the drivers behind the Welsh declines are acting on the species' breeding grounds outside the UK.

Climate determines both the distribution and movements of waterbirds and the wetland habitats they use for feeding and roosting. In total 30 species of non-breeding waterbirds were impacted by the pressure climate change. Milder conditions are encouraging species such as Bewick's swan, European White-fronted Goose *Anser albifrons albifrons* and Pintail *Anas acuta* to spend the winter on the continent, closer to their breeding grounds. The consequences of climate change for non-breeding waterbirds are multiple and may exacerbate profound negative impacts on driving habitat loss and degradation. There has also been a shift in wintering distribution within the UK in a north-easterly direction, particularly in the smaller waders such as Dunlin. In addition, sea-level rise is affecting non-breeding waterbirds by reducing space for high tide roosts, as upper saltmarsh is squeezed against hard sea defences.

The pressure category: Urban and infrastructure development impacted 21 species, with 16 species considered to be high impact. Recreational disturbance affected 16 species, mostly a combination of seaducks (disturbance by leisure boats) and waders. Specifically for wading birds, this pressure is further exacerbated by sea level rise, as high tide roosts are pushed closer to the upper shore areas. This increases recreational pressure in areas that were previously not accessible.

Poor water quality currently affected some species populations principally through hyper-eutrophication of freshwater and intertidal wetlands, from agricultural, residential and industrial sources.

Other pressures and threats included bycatch in fishing gear (though the level of this impact is poorly understood) and renewable energy development. Additional threats that may lead to population-level effects in the future include, hunting, marine fish or shellfish harvesting and marine aggregates extraction.

2.5 Conservation Measures Assessment

One of the key conservation measure applied to non-breeding waterbirds was the management of the impacts associated with converting land for development. This principally relates to the Habitats Regulations Assessment process, which has ensured impacts on SPA wintering waterbirds are avoided, mitigated or compensated. However, it has only been partially implemented for some species that are represented within the Wales SPA network.

Whilst sea level rise and coastal squeeze affects many species, great successes have been achieved through coastal habitat creation including managed realignments. Many waders and waterfowl use freshwater wetlands for roosting and foraging. Therefore, landscape scale restoration of wetlands, for example as is happening on the Gwent Levels is of great value for breeding and non-breeding populations for species like Common Crane *Grus grus*, Eurasian Spoonbill *Platalea leucorodia*, Common Snipe *Gallinago gallinago* and Northern Lapwing. Further measures to ensure the hydrological integrity of wetlands and to join them up at the landscape scale will enable species to persist in the face of climate change.

Action has been taken to address point source discharges from sewage treatment works and others through the Habitats Regulations consenting process. Diffuse discharges from agricultural sources have been more difficult to address. Further work is necessary to reduce the impacts of eutrophication which causes mudflats to become smothered by green algae, leading to anoxic conditions and reducing food availability for wintering waders.

2.6 Wales proportion of UK non-breeding waterbird populations

Of all non-breeding waterbirds found in Wales only Light-bellied Brent Goose *Branta bernicla hrota*, (Svalbard/Denmark race) had greater than 30% of the British population found in Wales with 69% of the British population wintering in Wales. Three species of non-breeding waterbird, that winter in Wales, had greater than 20% but less than 30% of the British population: Common Greenshank *Tringa nebularia*, Eurasian Oystercatcher *Haematopus ostralegus* and Spotted Redshank *Tringa erythropus.*

2.7 Overall conclusion

The UK wintering waterbird indicator shows that species have tended to increase in the long-term but there have been some declines in the short-term, with waders mirroring declines in wintering wildfowl. Such declines may be attributed to climate change, resulting in some waterbird populations wintering closer to breeding grounds. However, these declines have generally not led to a dramatic change in the conservation status of species as assessed on the BoCC Wales/IUCN Red List.

Significant pressures like climate change are outside our control in the UK. Here, climate change is leading to shifts in wintering distribution and there are other pressures acting at a flyway scale or on breeding grounds. In Wales, the WeBS Alerts triggered were most likely due to broadscale, multifactorial pressures. However, WeBS Alerts also show that where action is taken on sites, populations can buck the regional or national trend, indicating the value of conservation work on SPAs.

Work is being undertaken at a site level to address the impacts of coastal squeeze, recreational disturbance and poor water quality. This is driven by Habitats Regulations assessments of plans and projects, highlighting the importance of the SPA network for non-breeding waterbird conservation.

3. Woodland birds

3.1 Population change

Woodland bird populations have declined by 32% in the UK between 1970-2024 (Figure 3.1). The UK woodland bird index includes individual trend changes for 37 species of woodland birds, of which 25 are woodland specialists (species that are restricted to, or highly dependent on, specific woodland habitats) and 12 are generalists. There is no Wales specific woodland bird indicator.

The rate of UK decline has accelerated in the last ten years (Defra, 2025). However, woodland birds as a UK bird group are down by 3% over the short-term period from (2019–2024), compared to a 11% decline in the UK Farmland Bird indicator over the same period. This is despite woodland cover having increased 1.2% from 1998-2021. The long-term decline of the UK woodland bird indicator has been largely driven by the decline in specialist species (e.g. Lesser-spotted Woodpecker *Dendrocopus minor*) and long-distance migrants such as Wood Warbler *Phylloscopus sibilatrix*. For many species, these declines are only evident in the short-term, with five and ten-year declines shown in generalist woodland birds such as Great Tit *Parus major* and Hedge Accentor ('Dunnock') *Prunella modularis*. However, in Wales Dunnock have slightly increased by 5% between 2013-2023, whist other woodland species such as Blackcap *Sylvia atricapilla* and Common Chiffchaff *Phylloscopus collybita* have significantly increased by 189% and 117% respectively between 1995-2023 (Heywood *et al.,* 2025).

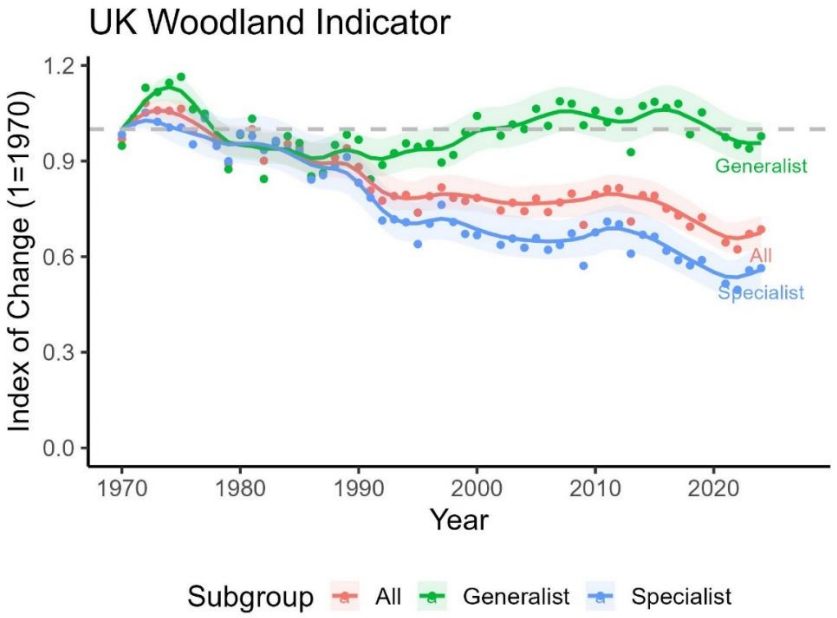

Figure 3.1. Changes in the abundance of woodland birds between 1986–2024 in the UK, including subgroups generalists (12 species) and specialists (25 species). Dots represent the unsmoothed trend and the solid line is the smoothed trend (95% confidence intervals not included). Source: Defra (2025).

Some breeding woodland birds are monitored annually through the Breeding Bird Survey (BBS), which is a partnership between JNCC (on behalf of the country statutory conservation agencies), BTO and RSPB. Fieldwork is conducted by volunteers. This long-term, standardised dataset gives robust population trend and range information. However, BBS coverage in Wales is insufficient to provide population trend changes for many specialist migratory woodland bird species e.g. Wood Warbler and resident specialist species e.g. Hawfinch *Cocothraustes cocothraustes* and Willow Tit *Poecile montanus*.

3.2 Birds of Conservation Concern Wales

Woodland bird species were reported in the fourth assessment of Birds of Conservation Concern assessments (BoCC) Wales (Johnstone *et al*., 2022). Marsh Tit *Poecile palustris*, Willow Tit, Spotted Flycatcher *Muscicapa striatastriata*, Willow Warbler *Phylloscopus trochilus*, Wood Warbler and Lesser Spotted Woodpecker remain Red-listed, with the last two at real risk of extinction in Wales. Goldcrest *Regulus regulus* joined the Red list following a decline in abundance since 1995, and Garden Warbler *Sylvia borin* moved from Green to Amber between the third and fourth BoCC Wales assessments. Some Welsh woodland breeding species are long distance Afro-Palearctic migrants and include Wood Warbler (Red-listed), Spotted Flycatcher (Red-listed), European Pied Flycatcher *Ficedula hypoleuca* (Amber-listed), and Tree Pipit *Anthus trivialis* (Red-listed) (Johnstone *et al*., 2022).

3.3 GB IUCN Assessment of extinction risk

Similar to BoCC, woodland bird species were assessed for their risk of extinction in GB using standardised criteria set by the IUCN (Stanbury *et al*., 2021). There is no equivalent IUCN assessment of extinction risk for birds in Wales. Of 54 woodland bird species that were assessed the prospects of four species improved (Marsh Tit, Mistle Thrush *Turdus viscivorus*, European Pied Flycatcher and Woodlark *Lullula arborea* (not a regular breeder bird of Wales), i.e. their extinction risk reduced, between the first GB IUCN assessment (Stanbury *et al*., 2017) and the second assessment (Stanbury *et al*., 2021), but five species had increased risk of extinction (Common Chaffinch *Fringilla coelebs*, Eurasian Sparrowhawk *Accipiter nisus*, Green Woodpecker *Picus viridis*, Spotted Flycatcher and Eurasian Hobby *Falco subbuteo*. All five of these species breed in Wales and there was a ‘genuine’ change in these species fortunes, as opposed to a ‘nongenuine’ change due to the availability of new survey information. The findings of the latest reviews of BoCC 4 Wales and GB IUCN 2 add to the already extensive weight of evidence that many of our woodland bird populations are in trouble and reinforce the UK Government’s Biodiversity Indicator that shows long-term decline in woodland birds.

3.4 Pressures Assessment

The assessment of pressures for Habitats Regulations 9A (see the Birds data Wales - Pressures spreadsheet) assessed 39 Welsh breeding woodland bird species and concluded for 18 species evidence could not be identified to determine whether any pressures are currently acting on them.

There are Welsh 22 woodland bird species assessed that are declining that are either Red or Amber-listed in the fourth assessment of Birds of Conservation Wales but the pressures causing this are unknown for five species (Wren *Troglodytes troglodytes*, Goldcrest *Regulus regulus*, Firecrest *Regulus ignicapillus*, Coal Tit *Parus ater* and Green Woodpecker).

Climate change was the highest active pressure category impacting 15 breeding species, representing 38% of all species assessed in Wales, increasing to 86% where a pressure was known and evidence based.

The consequences of climate change for breeding woodland birds are multiple and may exacerbate profound negative impacts on driving habitat loss and degradation. Furthermore, changing climate may determine both the distribution and breeding success of many specialist woodland bird species. For example, earlier breeding in some species may now be misaligned with peak food resources, resulting in a phenological mismatch where earlier leafing trees may result in earlier invertebrate peaks. Although the mismatch theory is currently popular in evolutionary and conservation science, most of the research is based on work done in the Netherlands. There is little evidence if this process occurs in the UK, which is at the extreme western edge of the distribution of many specialist migrant woodland birds such as the European Pied Flycatcher and Wood Warbler. Habitat creation is likely to be a large component of future land-use planning if targets on halting declines in Welsh woodland bird loss and mitigating climate change are to be met. Understanding the effects of climate change on woodland phenology, breeding success and survival of woodland birds, particularly long-distance migrants is both vital and urgent. For example, Robinson *et al*. (2007) suggested wetter rainy seasons in Africa are associated with increased overwinter survival in long-distant migrants such as Redstart.

Woodland bird species need to adapt and respond to a changing climate if they are to persist. There is plenty of evidence to suggest that some species are better able to do this than others. For example, many migratory birds, such as European Pied Flycatchers are now arriving back to breeding sites earlier than just a few decades ago. Landscape scale planning will be required to mitigate the impacts of climate change for some woodland bird populations and the habitats they require to meet their ecological needs.

The other key pressures were Forestry related practices, impacting 14 breeding species, and Unknown pressures operating outside the UK, which impacted 12 breeding woodland bird species, predominantly the long distance Afro-Palearctic migrants such as BoCC Wales Red-listed species e.g. Spotted Flycatcher, Willow Warbler, Tree Pipit and Wood Warbler and BoCC Wales Amber-listed species e.g. European Pied Flycatcher and Garden Warbler. Though there are many drivers of woodland bird population change, species with similar trends and ecological requirements are not necessary impacted by a common set of pressures. For example, Amar *et al.* (2006) suggested 13 out of 18 woodland bird species that were reviewed, including Willow Tit, Wood Warbler and Spotted Flycatcher, the maturation of woodland and the cessation of active management may be contributed to population decline. In other species, such as Hawfinch and Lesser Spotted Woodpecker, woodland fragmentation and reduced connectivity may be an important driver of decline (Dunn and Charman, 2008). Climate change and other pressures

are acting at a flyway scale (e.g. hunting pressure) or on wintering (e.g. degradation or loss of habitats on sub-Saharan Africa) and breeding grounds (e.g. phenological mismatch), or in some species pressures may operate across all three spatial and temporal scales.

3.5 Conservation Measures Assessment

If action is implemented effectively, this will increase trends in most species, whilst a smaller subset of at-risk species will require additionally targeted and bespoke action to avoid species extinction.

To aid woodland bird recovery requires a collaborative approach that sets the strategic direction of potential conservation interventions to aid recovery. More specifically, there is a need to:

- Determine and agree what are our woodland bird priorities and to establish better alignment between the various ways of measuring progress in species recovery.
- Determine main drivers of wild bird population change through diagnostic autecological studies.
- Examine ways to move beyond measuring progress species-by-species where multi-taxa priorities and benefits co-exist.
- Identify how can policy and legislation measures maximise opportunities.

Nine priority UK woodland bird species have been identified by the UK Woodland Bird Working Group where the management mechanisms are not yet fully understood to enable recovery, all but Nightingale *Luscinia megarhynchos* breed in Wales (Table 3.1). Several of these species, such as Willow Tit *Parus montanus* and Lesser-spotted Woodpecker are at serious risk of UK extinction in the coming decades. Additional evidence is urgently needed to both identify and ensure the correct management interventions are deployed to deliver positive results.

Table 3.1. Woodland bird species identified as UK priorities for specific action.

UK priority woodland bird species	**Wales Birds of Conservation Concern Status (Johnstone *et al.* 2022)**	**IUCN GB Red List Status (Stanbury *et al.*, 2021)**	**UK Population trend**
Hawfinch	Red	Endangered	**-73.5%** (1968-2011)
Lesser spotted woodpecker	Red	Endangered	**-91%** (1967-2020)
Marsh tit	Red	Near Threatened	**-48%** (1995-2023)
Nightingale	Red	Vulnerable	**-91%** (1967-2007)
Pied flycatcher	Amber	Near Threatened	**-56%** (1995-2023)
Spotted flycatcher	Red	Near Threatened	**-67%** (1995-2023)
Willow tit	Red	Endangered	**-90%** (1995-2023)
Woodcock	Red	Vulnerable	**-35%** (2003-2023)
Wood warbler	Red	Vulnerable	**-81%** (1995-2023)

3.6 Wales proportion of UK woodland bird populations

Wales supports a large proportion (>30%) of the UK population for six woodland bird species. For example, more than 80% of the UKs' European Pied Flycatcher and Wood Warbler populations are found in Wales and their declines in Wales are mirrored in the rest of the UK. Negative changes in the Welsh conservation status of these species has direct implications for UK populations and range maintenance. For other woodland bird species such as Common Redstart, Northern Goshawk *Accipiter gentilis,* and Spotted Flycatcher, whilst the Welsh proportion of their UK population is smaller, at 46%, 33% and 32% respectively, management actions may still have an important influence on overall UK population status.

3.7 Overall conclusion

The UK woodland bird indicator shows that many species, particularly specialist species, have steadily decreased in the long-term. Some pressures impacting specialist woodland bird species, particularly long distance Afro-Palearctic migrants are outside our control in Wales.

The problem with woodland bird decline in Wales, similar to elsewhere in the UK, is probably multi-factorial and understanding the contribution of drivers of population decline at a species level and establishing their relative importance is little understood.

Our knowledge of the drivers of woodland bird declines is more rudimentary than that for farmland species. Although potential causes have been identified (e.g. Fuller *et al*., 2005), more research is needed to determine which are affecting which species, and then to identify potential management methods, in woodlands or more broadly, to counter these impacts. This is particularly important for those woodland bird species where Wales holds a significant proportion of the UK population.

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