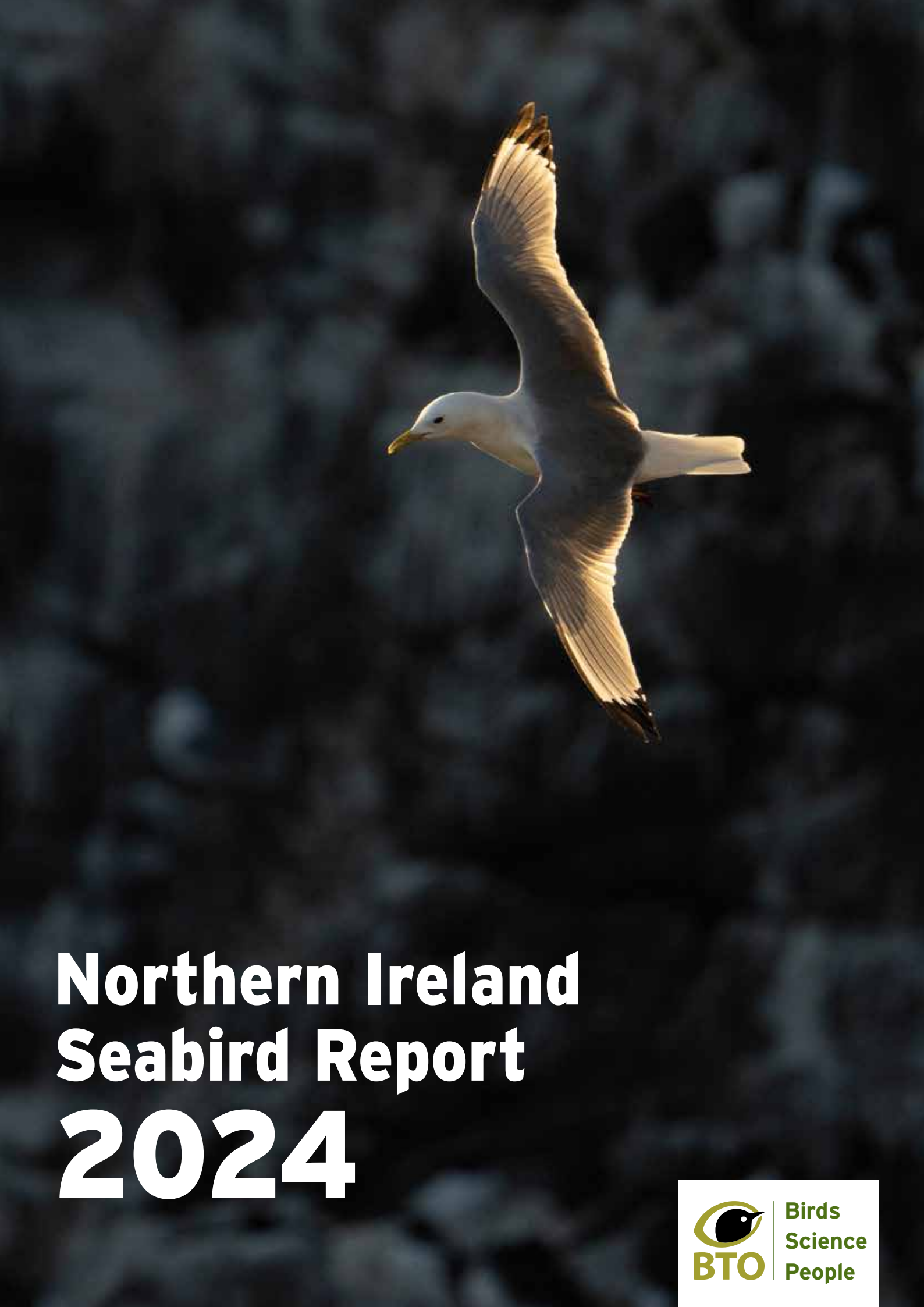

Northern Ireland Seabird Report 2024

BTO Birds Science People

Birds
Science
People

Northern Ireland Seabird Steering Group

Andrew Upton (BTO)
Hala Haddad (BTO)
Kendrew Colhoun (KRC Ecological)
Andy Crory (Ulster Wildlife)
Gillian Gilbert (RSPB)
Kerry Leonard (Sterna Environmental)
Claire Macnamara (NIEA)
Aoibheann Morrison (DAERA Marine and Fisheries Division)
Hugh Thurgate (National Trust)

Report editors

Hala El Haddad and Andrew Upton

This report is the published outcome of the work of the Northern Ireland Seabird Network – a network of volunteers, researchers and organisations – coordinated by the BTO Seabird Coordinator, and funded by NIEA.

British Trust for Ornithology
The Nunnery
Thetford
Norfolk
IP24 2PU
www.bto.org
info@bto.org
+44 (0)1842 750050
Registered Charity No.216652 (England & Wales) No.SC039193 (Scotland).
Company Limited by Guarantee No. 357284 (England & Wales)

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Northern Ireland Seabird Report 2024

Contents

Articles by contributors included in this report have not been subject to editorial control or scientific peer-review and therefore reflect their individual work, views and conclusions and not those of BTO.

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Editorial

Hala El Haddad & Andrew Upton

hala.haddad@bto.org

Black Guillemots, by Sarah Kelman / BTO

This is the 12th edition of the *Northern Ireland Seabird Report*, covering the 2024 breeding season. This report is the published outcome of the work of the Northern Ireland Seabird Network, overseen by the British Trust for Ornithology (BTO) on behalf of the Northern Ireland Environment Agency (NIEA). As always, at the core of the Seabird Network in Northern Ireland is our surveyors. Some work for government bodies such as NIEA, and others on behalf of non-governmental organisations (NGOs) such as Royal Society for the Protection of Birds (RSPB), Ulster Wildlife and the National Trust. All are important contributors through the provision of data for 2024 and previous years, and provide advice and guidance from their expert staff. We are grateful for their co-operation and assistance. Many other surveyors are volunteers who give their time freely to help. The amount and quality of work undertaken by volunteers in Northern Ireland is exemplary, and we are fortunate that many enthusiastic and talented people are part of the Northern Ireland Seabird Network. We would like to thank everyone who has contributed to this report. Huge thanks also go to NIEA for their continued financial support for both the Northern Ireland Seabird Coordinator role and for the production of this annual report.

This 2024 report on breeding seabirds in Northern Ireland follows the format of the preceding reports.

It is important that this report represents a summary of current species knowledge, and that reference to other, earlier, reports is not necessary. In this we are taking a similar stance to the past Northern Ireland Seabird reports (**www.bto.org/our-science/publications/northern-ireland-seabird-report**). In 2023, there was a serious outbreak of highly pathogenic avian influenza (HPAI) amongst breeding seabirds in Northern Ireland. Thankfully, there were no HPAI outbreaks reported amongst breeding seabirds in Northern Ireland during 2024.

As in previous years, several articles have been submitted for inclusion in the Northern Ireland Seabird Report. These articles provide further detail on seabird-related topics and highlight some of the exciting seabird research being undertaken in Northern Ireland and further afield. We are very grateful to the authors for giving their time to produce these articles.

This report should not be treated as an official statistics publication. Naturally this summary does not report on all data, but all records collected are of real value in understanding Northern Ireland's seabirds. A report such as this is only as robust as the data that we can collect and submit, so if you have additional seabird population data, either recent or historic, then please submit them online to the BTO/JNCC Seabird Monitoring Programme (SMP) database (**www.bto.org/smp**) or discuss this with us or the SMP Organiser, Sarah Harris (**smp@bto.org**). Although the national census period has closed, we would encourage volunteers to continue to monitor their seabird sites, as long-term, annual data collection is exceedingly valuable in tracing the health of our marine ecosystems. In particular, breeding success and survival data are rare in Northern Ireland, and therefore we would love to hear from anyone interested in contributing to productivity monitoring or seabird ringing and survival monitoring (Retrapping Adults for Survival, RAS: **www.bto.org/our-science/projects/ringing/surveys/ras**).

We hope you enjoy the 2024 report!

Andrew Upton and Hala El Haddad

BTO NI Senior Research Ecologist and BTO NI Research Ecologist (BTO NI Seabird Coordinators)

Seabird monitoring overview

Black Guillemot, by Edmund Fellowes, BTO

Seabird colony censuses in Britain and Ireland

There have been four national seabird censuses covering the United Kingdom and Ireland. The first, Operation Seafarer, was conducted in 1969 and 1970 by the then recently formed Seabird Group. More than 1,000 surveyors took part. The results were summarised in Cramp *et al.* (1974) *The Seabirds of Britain and Ireland*. Operation Seafarer was a major achievement and provided the first comprehensive and detailed account of the abundance and distribution of breeding seabirds in the UK and Ireland. However, Operation Seafarer also highlighted major problems in accurately counting some species, namely Storm Petrel *Hydrobates pelagicus*, Leach's Petrel *Oceanodroma leucorhoa*, Manx Shearwater *Puffinus puffinus*, Razorbill *Alca torda*, Guillemot *Uria aalge*, Black Guillemot *Cepphus grylle* and Puffin *Fratercula arctica*.

The second census, known as the Seabird Colony Register (SCR), was instigated by the then Nature Conservancy Council and The Seabird Group. Most fieldwork was carried out from 1985 to 1988. The results were published in Lloyd *et al.* (1991) *The Status of Seabirds in Britain and Ireland.* The SCR provided the first assessment of nationwide trends through comparison with results from Operation Seafarer. Recently developed survey techniques provided more reliable baseline estimates for Guillemot, Razorbill and Black Guillemot and served as the foundation for future monitoring of seabird populations. Crucially it also allowed the national importance of individual colonies to be compared, and for sites to be designated as Special Protection Areas (SPAs) under the EC 'Birds Directive'. A legacy of the Seabird Colony Register was the establishment of the Seabird Monitoring Programme (SMP, see below).

The third national census was Seabird 2000. It was coordinated by the Joint Nature Conservation Committee (JNCC) in partnership with other organisations: Scottish Natural Heritage (SNH), Countryside Council for Wales (CCW), Natural England (NE), NIEA, RSPB, The Seabird Group, Shetland Oil Terminal Environmental Advisory Group (SOTEAG), BirdWatch Ireland, and National Parks and Wildlife Service (Dept. of Environment, Heritage and Local Government, Republic of Ireland). Fieldwork was carried out from 1998 to 2002. Seabird 2000 provided population information on the 24 species of seabird which regularly breed in the UK and Ireland, estimating that over eight million seabirds breed in Britain and Ireland each year. Coverage was as comprehensive as possible and included, for the first time, counts of inland colonies. The updated population estimates allowed the identification of new, and the continued monitoring of existing SPAs, and provided updated national trends. Seabird 2000 used recently developed playback techniques for the first time, providing reliable baseline estimates for petrel and shearwater populations. The results were published in Mitchell *et al.* (2004) *Seabird Populations of Britain and Ireland* and demonstrated that the seabird assemblage that breeds here is of extraordinary international importance.

The fourth national census, Seabirds Count (**www.jncc.gov.uk/our-work/breeding-seabird-national-censuses**), was developed by the SMP Partnership and was coordinated by JNCC. Data collection for the census was undertaken between 2015 and 2021, after delays caused by the COVID-19 pandemic required an extension from 2020. On top of the professional coverage required to survey challenging colonies, the continued support of the volunteer Northern Ireland Seabird Network who contribute to this report annually has played a vital role in filling monitoring gaps for the recent census. The results of the Seabirds Count census were published in Burnell *et al.* (2023) *Seabirds Count: A census of breeding seabirds in Britain and Ireland (2015–2021).*

The Seabird Monitoring Programme (SMP)

Since 1986, seabird populations in the UK and Ireland have been monitored through the SMP (**www.bto.org/smp**) coordinated on behalf of 19 partnership organisations by JNCC until July 2022. In July 2022, a new agreement was signed, and a new Partnership formed: the Seabird Monitoring Programme is now jointly funded by BTO and JNCC, in association with RSPB. An Advisory Group of 24 organisations (those who formed the previous Partnership, including the new partners and organisations undertaking integrated population monitoring at four 'Key Sites') was also formed to help steer the programme going forward.

Annual data on breeding abundance and breeding success of seabirds are collected from a large network of sites, both regionally and nationally, to enable species' conservation status to be assessed. To examine trends at individual colonies, at country level and across the whole UK, it is essential that individual sites can be monitored consistently for many years.

Data on breeding abundance – the number of breeding pairs or individuals – provide a medium- to long-term measure of how populations are faring. Data on breeding success/productivity – the number of chicks fledged per breeding pair – are regarded as a short term or more immediate measure of changes in the wider environment (Parsons *et al.* 2008).

Studies at the four SMP Key Sites (Isle of May, Canna, Fair Isle and Skomer) provide extra information on adult survival, diet and phenology for selected species, which in conjunction with data on breeding success are used to help to diagnose the changes in abundance. Additional data on survival rates at other sites are collected through the BTO's Retrapping Adults for Survival (RAS) scheme (Horswill *et al.* 2015), although there are only two current RAS sites for seabirds in Northern Ireland.

The SMP generates annual trends of abundance and breeding success from these data, which from the 2021 breeding season are published on the BTO website (Harris *et al.* 2024: **www.bto.org/smp-publications**). Past trends were reported on the JNCC website up to 2019 (JNCC 2021: **www.jncc.gov.uk/our-work/smp-report-1986-2019**).Where possible, trends are given at UK or country level, but where coverage is only possible at individual sites, the indices are shown at the site level. The SMP is a vital programme for monitoring seabird population trends between the full national censuses.

Why monitor seabirds?

The SMP enables its partners to monitor the health of the marine environment and inform seabird conservation issues. Monitoring seabirds is important for several reasons:

- seabirds are an important component of marine biodiversity in the UK;
- seabirds are top predators and a useful indicator of the state of marine ecosystems;
- human activities impact upon seabirds, both positively and negatively and these effects should be monitored;
- the UK is internationally important for seabirds;
- seabirds are protected by law and the UK has obligations to monitor and protect populations; and
- monitoring provides data which underpin targeted conservation policy development and action.

The Northern Ireland Seabird Coordinator role

In 2013, NIEA initiated funding for a 'Northern Ireland Seabird Coordinator' post at BTO. The main aim of the Seabird Coordinator is to facilitate an increase in annual seabird monitoring across Northern Ireland. Critical to this is the active support and engagement of volunteer seabird monitors (the Northern Ireland Seabird Network), who collect much of the seabird data in Northern Ireland. The Northern Ireland Coordinator works closely with the SMP Organiser and SMP partners to ensure that all monitoring data collected by volunteers feeds into the SMP online database (**https://app.bto.org/seabirds/public/index.jsp**), which has included the creation of a definitive register of Northern Ireland sites (see over). The role also includes the compilation of an annual report on the state of seabird populations (this report), with input from the Northern Ireland Seabird Steering

Group, consisting of independent experts, the RSPB, National Trust, Ulster Wildlife, the Marine and Fisheries Division (DAERA) and NIEA (DAERA). The Steering Group also advises on the programme of activities for the Coordinator and the evolution of the Northern Ireland Seabird Network. Additionally, the Coordinator acts as an advisor and representative of the Northern Ireland Seabird Steering Group and volunteer network on the Northern Ireland Seabird Conservation Strategy Steering Group, led by the Marine and Fisheries Division. The Northern Ireland Seabird Coordinator role is now included in the duties of the BTO Senior Research Ecologist for Northern Ireland. This role is unique and provides an exemplar for better support and co-ordination of annual monitoring of seabirds in Britain and Ireland.

Strategies for seabird monitoring and conservation in Northern Ireland

In 2013, a strategy for seabird monitoring in Northern Ireland was developed (Northern Ireland Seabird Data Collection Strategy 2014–19, unpublished report to NIEA). The strategy provided the context and set minimum requirements for the annual monitoring of breeding seabirds in Northern Ireland to facilitate effective management of this natural resource. It focused on the monitoring of populations and productivity in Northern Ireland while also facilitating further detailed studies of those populations. The main objectives were:

- to identify priorities for seabird monitoring in Northern Ireland;
- to identify priorities for seabird research in Northern Ireland;
- to gather data which will assist NIEA and conservation NGOs in managing protected seabird species and habitats;
- to increase the number of seabird breeding sites monitored annually; and
- to increase the number of people involved in seabird monitoring in Northern Ireland.

The objectives of this strategy continue to be kept under review by the NI Seabird Steering Group, and new focus will be added through the development of a Seabird Conservation Strategy and Action Plan for Northern Ireland. It is being developed by DAERA, with the advice and feedback from an Advisory Group, in tandem with conservation strategies in each of the Devolved Administrations. The Strategy and Action Plan will review and report on the current status of seabird populations and identify and assess their sensitivity to threats and pressures and thus inform management recommendations to maintain and improve conservation status. Following a public consultation (from 23 September to 16 December 2024), the strategy should be published in 2025.

The objectives of the Seabird Conservation Strategy and Action Plan for Northern Ireland are to:

- collate existing evidence from all seabird monitoring efforts in Northern Ireland and continue to review and update these data as new evidence becomes available;
- identify the knowledge gaps to enhance the evidence base and data availability of seabird distribution and populations;
- integrate potential impacts of threats and pressures on seabirds into future management and decision making;
- identify and deliver targeted management measures to aid the recovery of seabirds and the wider ecosystem upon which they rely;
- bring all stakeholders and the public together to raise awareness of the importance of seabirds in Northern Ireland, and Northern Ireland's importance on a wider scale across the British Isles;
- conduct a review of the strategy every six years, with the ability to change species scope to reflect environmental change and species distribution where appropriate.

The Northern Ireland sites register

During 2013 a full register of all known, possible or potential seabird nesting sites, consistent with the SMP site register, was created by the Northern Ireland Seabird Coordinator, and which provided definitive spatial boundaries for each site. This means that every part of the Northern Ireland coastline now has a recording section for data entry in the SMP online database. All known inland sites are also listed. Sites are grouped by general area into 'Master Sites'. Master Sites usually can contain a number of different sites, for example along a stretch of coastline or in a large lough, or they might contain just one site, for example a small, isolated lough. Due to legacy issues from historical record keeping and the way data are held in the SMP online database, a separate site register is maintained for Black Guillemot.

Breeding seabirds in Northern Ireland in 2024

Andrew J. Upton
BTO NI BTO Senior Research Ecologist and Seabird Coordinator

Hala El Haddad
BTO NI BTO Research Ecologist and Seabird Coordinator

Fulmar, by Philip Croft / BTO

The following species accounts summarise the known status of each breeding seabird species in Northern Ireland (see Table 1). The accounts also provide a summary of population trends at the main breeding sites, where data exist. These data were collected by many participants across Northern Ireland and a list of those contributors is given at the end of this report. Many other people have contributed records from the 1960s onwards, when concerted monitoring began for some species. Without that recording we would not be able to generate these population graphs and tables.

Table 1: Seabird species breeding in Northern Ireland

Species	NI Priority[1]	BoCCI4 Status[2]	UK BoCC5[3]	IUCN Red List[4] (Europe)
Fulmar	N	AMBER	AMBER	Vulnerable
Manx Shearwater	N	AMBER	AMBER	Least Concern
Storm Petrel**	N	AMBER	AMBER	Least Concern
Cormorant	N	AMBER	GREEN	Least Concern
Shag	Y	AMBER	AMBER	Least Concern
Great Skua	Y	AMBER	RED	Least Concern
Kittiwake	Y	RED	RED	Vulnerable
Black-headed Gull	Y	AMBER	AMBER	Least Concern
Mediterranean Gull	Y	AMBER	AMBER	Least Concern
Common Gull	N	AMBER	RED	Least Concern
Lesser Black-backed Gull	N	AMBER	AMBER	Least Concern
Herring Gull	Y	AMBER	RED	Least Concern
Great Black-backed Gull	N	GREEN	RED	Least Concern
Little Tern	N	AMBER	AMBER	Least Concern
Sandwich Tern	N	AMBER	AMBER	Least Concern
Common Tern	N	AMBER	AMBER	Least Concern
Roseate Tern	Y	AMBER	RED	Least Concern
Arctic Tern	N	AMBER	RED	Least Concern
Guillemot	N	AMBER	AMBER	Least Concern
Razorbill	Y	RED	AMBER	Least Concern
Black Guillemot	Y	AMBER	GREEN	Least Concern
Puffin	Y	RED	RED	Endangered

[1] Northern Ireland Priority species are those identified during the preparation of the Northern Ireland Biodiversity Strategy (2002) and subsequently, using criteria set out by stakeholders (www.habitas.org.uk/priority). An updated list was published by DAERA on 2 March 2023 (www.daera-ni.gov.uk/publications/list-northern-ireland-priority-species-2023). [2] Birds of Conservation Concern in Ireland 4 (Gilbert *et al.* 2021). [3] The status of the UK's breeding seabirds: an addendum to the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man (Stanbury *et al.* 2024). [4] International Union for Conservation of Nature's Red List of Threatened Species (IUCN, 2024). ** Not currently breeding, historical records only.

In Northern Ireland, the Birds of Conservation Concern Ireland (BoCCI) list is used for flagging species conservation issues (Gilbert *et al.* 2021). Following the 2021 reassessment, three species were moved from the Amber List to the Red List in Ireland due to their conservation importance at the European level: Kittiwake (Vulnerable, IUCN), Puffin (Endangered, IUCN) and Razorbill (Near Threatened, IUCN), although since this assessment Razorbill has been reclassified by IUCN as Least Concern (IUCN 2023). Since the last assessment in 2013 (Colhoun & Cummins 2013), declines were less severe for Herring Gull and Black-headed Gull populations, resulting in these moving from Red to Amber, and Great Black-backed Gulls moved from Amber- to Green-listed.

The UK list, BoCC5, was also updated in 2021 but, because the new seabird census results were not available, assessments of the status of seabird species were not updated (Stanbury *et al.* 2021). In 2024, the status of the UK's breeding seabirds: an addendum to the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man, was produced (Stanbury *et al.* 2024). This resulted in a number of species moving from Amber- to Red-listed: Common Gull, Great Black-backed Gull, Arctic Tern and Great Skua. One species, Shag, moved from Red- to Amber-listed, while Black Guillemot joined Cormorant on the Green List, having previously been listed as Amber. For more details, please see the update on the status of the UK's breeding seabirds – addendum to BoCC5 article on page 71.

There are some notable differences between the All-Ireland BoCCI list and the Status of the UK's breeding seabirds: an addendum to the UK Birds of Conservation Concern (Stanbury *et al.* 2024). In particular, Great Black-backed Gull is now Red-listed in the UK but Green-listed in Ireland. There has been a significant decline in the number of breeding Great Black-backed Gulls in Scotland, which holds almost half the British and Irish population and was therefore the driver of the overall population decline. However, in Northern Ireland there has been a recovery from the recent population crash and the number of breeders shows an increase of 507% since Seabird 2000 (Burnell *et al.* 2023). Great Skua, Common Gull, Herring Gull, Roseate Tern and Arctic Tern are all Red-listed in the UK but Amber-listed in Ireland. The Roseate Tern is not Red-listed on the island of Ireland as it is in the UK, since it supports the largest European colony for the species at Rockabill in Dublin (Leonard & Wolsey 2016). Despite this, the Roseate Tern remains a precarious breeding species in Northern Ireland. Cormorants are Amber-listed in Ireland but Green-listed in the UK list due to the localised breeding criteria (more than 50% of the breeding population was found at 10 or fewer sites), and Razorbill is Red-listed in Ireland but Amber-listed in the UK, again due to their increased global conservation status (BirdLife International 2015) at the time this assessment was made. Black Guillemot is Amber-listed in Ireland but Green in the UK.

Seabird surveys of abundance and breeding success in the UK and Ireland are undertaken using standard survey guidelines for each species (Walsh *et al.* 1995). Tables 2 and 3 briefly outline the survey units and methods used for estimating the numbers of each species under consideration in Northern Ireland.

Table 2: Units for surveys of seabird numbers/abundance.

Unit	Abbreviation	Description
Apparently Occupied Nest	AON	An active nest occupied by a bird, pair of birds, or with eggs or chicks present.
Apparently Occupied Territory	AOT	When nests cannot be discerned (e.g. for Great Skua), the presence of a nest may be inferred at the time of year when nests are likely to be complete or eggs are newly hatched by the presence of an incubating adult, or adult displaying territorial behaviour.
Apparently Occupied Site	AOS	An active site occupied by a bird, pair of birds, or with eggs or chicks present. Used for species without obvious nests such as Fulmar.
Apparently Occupied Burrow	AOB	An apparently active and occupied burrow which may have a nest.
Individuals	IND	Individual birds.

Table 3: For consistency and for convenience to volunteers in Northern Ireland we recommend following the methods and the timings outlined below for recording seabird abundance. The methods listed here are derived from Walsh *et al.* (1995) where more detailed descriptions and comparisons of all survey methods can also be found, in addition to methods for measuring breeding success. For an explanation of units, see Table 2.

Species	Unit	Notes
Fulmar	AOS	Count between 09.00 and 17.30, late May to early July. Apparently Occupied Sites are those ledges suitable for nesting with a bird present (Population monitoring method 1).
Manx Shearwater	AOB	Late May to early June. Survey using tape playback between 09.00 and 17.00 (Population monitoring method 2).
Cormorant	AON	Local knowledge of timing of breeding useful, but generally early to mid June (Population monitoring method 1).
Shag	AON	Local knowledge of timing of breeding useful, but generally late May or multiple counts between May and June (Walsh *et al.* 1995).
Great Skua	AOT	Count period late May to mid June.
Kittiwake	AON	Count late May to mid June. Only count completed nests with at least one adult attending.
All gull species (excluding Kittiwake)	AON IND	Count late May to mid June. Counts of adults on nests, or transects to count nests. Alternatively, flush counts of individual adults (Population monitoring method 1, 3 or 5).
All tern species	AON IND	Count period between mid May and late June (especially late May and early June). Counts of adults on nests or transects to count nests. Alternatively, flush counts of individual adults (Population monitoring method 1, 2 or 3).
Guillemot	IND	Count between 08.00 and 16.00, made in the first three weeks of June, with ~5 repeats if possible. Birds on tidal rocks or sea excluded.
Razorbill	IND	Count between 08.00 and 16.00, made in the first three weeks of June, with ~5 repeats if possible. Birds on tidal rocks or sea excluded.
Black Guillemot	IND	Count any birds seen within c. 300 m of the shore and any on land, between 05.00 and 09.00, during the first three weeks in April.
Puffin	IND	Ideally, AOS/AOB should be counted, following methods described in Walsh *et al.* 1995. For small colonies, as may be present in Northern Ireland (outside of Rathlin Island), count individuals above ground, flying over the colony and birds within 200 m of the shore in April (Census method 3). Evening or early morning visits will produce highest counts.
Storm Petrel	AOB	Storm Petrels are not currently known to breed in Northern Ireland, therefore no recommendations are specifically made here.

Species accounts are structured as follows:

Overview – conservation status, a brief description of the species characteristics, population size estimates from censuses and SMP trends for abundance and breeding success for the UK as a whole and for Northern Ireland (Harris *et al.* 2024. **www.bto.org/sites/default/files/publications/smp_annual_report_2021-23.pdf**).

Abundance – a summary of the latest data available on breeding numbers (abundance) in Northern Ireland, with historical trends where data are available. In most cases, graphs show population trends, and, unless otherwise stated, gaps in graphs mean no count was carried out during that year. Where data are available for all years, a smoothed trend curve is fitted through the data points using a local polynomial regression fitting method ('loess') in the R package 'ggplot2', version 3.4.4 (R version 4.2.2). The curve is presented with a standard error 95% confidence interval at around the smoothed curve. For abundance data which represent the entire population of Northern Ireland (or near to), for example, for Mediterranean Gulls and tern species, cumulative plots are given.

Breeding success – a summary of the latest data available on breeding success in Northern Ireland. For species with sufficient data for visualisation, productivity is plotted per year across all sites where productivity was measured. In these plots, a trend curve is fitted through the data points using the methods described for breeding numbers above. However, it should be noted that these trends are based on small sample sizes and are not weighted for sample size per site and are therefore best used as a quick visual representation only and should be interpreted with caution.

A table detailing specific counts of breeding numbers at defined SMP Master Sites in Northern Ireland between 2015 and 2024 can be found in Table 6 in the Appendix on Page 95. Additional data collected on seabirds and other bird species at the UK level, such as range change, seasonality, movement and biometrics and can be found on the BTO BirdFacts pages: **www.bto.org/birdfacts**.

Priority gaps in 2024

There will always be sites that require professional effort or additional equipment to fully survey. Each year the Northern Ireland Seabird Steering Group review coverage and the table below outlines sites and species of particular priority.

Table 4: Key seabird monitoring gaps identified by the Northern Ireland Seabird Steering Group in 2022.

Site	Difficulties and gaps	Planned coverage
Big Copeland, the Copeland Islands, Co. Down	Access requires landowner permissions and a boat. Big Copeland is a large island and requires experienced survey effort. The important gull and tern colonies on Big Copeland have not been surveyed in recent times.	No
The Gobbins, Co. Antrim	Boat-based surveys are essential and previously good annual coverage was achieved, providing both abundance and breeding success data.	No
The Skerries, Co. Antrim	Access is difficult, requires a boat and permission from the owner via NIEA.	Coverage achieved in 2021, and by drone in 2022 for Cormorant, but the islands would benefit from regular monitoring. This site may also host an unmonitored population of Black Guillemot.
Sheep Island, Co. Antrim	Access to the island itself is dangerous and surveying requires a boat. Views of breeding seabirds are limited from boat-based surveys. The full island is best surveyed using a drone.	Coverage achieved by drone in 2021 but the island would benefit from regular monitoring and more comprehensive coverage.
Burial Island, Outer Ards, Co. Down	May have the second largest colony of Great Black-backed Gulls in NI (Kerry Leonard, pers. comm.). Also nesting Cormorants.	No
North and South Rock, Outer Ards, Co. Down	Small islands requiring a boat to observe nesting Cormorants and gulls.	No
The Maidens	Access by boat is difficult as the islands are surrounded by strong tides and there is no safe landing area. This site is important for Shag in Northern Ireland	Currently no coverage for Shag or Black Guillemot.
Black Guillemot – islands in Strangford Lough, Co. Down	The complex system of islands in Strangford Lough holds breeding Black Guillemots, however surveying these requires a boat	No
Guns Island, Co. Down	The site may hold a gull colony. Kittiwake formerly bred	No
Storm Petrels	While mostly considered to be absent as breeding seabirds in Northern Ireland, Storm Petrels are difficult to survey and may be present on islands such as Rathlin Island, The Skerries and Sheep Island. Playback equipment and access to a boat are necessary to survey Storm Petrels.	No

Abundance data are the most commonly collected data in Northern Ireland and provide the most important measure of how our seabirds are faring through time. However, monitoring breeding success and adult survival provides the context by which potential environmental drivers such as climate change, prey availability and predation can be linked to population changes. In Northern Ireland, however, these data are sparse or non-existent for many species. There are great examples of volunteer-led breeding success monitoring currently underway in Northern Ireland, for example at Portrush and Donnard Cove for Kittiwake, while RSPB, National Trust and Ulster Wildlife provide invaluable breeding success information for the islands they monitor, particularly for terns. Despite these efforts, breeding success data have nevertheless not been collected recently for many other species. Now that the Seabirds Count census period is complete, the Northern Ireland Seabird Coordinators aim to increase support for volunteers wishing to collect this vital data. Monitoring adult survival is achieved through general metal ringing and colour-ringing studies (such as Retrapping Adults for Survival, RAS: **www.bto.org/our-science/projects/ringing/surveys/ras**), activities that are also rare in Northern Ireland. BTO is currently running two seabird grants: grants for ringing groups to provide additional places on ringing trips for new participants, and; grants for individuals seeking seabird experience for holders of a BTO ringing permit (trainees, C- or A-, or S-permit holders) who are 18 years and over. These grants were possible thanks to the donations to BTO's Seabird Appeal (**www.bto.org/how-you-can-help/help-fund-our-work/appeals/our-lost-seabirds**). To report sightings of ringed birds go to Euring (**www.ring.ac**).

Get involved!

If you are interested in seabird monitoring in Northern Ireland, please get in touch with the Seabird Coordinators (**hala.haddad@bto.org** or **andrew.upton@bto.org**) to be added to the Northern Ireland Seabird Network. You can also find some simple introductions to monitoring common species in Northern Ireland in the following Google Drive online: **https://bit.ly/NI_Seabird_Guidance**, which are also available on request from the Seabird Coordinators.

You can see an interactive, zoomable version of the coverage maps online by following this link: **https://bit.ly/NI_Seabird_Sites**. The online maps are coloured by coverage and split between sites for 'all-seabirds' and for Black Guillemots, reflecting the division of the SMP database by these categories. If you click on a site of interest it will be highlighted, showing the extent of the site, its name and information on whether it is currently assigned to a participant. Please explore these online maps if you are interested in contributing seabird monitoring data in Northern Ireland. If you would like help viewing these maps or would like to discuss coverage of any of the sites, please email the Seabird Coordinators.

Species accounts

Guillemot, by Edmund Fellowes / BTO

Fulmar

Fulmarus glacialis

Conservation status: Amber-listed in BoCCI4 (2020–2026), Amber-listed in BoCC 5 Seabird Addendum (2024), EC Birds Directive – migratory species, Vulnerable – IUCN Red List Europe (BirdLife International 2021).

Fulmar, by Philip Croft / BTO

Overview

Synopsis: Fulmars are tube-nosed seabirds around the size of a small gull that nest in loose cliff-based colonies. They can use relatively small cliff faces, sometimes several miles inland. They are non-migratory and can be seen all year round. The name Fulmar means 'foul gull'.

UK population size, abundance and breeding success trends: Fulmars are very common in northern Britain. The UK population of Fulmar increased between the 1969–1970 and 1985–1988 censuses (from ~291,000 to 517,000 pairs) but remained stable between 1985–1988 and 1998–2002 when 501,609 pairs were recorded (Mitchell *et al.* 2004). The latest UK breeding population estimate is 319,508 AOS, a 37% decline since Seabird 2000 (Burnell *et al.* 2023). An increase in the use of commercial discards has been cited as one of the reasons for a massive increase in breeding range and population size across the North Atlantic in the 20th century (Mitchell *et al.* 2004, Phillips *et al.* 1999), and that changes in legislation around fisheries discards may be partly responsible for Fulmar declines (Bicknell *et al.* 2013). Other factors that may be responsible for this decline include accidental deaths due to bycatch, climate change, plastic pollution and predation (Harris *et al.* 2024). Fulmar has been upgraded from Green-listed to Amber-listed in the latest BoCCI due to an increase in their priority status across Europe (Gilbert *et al.* 2021). The long-term (1986–2023) breeding abundance trend for the UK population shows a 39% decline (Harris *et al.* 2024).

At the UK level, the annual productivity index for Fulmar has been variable but generally declining since 2006 and in 2023 was 0.34 chicks fledged per AOS (Harris *et al.* 2024). The overall fall in productivity observed since 1986 may have contributed to their population decline.

Northern Ireland population size, abundance and breeding success trends: In Northern Ireland, Fulmars are a widespread breeding species, with the most important site being at Rathlin Island. Other notable sites were Downhill and Binevenagh on the north coast, although numbers here have declined, and The Gobbins and Muck Island on the east coast. Small numbers are scattered around the coast where suitable cliff habitat occurs. Between the 1985–1988 and 1998–2002 censuses Fulmar numbers increased in Northern Ireland from 3,540 to 5,992 breeding pairs (Mitchell *et al.* 2004, JNCC 2021). Since Seabird 2000, annual monitoring indicates that numbers in Northern Ireland have generally decreased, following the trend for the UK as a whole (JNCC 2021). Specifically, Seabirds Count (2015–2021) found 2,566 AOS in Northern Ireland, a decline of 57% from Seabird 2000 (Burnell *et al.* 2023).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional-level (Harris *et al.* 2024).

Abundance in 2024

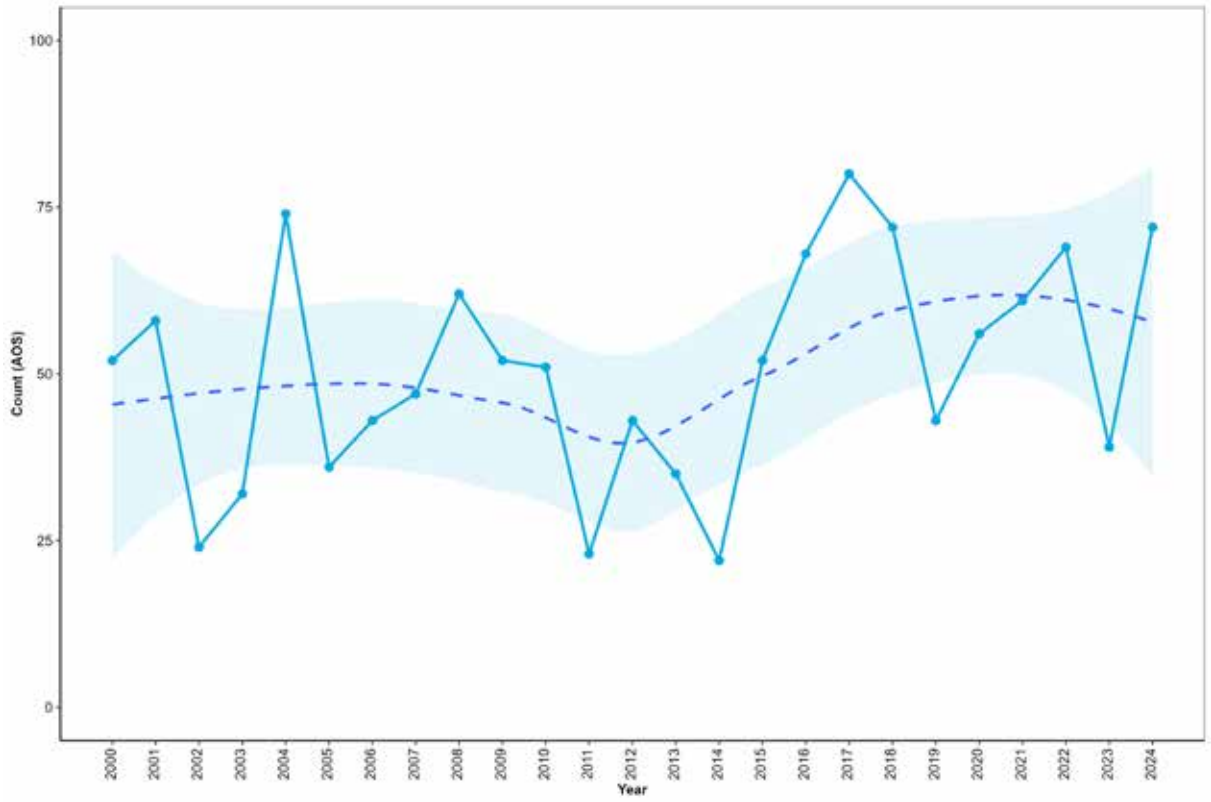
Fulmar continues to be at a low ebb in Northern Ireland (Table 6, Appendix), although numbers at most sites monitored in 2024 increased compared to 2023.

Numbers were relatively high on Isle of Muck with 72 AOS counted in 2024 (compared to 39 AOS in 2023). A total of 20 AOS were counted along the East Antrim Coast, the same figure as in 2023. On Lighthouse Island, Copeland Islands, 16 AOS were counted in 2024, compared to 10 AOS in 2023. However, at the RSPB study plot

on Rathlin Island, only six AOS were present, down from seven AOS in 2023 and nine AOS in 2022. Fulmar have recently ceased to breed along the Newcastle-Maggy's Leap coastline (Andy Carden, pers. comm.).

In Co. Derry/Londonderry, Fulmar appear to be stable with 112 AOS recorded at Downhill in 2023, although this is well below the Seabird 2000 count of 995 AOS (a 86% decline). The particular cause of the losses of Fulmar in Downhill and neighbouring Binevenagh (nine AOS in 2023, down from a high of 217 in 2000) is unclear; given the particular steep declines here compared to other sites, it may be that local conditions are a factor. Neither Downhill or Binevenagh were counted in 2024.

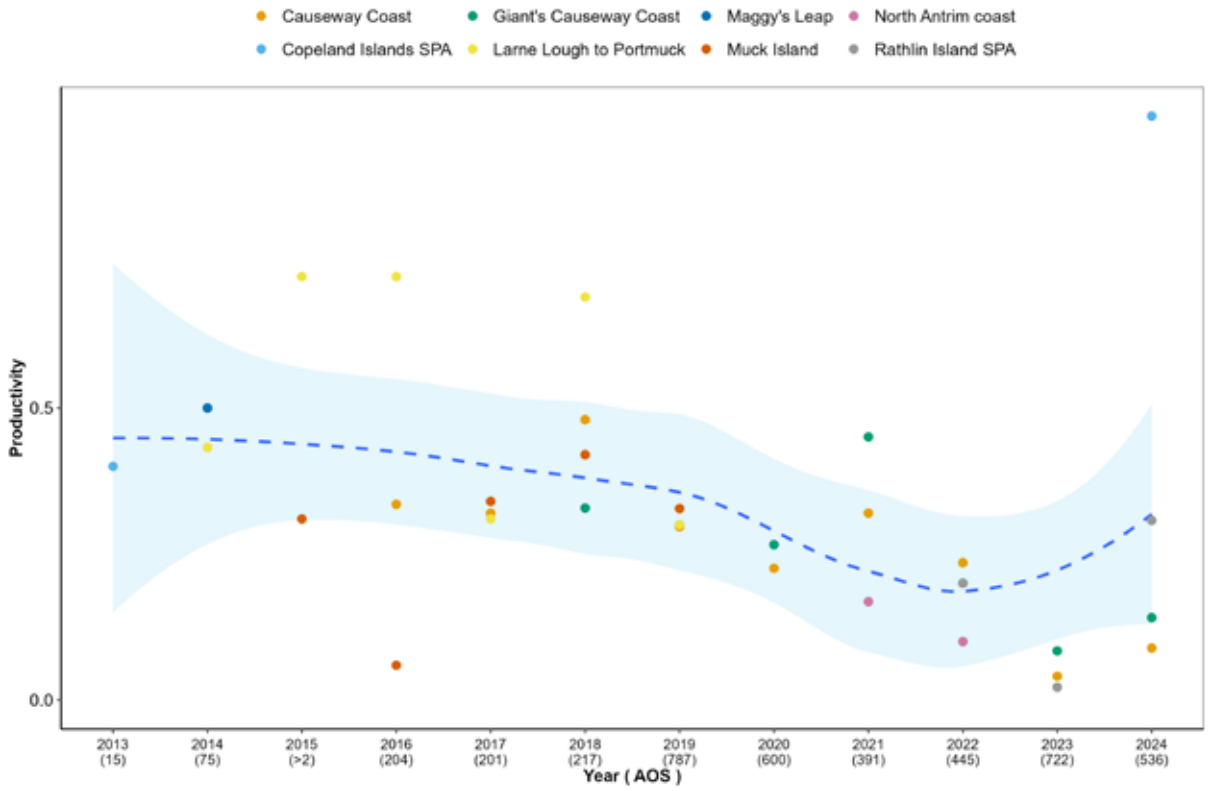
Figure 1: Fulmar counts (AOS) at Muck Island, 2000–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Fulmar numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2024

Over the past 10 years, Fulmar productivity has been highly variable between Northern Irish colonies and breeding seasons (Figure 2), although has generally remained below 0.50 chicks per pair. In 2024, Fulmar productivity was monitored at six sites along the north Co. Antrim coast. Figure 2 shows an overall decline in productivity among Fulmar colonies in Northern Ireland since 2013, with an average productivity in 2024 of 0.17 chicks per pair (n=267 AOS). This compares with 0.05 chicks per pair in 2023. The site with the highest productivity this year was Rathlin Island, with 0.31 chicks per pair (Else *et al.* 2024). The lack of data from other sites around Northern Ireland in 2024 limits the inference that can be made for productivity at the country level.

Figure 2: Productivity (chicks/AOS) for Fulmar 2013–2024 across eight sites in Northern Ireland. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Fulmar productivity between 2013 and 2024 include: Rathlin Island, Copeland Islands, Ballygalley Head, Maggy's Leap, Muck Island, Portmuck, The Gobbins, Park Head and Portnaboe, among others. The total number of AOS monitored per year is included in brackets under the year.



Manx Shearwater

Puffinus puffinus

Conservation status: Amber-listed in BoCCI4 (2020–2026), Amber-listed in BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021).

Manx Shearwater, by Liz Cutting / BTO

Overview

Synopsis: Manx Shearwaters are burrow-nesting, tube-nosed seabirds. They are highly pelagic, spending most of the year at sea and only coming ashore under the cover of darkness, to avoid avian predators. They are also the longest-living seabird recorded in the UK, with one recorded as more than 50 years old (BTO 2023).

UK population size, abundance and breeding success trends: Most of the world's population of Manx Shearwaters breeds in Britain and Ireland (Hamer & Hill 1997, Mitchell *et al.* 2004). At the time of the Seabird 2000 census, an estimated 299,678 AOS were counted in the UK (Mitchell *et al.* 2004; Woodward *et al.* 2020). However, the secretive, burrow-nesting lifestyle of Manx Shearwaters makes them a difficult species to survey, and the breeding population of Manx Shearwater was only comprehensively surveyed for the first time during Seabird 2000 (1998–2002, Mitchell *et al.* 2004). Annual changes in breeding abundance are not reported by the SMP, while changes in survey methods over time have meant that population trends from the censuses across the UK are not reliable. The largest colony in the world is on the island of Skomer in Wales. Recent surveys of strongholds in Wales and in Scotland suggest that the population of these islands may have increased by 50% to around 600,000 AOS since the last 1988–2002 census (JNCC 2021). The Seabirds Count confirms this with the UK population estimated to be 786,743 AOS, a 163% increase since Seabird 2000 (Burnell *et al.* 2023). However, many of the counts between the two censuses are not directly comparable due to methodological and analytical differences, therefore considerable caution is required in interpreting these changes (Harris *et al.* 2024).

Due to the difficulty in surveying Manx Shearwater burrows, few sites in the UK are monitored for productivity. Among these, average Manx Shearwater productivity was 0.60 chicks per pair per year between 1986 and 2023, and there is little year-to-year variation (Harris *et al.* 2024)

Northern Ireland population size, abundance and breeding success trends: The only confirmed extant colony in Northern Ireland is on the Copeland Islands, where there are birds on Lighthouse Island and Big Copeland. The Copeland Islands were surveyed in 2021 but figures are not yet available. During the previous survey in 2007 (Stewart & Leonard 2007), there were approximately 3,444 AOB (95% CI: 2,620–4,269) on Lighthouse Island and 1,406 AOB (95% CI: 612–1,432) on Big Copeland. There was an apparent 5.3% increase on the previous survey in 2000, although the former survey result was within the confidence limits of the 2007 population estimate. The Seabirds Count census did not contain data on Manx Shearwater in Northern Ireland from the 2015–2021 survey period; however, they used estimates from 2007 for Rathlin Island and the Copeland Islands (Burnell *et al.* 2023).

Rathlin Island formerly held a colony of unknown size (Brooke, 1990) but the species has not been confirmed breeding for many years (Liam McFaul pers. comm.) and surveys for Seabird 2000 (1998–2002) and in 2007 did not detect any birds. Deane (1954) estimated 150 AOB on Rathlin Island but the Operation Seafarer (1969–1970) figure was 1,000–10,000 AOB (Mitchell *et al.* 2004). The inaccessibility of the cliffs and the cryptic nature of the species make these estimates unreliable. All that is certain is that a huge decline has occurred on the island.

Breeding success was monitored on Lighthouse Island by Copeland Bird Observatory between 2007 and 2013, using study burrows. These consist of modified burrows with a concrete slab placed over the nesting chamber to allow easy access. In the seven years of monitoring, average breeding success on Copeland (0.74 chicks/AOB) was usually a little higher than at other sites in the UK (0.65 chicks/AOS, JNCC 2021), although extremely wet weather in 2007 resulted in a success rate of just 0.38 chicks per pair.

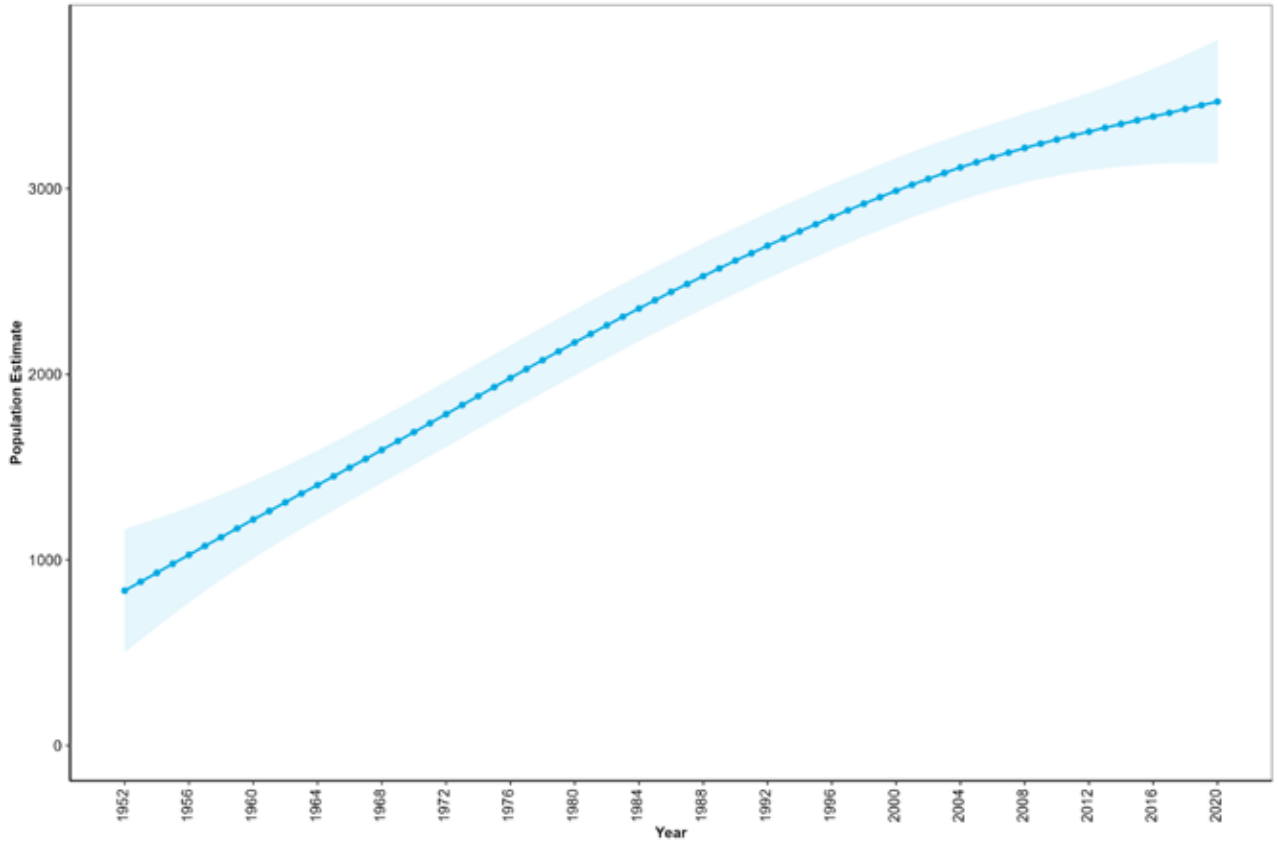
Abundance in 2024

There is no annual surveying of Manx Shearwaters in Northern Ireland, but a census of the Copeland Islands was made as part of the MarPAMM project in 2021, with results still to be reported. Population estimates across 1952 to 2020 for Lighthouse Island are displayed in Figure 3. (Esmonde 2024). In 2024, on Rathlin Island, birds were heard calling on several occasions on the north cliffs during May to July. Monitoring was carried out in 2022 and 2023 by the RSPB LIFE Raft project using night vision equipment; birds were recorded landing on ledges and it is suspected that birds are breeding in low numbers. Difficulties in accessing the area where birds are present, makes it impossible to estimate numbers and confirm breeding (McFaul & McFaul 2024).

Breeding success in 2024

Breeding success data are not routinely collected for Manx Shearwater in Northern Ireland. In 2018, a sample of study burrows on Lighthouse Island was monitored by the Oxford Navigation Group (www.oxnav.org) with the support of the Copeland Bird Observatory. Of the 117 burrows checked, 39 contained eggs and were shallow enough to follow to the chick rearing phase. In August, 30 of these study burrows contained chicks. If it is assumed that chick presence in August is a good (if slightly inflated) indicator of the number of fledged young, therefore the productivity of the sample of occupied nests in 2018 was estimated as 0.77 chicks per pair.

Figure 3: Manx Shearwater population estimates on Lighthouse Island from 1952 to 2020. These estimates were created using the Copeland Bird Observatory's ringing and Capture-Mark-Recapture (CMR) records across 70 years. A generalised additive model was used to calculate the estimates and the shaded blue region shows the upper and lower estimates of the population by year (Esmonde 2024).



Storm Petrel

Hydrobates pelagicus

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in BoCC5 Seabird Addendum (2024), EC Birds Directive – listed in Annex 1 and as a migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021).

Storm Petrel, by Joe Pender

Overview

Synopsis: Storm Petrels are sparrow-sized tube-nosed seabirds. They are highly pelagic, only returning to land to breed. They eat mostly plankton and small fish on the surface of the sea without alighting, almost appearing to walk on water, pattering across the water's surface (Robinson 2005).

UK population size, abundance and breeding success trends: The UK breeding population of Storm Petrel was only comprehensively surveyed for the first time during Seabird 2000 (1998–2002) using a standard playback method (Mitchell *et al.* 2004, Ratcliffe *et al.* 1998), when ~25,700 pairs were estimated. Surveys for Storm Petrels are intensive and costly, and therefore rare; however, recent surveys of Scottish islands suggest an increase in population size since the 1998–2002 census (Burnell *et al.* 2023). The Seabirds Count Census (2015–2021) found that the UK population had increased by 41% since Seabird 2000 to an estimated 37,655 AOS (Burnell *et al.* 2023). However, caution is required as the confidence intervals of the UK population estimates from the Seabird 2000 and Seabirds Count censuses overlap (Burnell *et al.* 2023). While new monitoring techniques, such as passive infra-red and endoscopes, are being tested for their usefulness in monitoring, these methods are still costly in terms of fieldwork effort and equipment (Perkins *et al.* 2017). For similar reasons, there is a lack of annual data collected on productivity.

Northern Ireland population size, abundance and breeding success trends: The species has no known breeding sites in Northern Ireland. In their review of the birds of Ireland, Ussher & Warren (1900) stated that "*two small islands off the north coast of Co. Antrim*" were reported to have populations of storm petrels. The only small islands which they could realistically have been referring to are Sheep Island and one of The Skerries, Co. Antrim. A volunteer visit to The Skerries in 2021 reported that there were few areas of suitable nesting habitat available on the islands for Storm Petrels, and that the large gull population on Large Skerries where Rabbit *Oryctolagus cuniculus* burrows could provide some nesting habitat may deter Storm Petrels from breeding here. Deane (1954) reported up to a dozen pairs on Sheep Island, but the species is considered unlikely to be still there. A visit to Sheep Island in 2024 found that Storm Petrels were unlikely to breed due to the prevalence of Brown Rat *Rattus norvegicus* (Daniel Johnston, pers. comm.). The species may be present on Rathlin Island but no surveys have yet been conducted. The nearest colony is on Sanda Island, Scotland which is just 37 km to the east.

Cormorant

Phalacrocorax carbo

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Green-listed in BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International, 2021).

Cormorant, by Edmund Fellowes / BTO

Overview

Synopsis: The Cormorant is a widespread breeding species, often found in dense colonies. The characteristic open-winged posture they adopt after fishing is due to the need to dry their feathers, which are not waterproof.

UK population size, abundance and breeding success trends: The UK population estimate from Seabird 2000 (1998–2002) census was 8,900 AON, an increase of 10% since the previous census (Mitchell *et al.* 2004). The most recent census, Seabirds Count (2015–2021), showed that the UK population of Cormorant has remained stable at 8,829 AON (Burnell *et al.* 2023). The UK breeding abundance index for Cormorants between 1986–2023 indicates that the population has fluctuated slightly over this time period, the 2023 index was 5% above the 1986 baseline (Harris *et al.* 2024). The latest UK winter population estimate is 64,500 (Frost *et al.* 2021; Woodward *et al.* 2020).

An insufficient number of Cormorant colonies are monitored across the UK to allow for the production of valid annual productivity trends (Harris *et al.* 2024). Previously, the UK average productivity was 1.84 chicks fledged per nest between 1991 and 2019, with nests fledging (JNCC 2021).

Northern Ireland population size, abundance and breeding success trends: The increase seen at the UK-level between the 1985–1988 and 1998–2002 censuses was in contrast to the trend in Northern Ireland, where Cormorant numbers dropped from 736 AON to 663 AON during the same period and down to 561 AON during Seabirds Count (Burnell *et al.* 2023). There are no inland breeding colonies of the European sub-species *Phalacrocorax carbo sinensis* in Northern Ireland. Cormorants have historically principally bred at two sites – Sheep Island (north coast, Co. Antrim) and Bird Island (Strangford Lough). In 2010, the Sheep Island colony split with some birds moving to The Skerries. Smaller numbers are found at The Gobbins and Burial Island on the Outer Ards Peninsula, although the latter site is not monitored annually. The latest Northern Ireland winter population estimate is approximately 2,500 (Frost *et al.* 2019, Woodward *et al.* 2020).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

Abundance in 2024

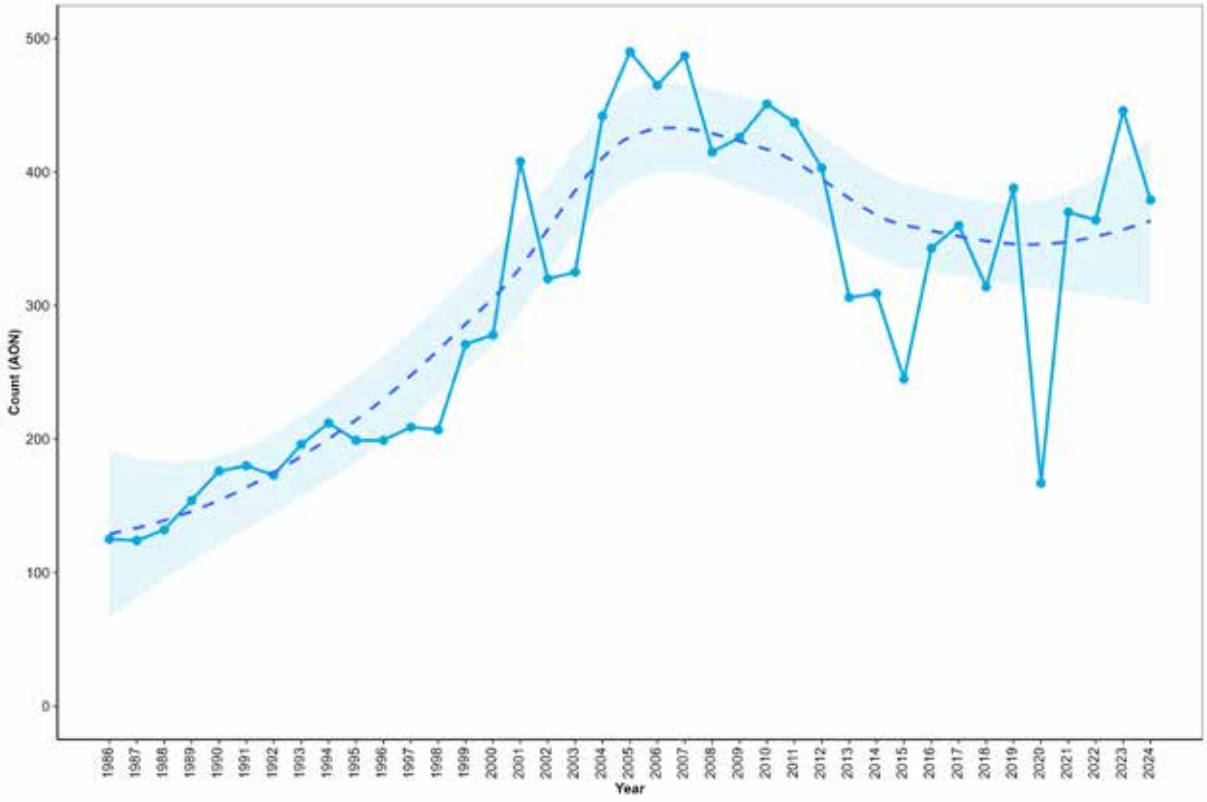
Long-term annual data dating back to 1986 are available for Bird Island, Strangford Lough, where numbers increased erratically until 2005, to a peak of 490 AON. Since then, numbers have fallen but appeared to be increasing again in recent years. Numbers on Bird Island declined from 433 AON in 2023 to 359 AON in 2024. An exciting development in 2023 was the establishment of a second colony on Strangford Lough, with 13 AON on West Boretree Island. This colony has grown to 20 AON in 2024 (Hugh Thurgate, pers. comm.).

Numbers of Cormorants on Sheep Island declined between 2005 and 2015, before stabilising in more recent years. A full census of Sheep Island was carried out using a drone as part of the MarPAMM project in 2021, finding 139 AON. This was the highest count since 2010 which may be in part due to the better coverage achieved using the vantage of the drone (Booth Jones *et al.* 2022a). However, a similar drone survey conducted by NIEA found 86 AON on Sheep Island in 2022, confirmed by a simultaneous scoped vantage-point count, demonstrating that breeding numbers can vary widely year-to-year. This may be due to the prolonged breeding season of Cormorants and a sensitivity to disturbance (Richard Donaghey, pers. comm.). Sheep Island was not surveyed in 2023 or 2024.

The Skerries has not been surveyed for as long as Sheep Island, and counts have varied substantially between years. It seems probable that the original population of Sheep Island is now spread between the two sites, while exchange with the colony at Inishowen (Co. Donegal) is also thought possible but has not been validated (e.g. by movements of colour-ringed birds). In 2022, NIEA conducted a simultaneous drone and vantage-point survey of Castle Island (Little Skerrie), counting 193 AON, which was a 135% increase on 2021's boat-based count. In 2024, four AON were counted amongst the Kittiwake colony at Portrush. A small colony of Cormorants has nested at this site for a number of years (Cliff Henry, pers. comm.).

Periodic counts of the numbers at The Gobbins cliffs dating back to 1969 have shown fluctuating numbers in recent years, dropping to as low as two AON in 2007, returning to 33 AON in 2008. Unfortunately, The Gobbins has not been surveyed since 2019.

Figure 4: Cormorant counts (AON) at the Strangford Lough SPA, 1986–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Cormorant numbers over time. The shaded region represents the 95% confidence interval around the trend.

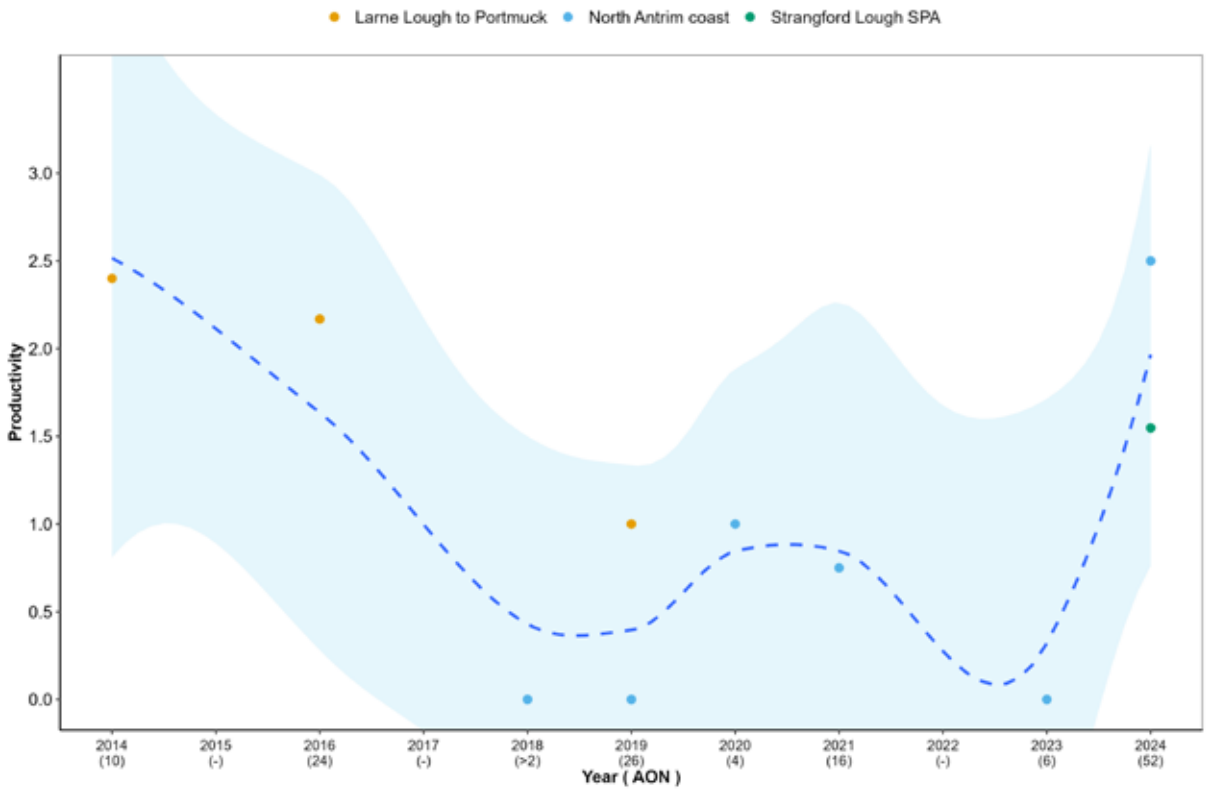


Breeding success in 2024

Historically, breeding success has not been measured for any of the large colonies of Cormorants in Northern Ireland. Due to their breeding asynchrony, many visits are required to colonies through the season to assess the productivity of Cormorants. Historically, NIEA have made single-visit surveys to Sheep Island and The Skerries annually to count numbers of eggs and chicks in the Cormorant colonies; however, the multiple visits required to generate true productivity estimates are not made. In 2024, 2.5 chicks fledged from four AON at Portrush (Cliff Henry).

Due to the limited collection of breeding productivity data for Cormorant in Northern Ireland, BTO installed two camera traps on Bird Island, Strangford Lough in 2024 to supplement efforts to monitor Cormorant breeding timing and productivity. Overall, productivity was 1.55 (± 0.76) chicks fledged per nest (Daniel Johnston, pers. comm.). For further details, please refer to the article on Page 87.

Figure 5: Productivity (chicks/AON) for Cormorant 2014–2024 across three sites in Northern Ireland. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Cormorant productivity between 2014 and 2024 include: Bird Island on Strangford Lough, Portrush, and The Gobbins. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Shag

Gulosus aristotelis

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Shag, by Allan Drewitt / BTO

Overview

Synopsis: Slightly smaller than the Cormorant, the European Shag (Shag) is endemic to the north-east Atlantic and the Mediterranean. It is a marine inshore species that is almost never observed out of sight of land (Mitchell *et al.* 2004). The name of the Shag refers to the tuft of feathers on its head.

UK population size, abundance and breeding success trends: Over a third of the world population of the sub-species *aristotelis* breeds in the UK and Ireland (Burnell *et al.* 2023). The UK population size was estimated to be 26,643 AON during Seabird 2000 (Mitchell *et al.* 2004). Latest estimates put the UK population at 20,209 AON, a decline of 24% since Seabird 2000 (Burnell *et al.* 2023). The UK long-term breeding abundance index shows a similar 27% decline between 1986 and 2023 (Harris *et al.* 2024). Annual return rates of adults are usually in the order of 80–90% (JNCC 2021) but Shags are vulnerable to one-off events such as extreme winter storms and the return rate may drop to below 15% because of their impact (Frederiksen *et al.* 2008, Heubeck *et al.* 2015). The latest UK winter population estimate is 110,000 (Frost *et al.* 2021, Woodward *et al.* 2020).

The shortage of Sandeels *Ammodytes tobianus* is thought to have contributed to low productivity in some years. In Scotland, Shag productivity was on average 1.28 chicks per pair between 1986 and 2019 (JNCC 2021). The long-term trend for productivity from 1986–2023 is stable, with the most recent figure being 1.38 chicks fledged per AON in 2023 (Harris *et al.* 2024). Population Viability Analysis calculations by Cook & Robinson (2010) suggested that if all demographic parameters remained the same (survival, clutch size, etc.) the UK population would decline by 9% over a period of 25 years.

Northern Ireland population size, abundance and breeding success trends: In Northern Ireland, the Shag is mostly restricted to Co. Antrim, with the largest colonies being at The Maidens (offshore from Larne) and Rathlin Island, with other breeding pairs scattered widely around the coast in smaller groups. The Seabird 2000 (1998–2002) census estimated that there were 301 AON in Northern Ireland, and that this was a decrease of 32% since the previous census (Mitchell *et al.* 2004). The most recent Seabirds Count (2015–2021) results show that there were 278 AON in Northern Ireland, which is a 4% decline from Seabird 2000 (Burnell *et al.* 2023).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

Abundance in 2024

While Shags stopped breeding in Strangford Lough in 2007, they have been recorded breeding in small numbers at several new locations in Northern Ireland since 2013 (Table 6, Appendix). A full census of Rathlin Island and of the north Antrim coastline between Runkerry and Murlough occurred as part of the MarPAMM project in 2021. On Rathlin Island, Shag had increased by 28% since the 1998–2002 census to 74 AON. In 2024, 51 AON were counted at the main colony on Rathlin Island at Rue West, which is lower than the counts in 2023 (65 AON) and 2022 (79 AON). The total count for Rathlin Island was 56 AON in 2024 (RSPB LIFE Raft project).

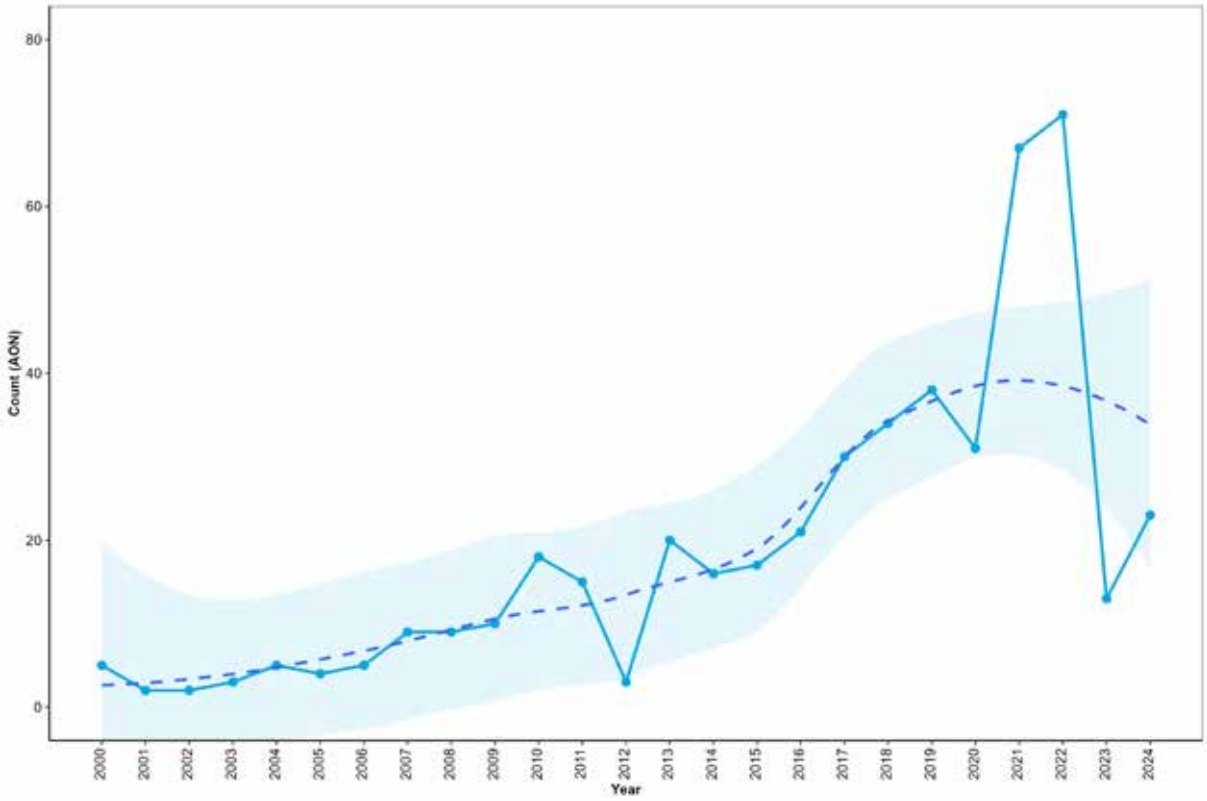
On the north coast, 32 AON were recorded on The Skerries in 2021, a decline of 50% on the last count made in 2015 (although higher than the 11 AON recorded in 2000). In 2023, similar numbers to the 2022 counts were

recorded at Downhill (12 AON) and in the Portrush sub-sites (nine AON, Table 6, Appendix). The Maidens was last counted in 2018 with 20 AON estimated.

Numbers at Muck Island have increased since 2000, and reached a peak of 71 AON in 2022, the highest count for the site on record. However, numbers have subsequently dropped to only 13 AON in 2023 and 23 AON in 2024. Although not counted since 2018, numbers at The Gobbins nearby were at their highest recorded in 2018 (Table 6, Appendix), having increased by 11% since Seabird 2000 (1998–2002).

Nine AON were counted between Newcastle to Maggy's Leap, Co. Down in 2024, compared to eight AON in 2023.

Figure 6: Shag counts (AON) at Muck Island, 2000–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Shag numbers over time. The shaded region represents the 95% confidence interval around the trend.

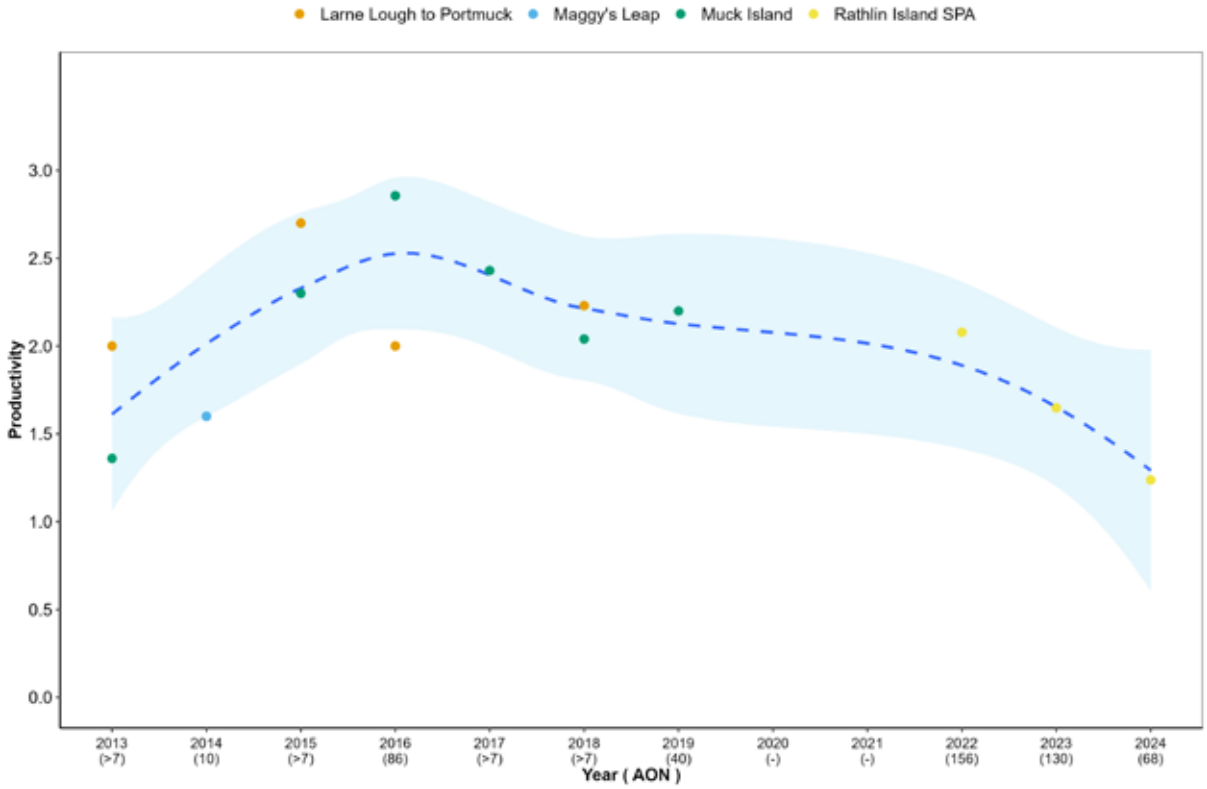


Breeding success in 2024

Productivity data for Shag in 2024 was collected on Rathlin Island at Rue West, where 1.26 chicks fledged per AON from 34 nests. This is lower than productivity in the previous two years; 2.08 chicks fledged per AON in 2022 and 1.65 chicks per AON in 2023. Birds were two weeks late nesting on Rathlin Island this year. The reason for the lower productivity in 2024 could be attributed to the cool and wet summer (RSPB LIFE Raft project).

In 2019, the Muck Island colony produced 44 chicks from 20 AON, a slightly higher figure than in the previous two years (Kerry Leonard, pers. comm.). Productivity data have not been recorded at The Gobbins since 2018. However, it is worth noting that the number of nests monitored per year is likely to also be variable and, in some cases (e.g. 2014) very low. Although the trend in productivity appears to be fairly stable in recent years, the trend line has a large 95% confidence interval (blue shading) as a result of the small number of sites being monitored for Shag and records not being available for all years, therefore caution in interpreting this is required.

Figure 7: Productivity (chicks/AON) for Shag 2013–2024 across four sites in Northern Ireland. No data were available for 2020 or 2021. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Shag productivity between 2013 and 2024 include: Rathlin Island, Maggy's Leap, Muck Island, and The Gobbins. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Great Skua

Stercorarius skua

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Red-listed in the BoCC5 Seabirds Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Great Skua, by Edmund Fellowes / BTO

Overview

Synopsis: Great Skuas are Herring Gull-sized, heavy-set seabirds, also colloquially known as 'Bonxies', a name that may derive from the old Norse for 'dumpy'. Great Skuas are known for their aggressive behaviour towards human intruders on their territories (Mitchell *et al.* 2004).

UK population size, abundance and breeding success trends: The Seabirds Count (2015–2021) data show the UK population of Great Skua increased to 10,937 AOT (Burnell *et al.* 2023). During this census, Britain and Ireland therefore held over 60% of the world's population of Great Skua (Burnell *et al.* 2023). Unfortunately, the outbreak of highly pathogenic avian influenza (HPAI) in recent years has affected the positive trend of the UK's Great Skua population. Orkney and Shetland are the core breeding areas, but the species also spreads through northern Scotland to the Western Isles (Burnell *et al.* 2023). The UK population increased by 148% between the 1969–1970 and 1985–1988 censuses, by a further 26% by Seabird 2000 (Mitchell *et al.* 2004), and by another 14% in Seabirds Count (Burnell *et al.* 2023). Therefore, the recent breeding attempts on Rathlin Island are not surprising. However, RSPB has reported a decline of 76% of the most important Great Skua colonies due to HPAI (Tremlett *et al.* 2024). Annual sampling of breeding abundance is insufficient to generate reliable population trends for the UK, country level or at individual sites (Harris *et al.* 2024).

Productivity across the UK has varied considerably over the SMP recording period, averaging 0.2 and 1.1 chicks per AOT between 1986 and 2019 (JNCC 2021) and there has been an overall decline since 2006. The most recent figure was 0.44 chicks fledged per AOT (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Great Skuas are rare breeding birds on the island of Ireland (Burke *et al.* 2020). The first occurrence of Great Skuas breeding in Northern Ireland occurred in 2011 on Rathlin Island. This pair has had an average breeding success of 1.67 chicks per year since their arrival up to 2021 (JNCC 2021). In the Republic of Ireland, the first breeding occurred in the late 1990s in Co. Mayo (Mitchell *et al.* 2004) and there are now approximately 15 AOT although no complete survey has been undertaken (Steve Newton, pers. comm.). There were 36 AOT in Ireland during Seabirds Count, involving 34 AOT in the Republic of Ireland and two AOT in Northern Ireland (Burnell *et al.* 2023).

Abundance in 2024

There was just a single AOT on Rathlin Island in 2024, the same as in 2022 and 2023 (Else *et al.* 2024). The 2021 MarPAMM surveys recorded a total of two AOT for the whole island, with other individuals also present.

Breeding success in 2024

The pair on Rathlin Island showed no signs of nesting this year. It has now been three years since the species nested successfully on Rathlin Island (RSPB LIFE Raft project).

Kittiwake

Rissa tridactyla

Conservation status: Red-listed in the BoCCI4 (2020–2026), Red-listed in the BoCC5 Seabirds Addendum (2024), EC Birds Directive – migratory species, Vulnerable – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Kittiwake, by Sarah Kelman / BTO

Overview

Synopsis: The Kittiwake is the most numerous gull species in the world, and perhaps surprisingly, also the most numerous breeding gull in the UK (Burnell *et al.* 2023). Unlike the UK's other gull species, the Kittiwake is closely tied to the sea and adapted to nesting on steep sea cliffs, although it has recently taken to nesting on human-made structures (Burnell *et al.* 2023, Woodward *et al.* 2020).

UK population size, abundance and breeding success trends: Seabirds Count (2015–2021), found that the UK Kittiwake population has declined by 43% since Seabird 2000 to 215,913 AON (Burnell *et al.* 2023). In the Seabird 2000 (1998–2002) census, the UK population was estimated to be 378,847 AON, a decline of 25% since the previous census (Mitchell *et al.* 2004). Annual SMP data indicate that numbers declined by 51% between 1986 and 2023 (Harris *et al.* 2024).

There has been considerable variation in UK Kittiwake productivity across the SMP recording period. There was an overall decline until 2008, following which productivity values increased slightly. The UK averaged 0.62 chicks per AON between 2014 and 2019 (JNCC 2021). The most recent data is 0.75 chicks fledged per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Relative to the overall UK and Ireland trend since 1986, and its historical status, the Northern Ireland population is still reasonably stable. The largest colony by far in Northern Ireland is on Rathlin Island, the second largest colony at The Gobbins being only approximately 10% the size of the Rathlin Island colony. Other small colonies are dotted around the coast at Muck Island, Newcastle-Maggy's Leap, Castlerock, Carrick-a-rede, Dunluce and The Skerries. Colonies at Gun's Island and Strangford Lough have become extinct in the last 15 years. Seabirds Count 2015–2021 recorded 17,152 AON in Northern Ireland, a 33% increase from Seabird 2000, therefore, Kittiwakes are faring better in Northern Ireland than other parts of the UK and Ireland (Burnell *et al.* 2023). Kittiwake has been upgraded from Amber-listed to Red-listed in the latest BoCCI due to being classified Globally Vulnerable (Gilbert *et al.* 2021).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level. However, trends are available at an all-Ireland level up to 2019 (Harris *et al.* 2024).

Abundance in 2024

A total of 588 AON were counted in 2024 along the coastline from Newcastle to Maggy's Leap, Co. Down, a small increase on the 545 AON recorded in 2023.

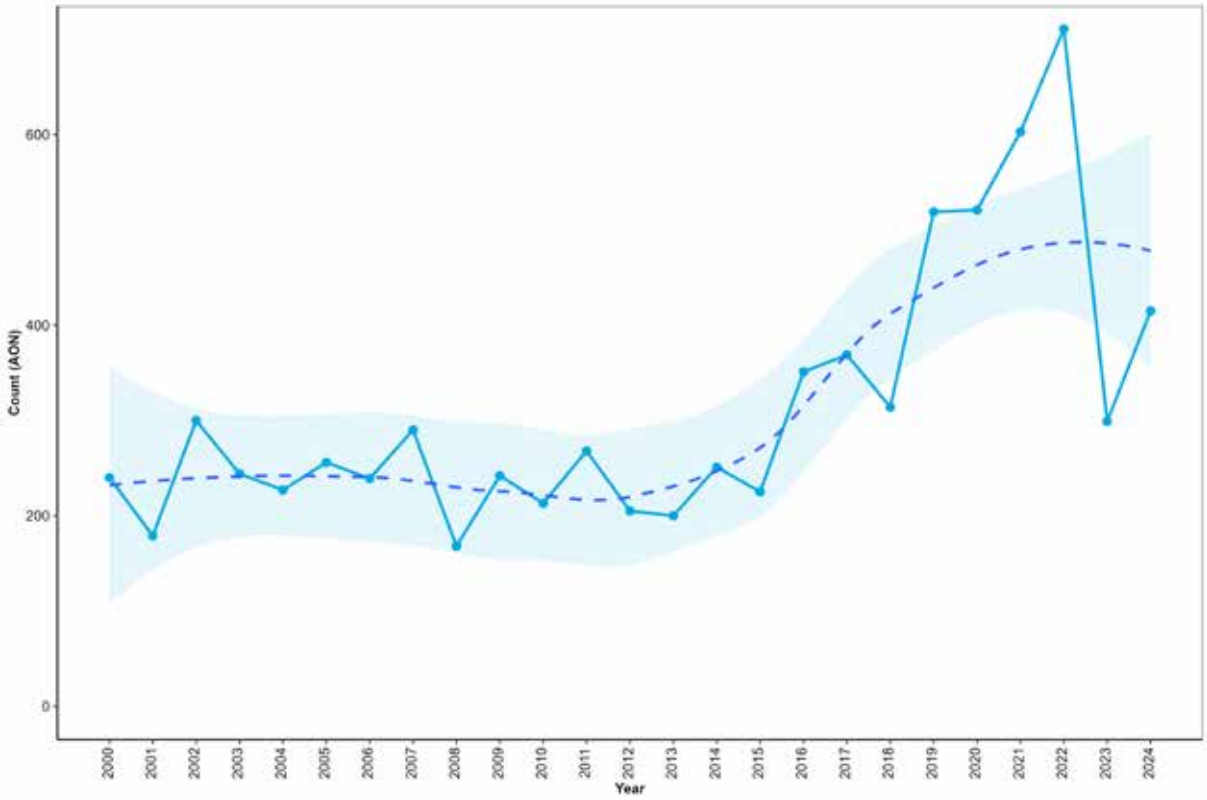
The number of Kittiwake in the RSPB Rathlin Island study plot increased slightly from 62 AON in 2023 to 66 AON in 2024, while the MarPAMM census of Rathlin Island in 2021 found that Kittiwake numbers had increased on the island by 38% to 13,706 AON since the 1998–2002 census. RSPB carried out a follow up census of Rathlin Island in 2023 to monitor the impact of HPAI on the colony and found that Kittiwake numbers had declined by 31% since 2021, with 9,629 AON counted (Mackley *et al.* 2023). MarPAMM surveys of the North Antrim coastline between Runkerry and Murlough in 2021 found that Kittiwake had declined by 10% to 792 AON.

The colony at Portrush is divided into sub-sites to ease counting, and seven of these seven sites were monitored in 2022 by NIEA. Kittiwake at Portrush appears to have increased annually during the Seabirds Count census

period (2015–2021) but decreased from 499 AON in 2022 to 366 AON in 2023 (Table 6, Appendix). The colonies at both Portrush and Downhill were not counted in 2024.

The population of Kittiwake monitored by Ulster Wildlife on Muck Island increased in 2022 to 711 AON (Figure 8), the highest total counted on the island since the first count for the SCR in 1987 (830 AON). Numbers decreased to 299 AON in 2023 and 415 AON in 2024. Although there are no records since, in 2019 neighbouring sites at The Gobbins collectively held 1,145 AON, the highest count since 2007 and an increase of 68% on the 2018 figure (Table 6, Appendix).

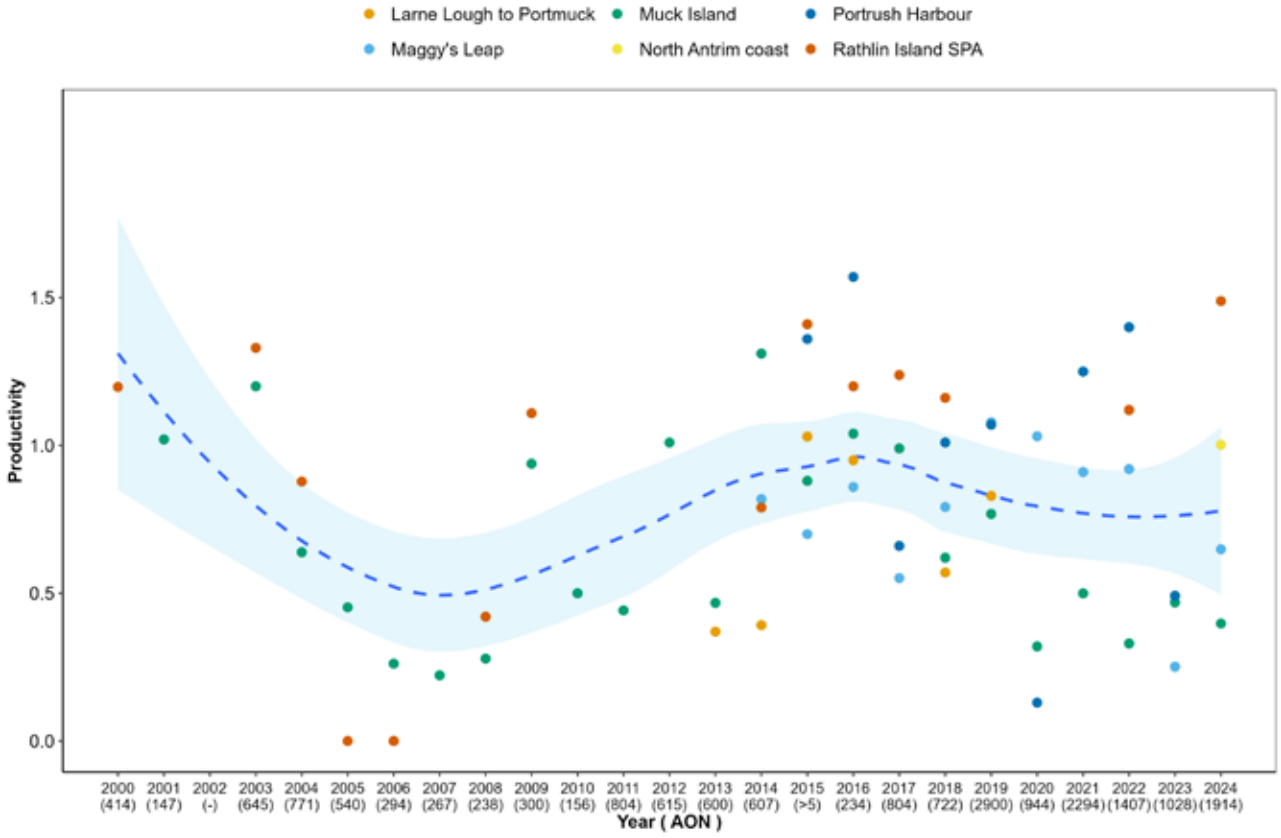
Figure 8: Kittiwake counts (AON) at Muck Island, 2000–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Kittiwake numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2024

Four sites were monitored for productivity in 2024: Donnard Cove (Andy Carden), Portrush (Cliff Henry), Isle of Muck (Andy Crory) and Rathlin Island (RSPB LIFE Raft project). The low number of sites monitored in 2023 and 2024 could explain the decline in productivity from recent years (Figure 9). Since a peak in 2016, productivity has declined gradually, reaching the second lowest productivity figure reported for Portrush and the lowest figure reported for Maggy's Leap in 2023. However, the average productivity for the four monitored sites in 2024 was 0.89 chicks fledged per nest, which was an improvement on 2023 when 0.61 chicks fledged per AON. In 2024, breeding success was 0.4 chicks fledged per nest on Isle of Muck (n=415 AON), 0.65 chicks per nest at Donnard Cove (n=85 AON), 1 chick per nest at Portrush (n=227 AON) and Rathlin Island had an exceptional year with 1.49 chicks per nest (n=230 AON). More certainty around overall Northern Irish trends could be gained by increasing the number of sites monitored.

Figure 9: Productivity (chicks/AON) for Kittiwake 2000–2024 across six sites in Northern Ireland. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Kittiwake productivity between 2000 and 2024 include: Rathlin Island, Maggy's Leap, Muck Island, Portrush, and The Gobbins. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Black-headed Gull

Chroicocephalus ridibundus

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Black-headed Gull, by Allan Drewitt / BTO

Overview

Synopsis: Black-headed Gulls are small gulls found throughout the UK both around the coasts and inland. They are particularly abundant in the winter when the UK breeding population is joined by migrants from continental Europe (Wernham *et al.* 2002).

UK population size, abundance and breeding success trends: The Black-headed Gull is a common breeding species in the UK, with approximately 2–4% of the world population recorded during Seabirds Count (2015–2021) and a UK population of 97,950 AON (Burnell *et al.* 2023). The Seabirds Count census showed a 29% decline in the UK since Seabird 2000 (Burnell *et al.* 2023). It is unclear how the population may compare to previous decades because previous UK surveys were incomplete, with many inland colonies remaining uncounted. However, the last two censuses – Seabird 2000 and Seabirds Count – targeted inland colonies so comparisons can be made more readily. Although Seabird 2000 showed an apparent increase compared to previous censuses, this was due to more comprehensive surveying that may have masked an actual population decline (Mitchell *et al.* 2004). The long-term trend (1986–2023) for abundance shows a 5% decline in the UK (Harris *et al.* 2024). The UK is estimated to host nearly 2,200,000 individuals in the winter (Burton *et al.* 2013, Woodward *et al.* 2020).

In the UK, productivity fluctuates from 0.00–1.30 chicks per AON, while the most recent UK productivity averaged 0.22 chicks fledged per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: In Northern Ireland, the Black-headed Gull is a widespread breeding species in relatively few large colonies, with major concentrations at Strangford Lough, Belfast Lough, Larne Lough, Lough Neagh and Lower Lough Erne. Seabirds Count found 12,465 AON in Northern Ireland, a 23% increase since Seabird 2000 (Burnell *et al.* 2023). The winter population of Northern Ireland is estimated to be 44,000 individuals (Burton *et al.* 2013, Woodward *et al.* 2020). Black-headed Gull has been downgraded from Red-listed to Amber-listed in the latest BoCCI due to less severe declines in recent years (Gilbert *et al.* 2021).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024). The potential impact of predators such as American Mink *Mustela vison* (Craik 1997), Eurasian Otters *Lutra lutra* and Brown Rat on inland colonies in Northern Ireland are largely unstudied. Collecting productivity data for Black-headed Gulls is a high priority.

Abundance in 2024

Black-headed Gull numbers were lower at a number of sites during 2024 than previous years and this is likely to be due to the impacts of HPAI last year (Ciara Laverty and Hugh Thurgate, pers. comm.).

Numbers at Larne Lough grew from just 109 AON in 1987 to a high of 3,201 AON in 2016 (Figure 10; Table 6, Appendix). This was the first time in several years that a completely accurate census was carried out. While the completeness of the 2016 count is likely to have been responsible for some of the increase in recorded numbers, Black-headed Gull populations can fluctuate between years, something which has been previously seen at Larne Lough. In 2024, 1,620 AON were counted by RSPB on Blue Circle and Swan Islands, which represents a 44% decline in numbers since 2023 when 2,888 AON were counted (Table 6, Appendix).

At RSPB's Belfast Lough reserve, there was a further reduction in the Black-headed Gull colony from 587 AON in 2023 down to 402 AON in 2024. A total of 1,500 AON were estimated in 2022. Black-headed Gulls have been stable at RSPB's Portmore Lough reserve (part of the Lough Neagh and Lough Beg SPA) over the past few years. 104 AON were recorded in 2024, a slight decrease on the 107 AON counted in 2023 (Table 6, Appendix).

A combined total of 653 AON were counted in 2024 by the National Trust and WWT on Strangford Lough (Table 6, Appendix), which was a significant decline from the 1,179 AON counted in 2023. Prior to this, the breeding population appeared to have mostly stabilised since 2013 after a large decline from the peak seen in the early 1990s (Figure 11). A breakdown of counts across different islands can be found in the Strangford report on Page 82. On Cockle Island on the Outer Ards, 112 AON were counted, which is a significant decline from the 255 AON present in 2023.

There are also inland breeding populations of Black-headed Gulls in Northern Ireland. In Co. Fermanagh, 11 AON were counted at Moorlough Lake in 2024 which represents a substantial decline since 2022 when 58 AON were recorded. Counts were not conducted on Lower Lough Erne in 2023 and 2024, although there were 1,255 AON in 2022, the lowest on record since 2018 (Table 6, Appendix). Fifteen islands in Lough Neagh were surveyed during May/June 2024 by the Lough Neagh Partnership and eight held Black-headed Gull colonies. A total of 3,689 individuals was counted, lower than the 4,019 individuals counted in 2022. Abundance data are challenging to collect consistently from the Lough Neagh islands making between-year comparisons difficult, particularly given late counts due to COVID-19 restrictions in 2020, and the relative merits and drawbacks of reporting peak counts or average counts. A count of the main breeding islands gave an estimate of 11,595 individuals in 2016, but numbers then fell to approximately 8,120 individuals in 2017 and 8,906 in 2018 (Bob Davidson and Stephen Foster, pers. comm.). Lough Neagh supported 30,000 breeding pairs of Black-headed Gulls on 12 islands in the 1980s; subsequently the gulls have abandoned breeding on Shallow Flat and Coney Island Flat, and have decreased in number on Padian Island, Owen Roe and Scaddy Island (Allen & Mellon 2018).

The MarPAMM census of Rathlin Island found that Black-headed Gull had almost declined to extinction (-99%) since Seabird 2000, with only five AON counted on the island in 2021, compared to 383 AON in 1999. There was a welcome increase in numbers in 2024, with 40 AON estimated on Rathlin Island (Else *et al.* 2024).

Figure 10: Black-headed Gull counts (AON) at Larne Lough, 1994–2024. No counts took place 2001–2004, 2010, and an incomplete count in 2020. The dashed line represents the Locally Weighted Least Squares Regression trend in Black-headed Gull numbers over time. The shaded region represents the 95% confidence interval around the trend.

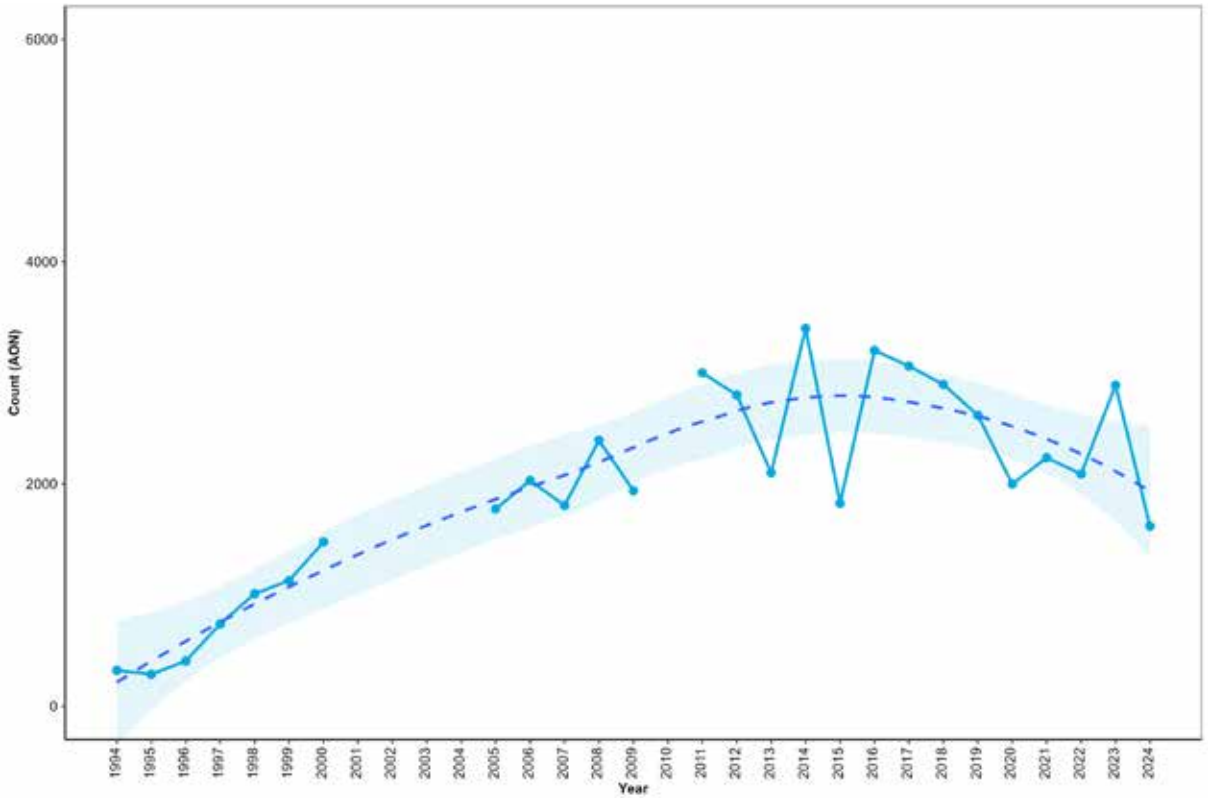
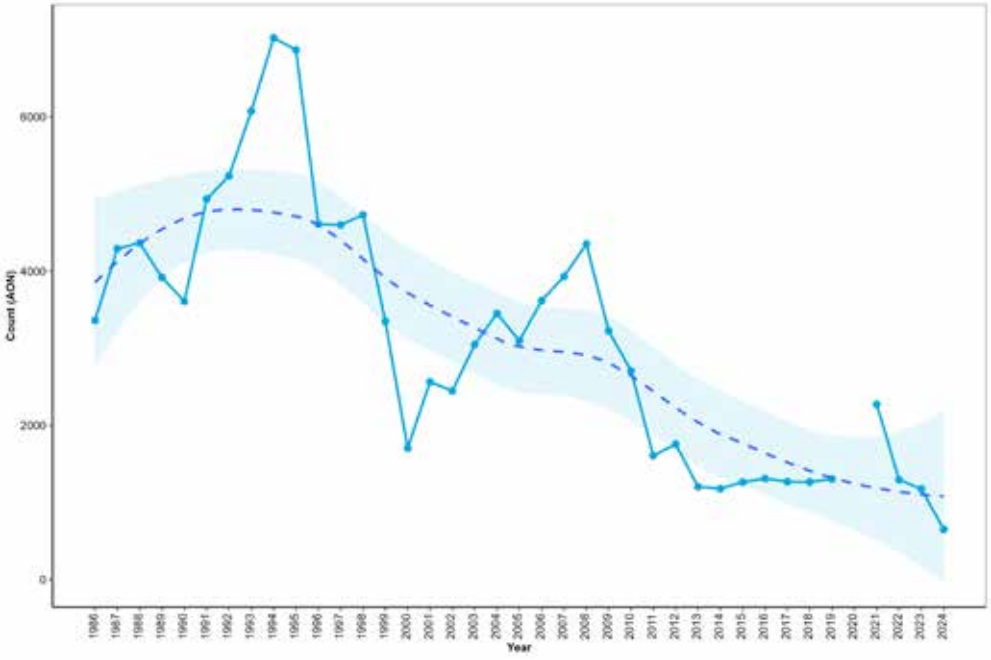


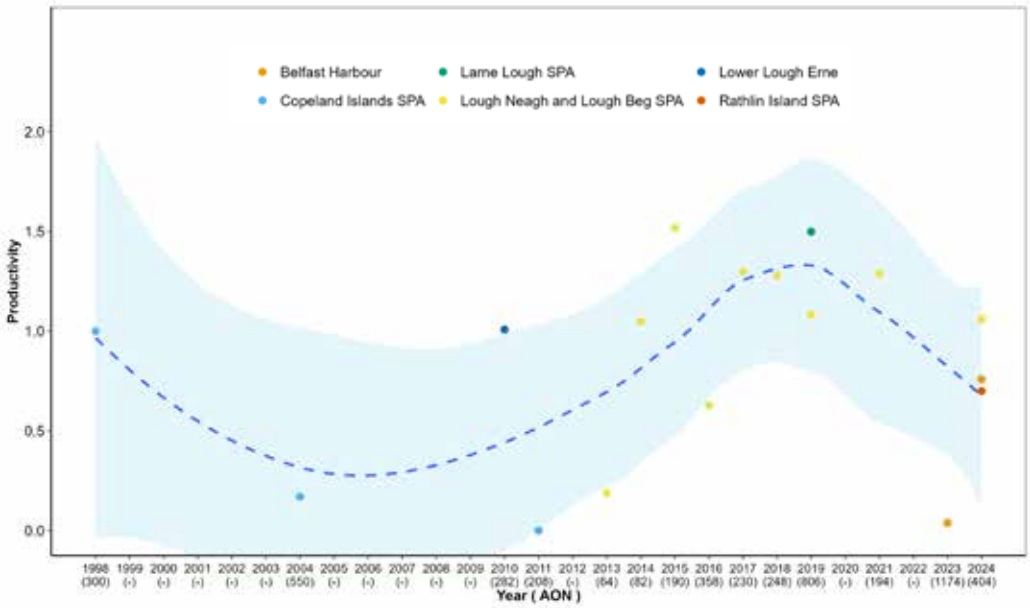
Figure 11: Black-headed Gull counts (AON) at Strangford Lough, 1986–2024. No counts took place in 2020. The dashed line represents the Locally Weighted Least Squares Regression trend in Black-headed Gull numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2023

Black-headed Gull productivity data were submitted for Belfast Lough, Portmore Lough and Rathlin Island (all RSPB) in 2024. At Belfast Lough, a sample of 58 AON fledged an average of 0.76 chicks per AON, a significant improvement on 2023 when only 0.03 chicks fledged per AON (n=587 AON) due to the colony being badly affected by an HPAI outbreak. Productivity at Portmore Lough was 1.06 chicks fledged per AON from 104 nests, compared to 1.29 chicks fledged per AON in 2021 (n=97 AON). At Rathlin Island, 28 juveniles were counted, which would give a productivity of 0.7 chicks fledged per AON from 40 nests (RSPB LIFE Raft project). The last time breeding productivity data was collected for Larne Lough was in 2019, when approximately 1.50 chicks fledged per AON (Booth Jones 2020).

Figure 12: Productivity (chicks/AON) for Black-headed Gull 1998–2024 across six sites in Northern Ireland. No data were available for 1999 to 2003, 2005 to 2009, or 2022. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Black-headed Gull productivity between 1998 and 2024 include: Rathlin Island, Copeland Islands, Belfast Lough, Portmore Lough, Larne Lough, and Lower Lough Erne. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Mediterranean Gull

Ichthyaetus melanocephalus

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – Annex 1 and migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Mediterranean Gull, by Liz Cutting / BTO

Overview

Synopsis: Slightly larger and stockier than the Black-headed Gull with a stouter bill, the Mediterranean Gull is a relative newcomer to the UK and Ireland's breeding seabird assemblage. Mediterranean Gulls expanded their range and population size from their traditional distribution around the Black Sea and Eastern Mediterranean in the 1950s and 1960s (JNCC 2021), with their first confirmed breeding in the UK occurring in Hampshire in 1968 (Slack 2007).

UK population size, abundance and breeding success trends: From just one pair in the 1985–1988 census, numbers have increased to 132 AON during Seabird 2000 (Mitchell *et al.* 2004) and 2,295 AON during Seabirds Count in 2015–2021 (Burnell *et al.* 2023). Most large colonies are located in south and south-east England, although the species' distribution is expanding northward with smaller colonies becoming established elsewhere (Burnell *et al.* 2023). An estimated 4,000 Mediterranean Gulls winter in the UK (Woodward *et al.* 2020).

Few productivity data are collected for Mediterranean Gulls, and as result productivity at the UK level is not reported (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: The Mediterranean Gull is a rare breeding species on the island of Ireland (Burke *et al.* 2020). After first breeding in Co. Antrim 1995, initially between one and three AON were recorded annually in Northern Ireland, across three different sites. Numbers have gradually increased, however, particularly since Mediterranean Gulls started breeding at Belfast Lough RSPB reserve in 2016 and the NI population peaked at 14 AON in 2018.

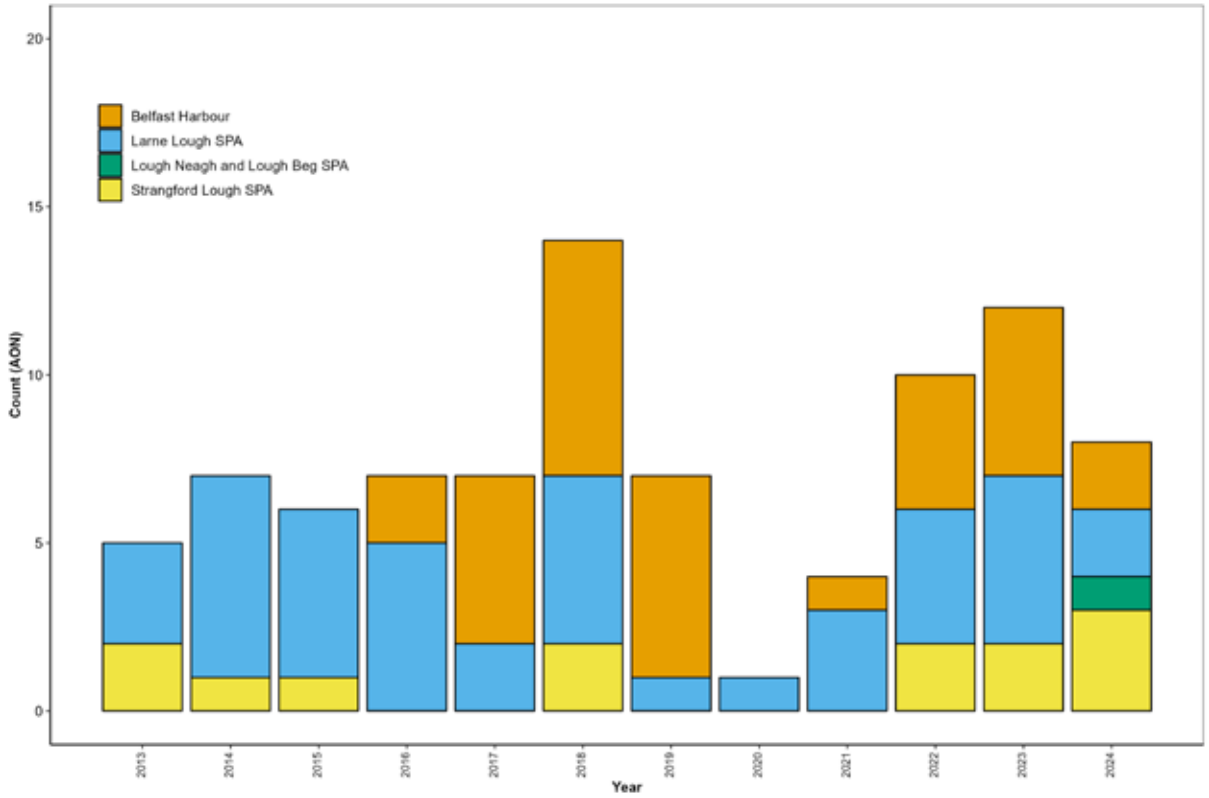
The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

Abundance in 2024

Numbers of breeding Mediterranean Gulls appear to have dropped since the peak in 2018 (Table 6, Appendix), although due to COVID-19 fieldwork restrictions, few records were made in 2020. While in 2021 there were only four confirmed breeding pairs, in 2022 numbers had again risen with a total of 10 pairs between Strangford, Larne and Belfast Loughs (Figure 12). One male Mediterranean Gull returned to Lower Lough Erne in 2022 and was believed to have incubated two nests, but there was no evidence of successful hatching (RSPB).

The overall trend was of a decline in the number of breeding pairs in Northern Ireland in 2024. There was a reduction in the number of Mediterranean Gulls at both Belfast Lough and Larne Lough this year with only two AON present at each site, compared to five AON at each site in 2023. On Strangford Lough, there were three AON in 2024, compared with two AON in 2023. There was also one AON at Portmore Lough in 2024 and a single bird was also recorded on Lower Lough Erne amongst a Common Gull colony during the breeding season, although there was no evidence of it being paired up (Amy Burns, pers. comm.).

Figure 13: Cumulative Mediterranean Gull count (AON) in Northern Ireland, 2013–2024. Data were only available for 2020 from Larne Lough. The total bar height represents the number of Mediterranean Gull pairs per year, and the colour represents the number in each site.



Breeding success in 2024

Due to the low number of breeding pairs in Northern Ireland, assessment of breeding success is very limited. Two breeding records were submitted for Mediterranean Gulls in 2024. Two chicks were fledged from two nests recorded at Belfast Lough in 2024 (one chick per AON), compared to zero productivity from five AON in 2023. On Strangford Lough, one chick may have fledged from three AON in 2024 (see Strangford Lough nesting report on Pages 82). Two chicks fledged from four nests (0.50 chicks per AON) at Larne Lough in 2022.

Common Gull

Larus canus

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Red-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive –migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021).

Common Gull, by Liz Cutting / BTO

Overview

Synopsis: A dainty gull, resembling a small Herring Gull, this species nests colonially around coasts and inland sites. Common Gulls can often be seen paddling their feet to encourage worms to surface in grassy areas (Vernon 1972).

UK population size, abundance and breeding success trends: Scotland holds 89% of breeding Common Gulls across Britain and Ireland (Burnell *et al.* 2023), so the rest of the UK and Ireland is relatively insignificant for this species. In the Seabird 2000 census, there were an estimated 48,714 AON in the UK but because inland colonies were not counted in previous censuses, a comprehensive estimate of Common Gull population change was not available. Seabirds Count (2015–2021) found that the UK population had more than halved since Seabird 2000 to only 23,540 AON (Burnell *et al.* 2023). During Seabirds Count, 45% of UK breeding Common Gulls bred inland (Burnell *et al.* 2023). Due to its importance in the UK context, the Scottish trend can be used cautiously to represent the UK-level trend and shows a 19% decline in coastal breeding Common Gulls between 1986–2023 (Harris *et al.* 2024). The winter population of Common Gull in the UK is estimated to be 710,000 (680,000–730,000) (Burton *et al.* 2013, Woodward *et al.* 2020).

Common Gull productivity is not well studied at the UK-scale, but a long-term study on the impact of American Mink predation on gulls and terns in western Scotland found that between 1989 and 2019 average productivity was 0.38 chicks per pair (JNCC 2021). The most recent productivity data for the UK is 0.55 chicks fledged per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Historically the Common Gull was a scarce breeding species in Northern Ireland, belying its name. However, coastal-nesting Common Gulls had increased in their population size from 192 to 532 AON between the 1985–1988 and 1998–2002 censuses (Mitchell *et al.* 2004), and small numbers have appeared at several locations, although unfortunately not formally monitored (Kerry Leonard, pers. comm.). Seabirds Count found 758 AON in Northern Ireland, a 42% increase from Seabird 2000 (Burnell *et al.* 2023). For example, one such new colony was discovered in late July 2013 at Torr Head, Co. Antrim. By far the largest concentrations are on the Copeland Islands and at Strangford Lough, and inland at Lower Lough Erne. Approximately 10,000 Common Gulls visit Northern Ireland in the winter (Burton *et al.* 2013, Woodward *et al.* 2020).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

Abundance in 2024

Four areas around Northern Ireland have been regularly monitored for Common Gull in recent years: Strangford Lough, Larne Lough, Outer Ards and Lower Lough Erne (Table 6, Appendix). At these sites Common Gulls have generally increased over time. Numbers of Common Gulls grew steadily in Strangford Lough in the 1990s, but since have been less stable, with a huge increase in the 2000s followed by a decline in the early 2010s. However, numbers have since declined and only 282 AON were counted in 2024 (compared with 329 AON in 2023). For further details, please refer to the Strangford report on Page 82.

The next largest colony is in Lower Lough Erne (Table 6, Appendix), where an estimated 238 were counted in 2022, which was very similar to 2021's count of 249 AON. While counts were not carried out in 2020, in 2019

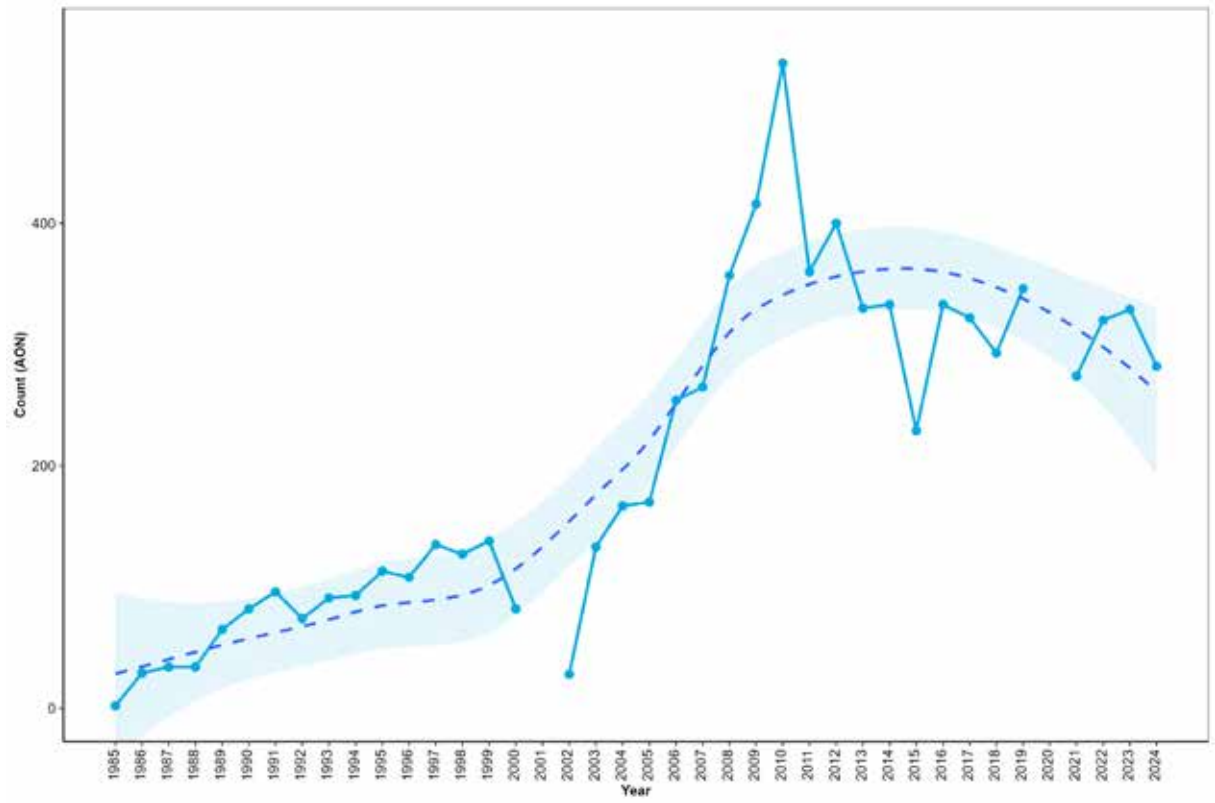
it was not possible to count one important colony at Lower Lough Erne, so although the count of 337 AON was the highest on record (Table 6, Appendix), this was probably an underestimate (Brad Robson, pers. comm.). Lower Lough Erne was not counted in 2024.

Numbers of Common Gull at the smaller Larne Lough colony have been increasing in recent years and 2024 saw a record count of 49 AON, up from 47 AON in 2023 (Figure 15). Up to nine AON have been recorded annually in Cockle Island (Outer Ards SPA) since 1986, with six AON counted in 2024 compared to seven AON in 2023. (Table 6, Appendix). On Muck Island, three AON were present in 2024, a significant reduction on the 28 AON counted in 2022.

Outside regularly monitored areas, other aggregations of Common Gull exist primarily on the Copeland Islands and on Rathlin Island. On the Copeland Islands, although numbers have dropped, birds have spread out from a few large sub-colonies to form new satellite sub-colonies around the shore of all three islands. The Copeland Islands have not been completely surveyed since 2012 when there were 452 AON, down from a peak of 830 AON in 2009. More recently, 15 AON were recorded on Lighthouse Island in both 2018 and 2022. Up to six AON were counted in 2024. The MarPAMM census of Rathlin Island found that the Rathlin Island population has stayed fairly stable since the 1998–2002 census, at 69 AON (an 8% increase). However, there has been a subsequent reduction in numbers, with only 37 AON counted in 2023 and 33 AON in 2024 by the RSPB LIFE Raft project (Else *et al.* 2024).

A few Common Gulls breed at Carlingford Lough, and in 2024 there were eight AON, compared to the last count of seven AON in 2021 (Table 6, Appendix). Six AON were counted at the base of the cliffs at Runkerry, Co. Antrim in 2024 (Stephen Foster, pers. comm.).

Figure 14: Common Gull counts (AON) at Strangford Lough, 1995–2024. No counts were made in 2001 or 2020. The dashed line represents the Locally Weighted Least Squares Regression trend in Common Gull numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2023

In 2024, breeding productivity for Common Gull was only monitored at Larne Lough (RSPB). The productivity was lower at Larne Lough in 2024 at 0.61 chicks fledged per AON (n=49 AON), compared to 0.92 chicks per AON in 2023 and 1.13 chicks per AON in 2022. Productivity at Rathlin Island was undertaken in 2023, with 0.27 chicks fledging from 37 AON.

Figure 15: Common Gull counts (AON) at Larne Lough, 1985–2024. No counts were made in 2002 or 2004. The dashed line represents the Locally Weighted Least Squares Regression trend in Common Gull numbers over time. The shaded region represents the 95% confidence interval around the trend.

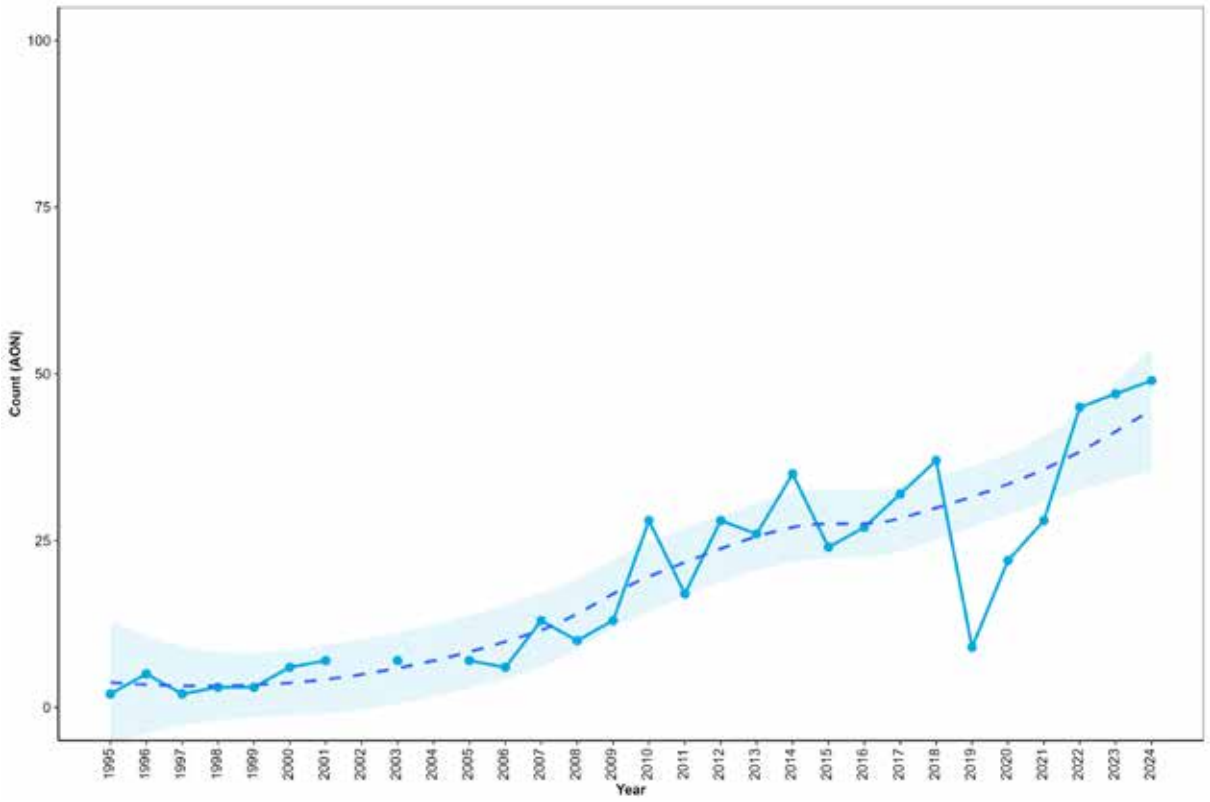
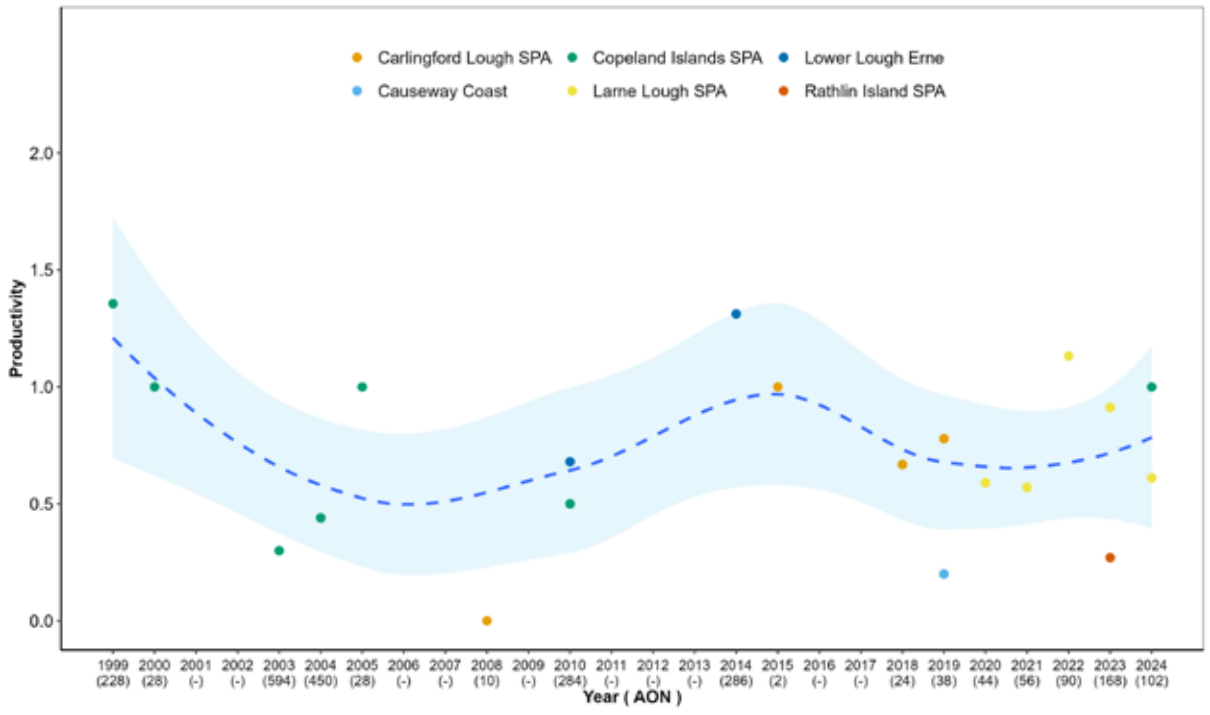


Figure 16: Productivity (chicks/AON) for Common Gull 1999–2024 across six sites in Northern Ireland. No data were available for 2001, 2002, 2006, 2007, 2009, 2011 to 2013, or 2016. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Common Gull productivity between 1999 and 2024 include: Rathlin Island, Copeland Islands, Larne Lough, and Lower Lough Erne, among others. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Lesser Black-backed Gull

Larus fuscus

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive –migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021).

Lesser Black-backed Gull chicks, by Allan Drewitt / BTO

Overview

Synopsis: Lesser Black-backed Gulls nest colonially often with other gull species, particularly Herring Gulls (Mitchell *et al.* 2004). However, unlike Herring Gulls, many Lesser Black-backed Gulls from the UK migrate to the Iberian Peninsula or North Africa during the non-breeding period (Rock 2002, Spina *et al.* 2022).

UK population size, abundance and breeding success trends: Based on data from Seabirds Count (2015–2021) together Britain and Ireland hold a minimum of 36% of the estimated world population. During Seabird 2000, the breeding population was estimated at 123,253 AON, an increase of 40% over the previous census period (JNCC 2021). However, with the species' spread to urban sites, it is likely that some colonies remained uncounted. The Seabirds Count census utilised a new methodology to count the urban-nesting Lesser Black-backed Gulls to improve the accuracy of the population estimate. Combining the counts of both natural and urban nesters, the UK population was estimated to be 324,465 AON (95% CI: 294,267–357,253), almost a three-fold increase since Seabird 2000, driven by the large increase in urban-nesting gulls (Burnell *et al.* 2023). However, caution is advised with this total as the survey methods used during Seabird 2000 and Seabirds Count differed. Based on SMP data, the 65% downward trend in the Lesser Black-backed Gull abundance index from 1986–2023 is based only on natural-nesting gulls and may not be representative of the UK whole (Harris *et al.* 2024). Although many of the UK's breeding Lesser Black-backed Gulls migrate during the winter, the winter population is estimated to be 130,000 (120,000–130,000) (Burton *et al.* 2013, Woodward *et al.* 2020), boosted by an influx of birds from Iceland and Fennoscandia.

At the UK level, productivity measured at natural-nesting colonies (defined as moors, cliffs, marshes, beaches and other areas of semi-natural habitat, i.e. non-urban) have fluctuated widely over the SMP recording period, particularly in recent years. UK productivity averaged 0.52 chicks per AON between 1989 and 2019 (JNCC 2021), while most recently in 2003 it was 0.48 chicks fledged per pair (Harris *et al.* 2024). The factors causing low productivity in Lesser Black-backed Gulls are not fully understood but include predation at some colonies. There is a lack of equivalent productivity estimates for urban sites.

Northern Ireland population size, abundance and breeding success trends: The Lesser Black-backed Gull is a widespread breeding species in Northern Ireland, mainly in a few large colonies at Strangford Lough, Copeland Islands, and inland at Lower Lough Erne and Lough Neagh. There are smaller numbers at Rathlin Island, The Skerries and Muck Island. Across Northern Ireland as a whole, numbers of coastal-nesting Lesser Black-backed Gulls doubled between the 1969–1970 and 1985–1988 censuses, and increased further to 131% by 1998–2002, when 1,033 AON were counted (Mitchell *et al.* 2004). Inland colonies were only censused for the first time in Seabird 2000 (940 AON), so trends are unavailable for these sites (JNCC 2021). Central Belfast was the only urban colony to be surveyed in Seabird 2000, with 63 AON recorded (Mitchell *et al.* 2004), but the full extent of urban-nesting Lesser Black-backed Gulls is unknown in Northern Ireland. Seabirds Count estimated that the Northern Ireland population was 6,388 AON (5439–7556), including both urban and natural nesters, a six-fold increase since Seabird 2000 (Burnell *et al.* 2023). However, this figure should be treated with caution as there is some uncertainty around the number of urban nesters. Seabirds Count estimated the number of urban nesters to be 2,434 AON (1,485–3,603) in Northern Ireland (Burnell *et al.* 2023). Around 550 Lesser Black-backed Gulls may occur in Northern Ireland in the winter (Burton *et al.* 2013, Woodward *et al.* 2020).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

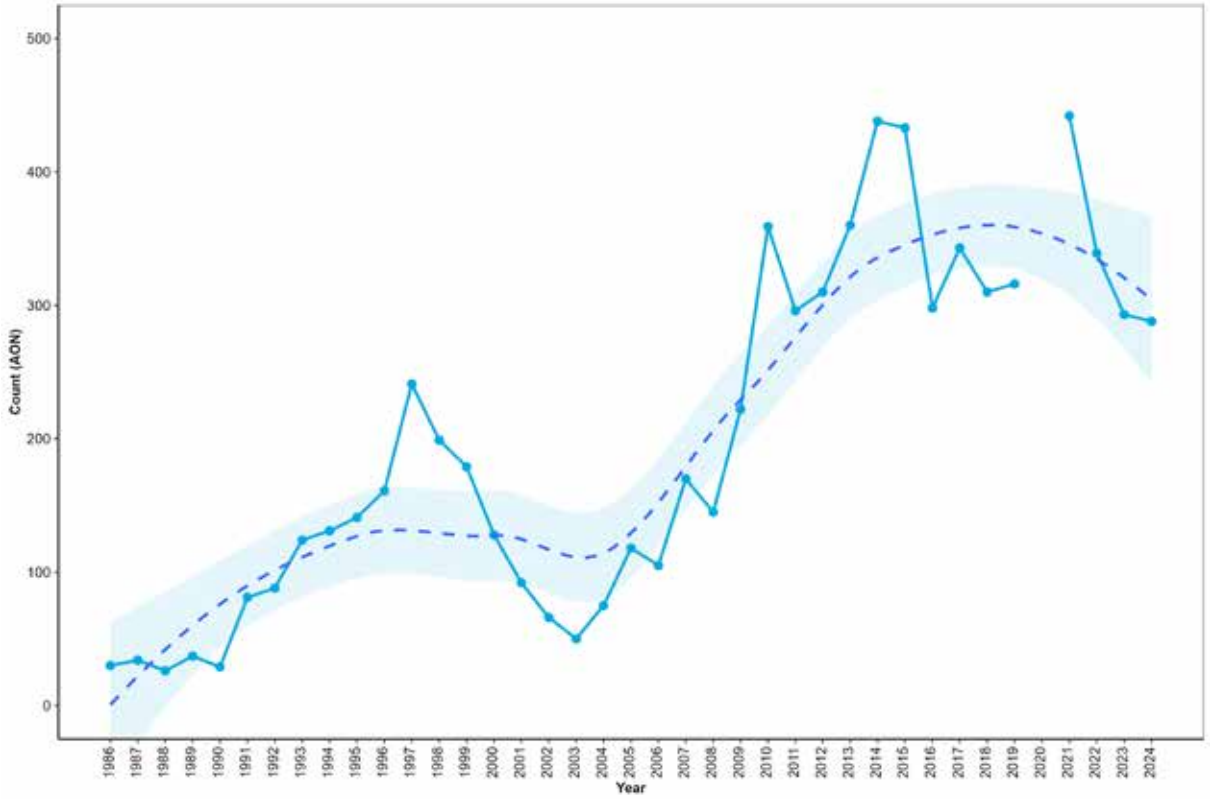
Abundance in 2024

Lower Lough Erne supports a large proportion of the Lesser Black-backed Gulls in Northern Ireland, but was not counted in 2024. In 2022, the population on Lower Lough Erne was estimated to be 1,653 AON, the maximum on record for the site. However, this count includes the 2019 record of 765 AON at Rabbit Island, as this particular colony could not be visited in 2022 (RSPB).

Another large concentration is found in Strangford Lough where, with the exception of a dip in the late 1990s and early 2000s, the population has risen consistently since the first records in 1987. Since the record count in 2021, numbers have declined by 35% and only 288 AON were recorded in 2024 (compared to 293 AON in 2023). A breakdown of counts across different islands can be found in the Strangford report on Page 82.

Fifteen islands in Lough Neagh were surveyed in 2024 by the Lough Neagh Partnership (excluding Portmore Lough RSPB reserve) and a total of 1,109 individuals was recorded using peak flush counts. This compares with 1,543 individuals counted in 2022. Abundance data are challenging to collect consistently from the Lough Neagh islands making between-year comparisons difficult.

Figure 17: Lesser Black-backed Gull counts (AON) in Strangford Lough, 1986–2024. No data were collected in 2020. The dashed line represents the Locally Weighted Least Squares Regression trend in Lesser Black-backed Gull numbers over time. The shaded region represents the 95% confidence interval around the trend.



While the Loughs are generally well-covered for Lesser Black-backed Gulls, coastal colonies are less regularly counted, or coverage is incomplete. Addressing part of this gap, the MarPAMM census of Rathlin Island in 2021 found that Lesser Black-backed Gulls had increased on the island by 309% to 519 AON since the 1998–2002 census, while between Runkerry and Murlough, they increased by 1,200% to 91 AOT/AON. The RSPB LIFE Raft project counted 726 AON in 2024, down on the 825 AON recorded in 2023. Additionally, a volunteer survey of The Skerries counted 537 AON in 2021, a significant and under-recorded population. No counts were submitted for those coastal colonies in 2024.

A volunteer team led by the Copeland Bird Observatory surveyed large gulls on Lighthouse Island in all years since 2018 (apart from 2020). The count in 2024 was 448 AON, which is a reduction on the 683 AON counted

in 2023. A further 108 AON were counted on Mew Island, although Big Copeland remains uncounted. For more details, please see Copeland Gull article on Page 79. On Muck Island, 12 AON were recorded in 2024, significantly up on the two AON counted in 2023.

True numbers of urban-nesting gulls remain difficult to quantify, however in 2018 and 2019 NIEA-funded surveys of central Belfast recorded a peak of 221 AON (Booth Jones *et al.* 2022b). While much higher than the last record made for the 1998–2002 census (63 AON), this is still likely to be an underestimate due to the complexity of the roof-scape in the survey area. Urban-nesting appears to be an increasing phenomenon in Northern Ireland, and records of roof nesters from volunteers would be welcome.

Breeding success in 2024

No colonies were monitored for breeding success in 2024.

Herring Gull

Larus argentatus

Conservation status: Amber-listed in the BoCCI4 (2020–2026); Red-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Herring Gull, by Edmund Fellowes / BTO

Overview

Synopsis: The Herring Gull is slightly larger than the Lesser Black-backed Gull. It was historically widespread in Britain and Ireland and is largely resident (Mitchell *et al.* 2004). It nests in a range of habitats, from rocky coastlines to rooftops, but is less widespread inland compared to the Lesser Black-backed Gull. Although quite commonly nesting on roofs now, this behaviour was first observed in the 1920s in the south-west of England (Robinson 2005).

UK population size, abundance and breeding success trends: Herring Gulls suffered a steep decline in the late 1980s, largely due to botulism (Mitchell *et al.* 2004). Between the 1969–1970 and 1985–1988 censuses, Herring Gulls declined by 43% and declined a further 13% by 1998–2002, to 130,230 AON (Mitchell *et al.* 2004). However, with the species' spread to urban sites, it is likely that some colonies remained uncounted. The Seabirds Count census (2015–2021) has utilised a new methodology to count the urban-nesting Herring Gulls to improve the accuracy of the population estimate. The combined UK population of natural and urban nesters was estimated to be 237,573 AON (95% CI: 251,735–269,520), indicates an increase since Seabird 2000, driven by a large increase in urban-nesting gulls (Burnell *et al.* 2023). However, caution is advised with this total as the survey methods used during Seabird 2000 and Seabirds Count differed.The SMP report does not produce a combined urban- and natural-nesting abundance index for Herring Gull due to the low sample from urban sites, but the natural-nesting index for 2023 was 50% below the 1986 baseline (Harris *et al.* 2024). Based on existing UK demographic parameters (survival, clutch size, etc.) Cook & Robinson (2010) predicted a 60% decrease in the national population over 25 years. During the winter, visitors from Scandinavia swell the Herring Gull population to around 740,000 (710,000–780,000) (Burton *et al.* 2013, Woodward *et al.* 2020).

Productivity has been variable during the SMP reporting period, with the most recent UK figure of 0.50 chicks fledged per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: The population in Northern Ireland declined by 96% between the 1985–1988 and 1998–2002 censuses to just 709 AON (Cramp *et al.* 1974, Mitchell *et al.* 2004). Concentrations of Herring Gulls occur on the Copeland Islands and at Strangford Lough. Smaller colonies are on Rathlin Island, Burial Island, Muck Island and The Skerries. The population of Rathlin Island declined from 4,037 AOT in 1985 to just 19 AOT in 1999 (Mitchell *et al.* 2004), but has since recovered to 83 AON during Seabirds Count (Burnell *et al.* 2023). A similar decline occurred on the Copeland Islands, from approximately 7,000 AOT in 1985 to 225 AOT in 2004. The figures for Strangford Lough mirror this trend, with a large and rapid decline in the mid 1980s, numbers reaching a low point just after the turn of the century. Since 2007, numbers of AOT at Copeland and Strangford have shown sustained growth. This is reflected in Seabirds Count with the Northern Ireland natural-nesting population now at 2,177 AON, a 210% increase since Seabird 2000 (Burnell *et al.* 2023). Herring Gull has been downgraded from Red-listed to Amber-listed in the latest BoCCI due to less severe declines in recent years (Gilbert *et al.* 2021). As many as 10,000 Herring Gulls may occur in Northern Ireland in the winter (Burton *et al.* 2013, Woodward *et al.* 2020).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

Abundance in 2024

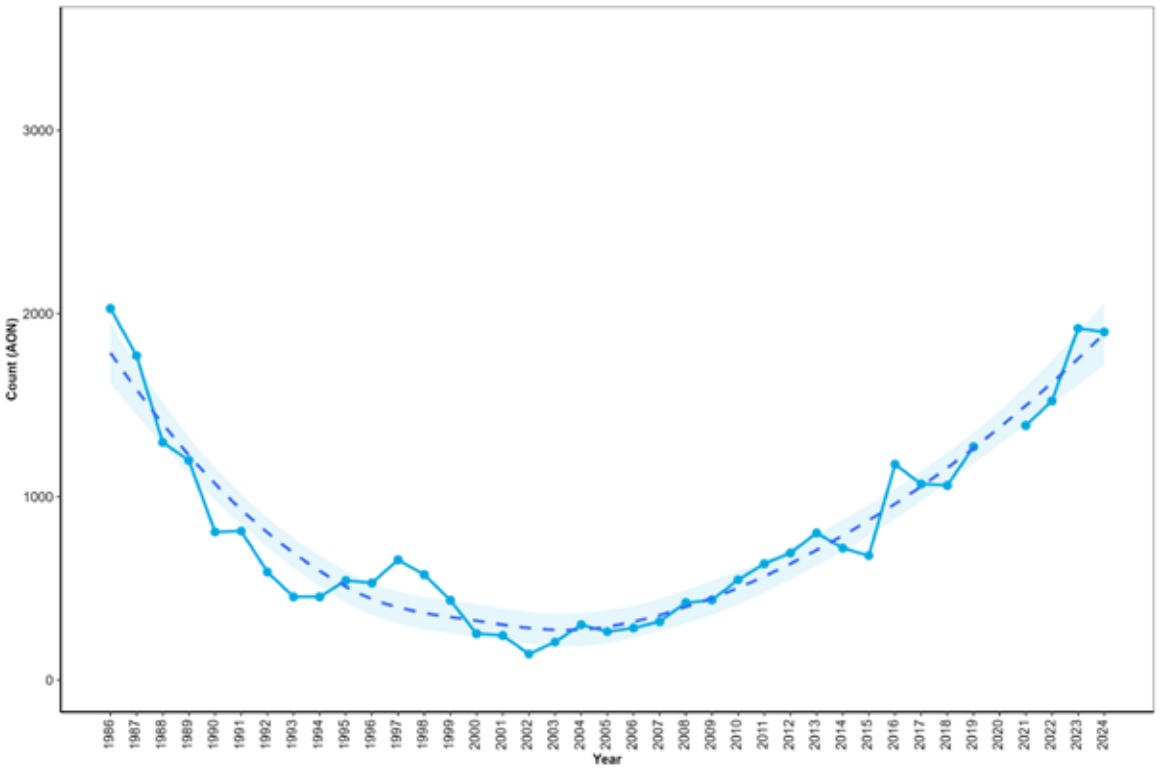
The primary population of Herring Gulls in Northern Ireland is found in Strangford Lough, where numbers have been steadily increasing after a decline in the late 1980s and 1990s (Figure 18). The 2024 count of 1,900 AON is only slightly below the 2023 count of 1,920 AON, which was the largest count there since 1986 (2,825 AON). A breakdown of counts across different islands can be found in the Strangford report on page 82.

The other major colony spanning the three Copeland Islands has not been completely surveyed since 2012. However, volunteers from Copeland Bird Observatory have conducted a full survey of Lighthouse Island annually since 2018 (apart from 2020), with 869 AON being counted in 2023 and 831 AON in 2024 (Table 6, Appendix). A further 250 AON were counted on Mew Island in 2024. For further details, please refer to Copeland Gull article on page 79. Herring Gulls have been counted annually on Muck Island (2000–2010), and more recently the small population there has increased to 25 AON in 2022, although this is an 86% reduction on the highest count (184 AON) made on the island, back in 1995. A total of 74 AON were counted on Muck in 2024, which is a significant increase on 2022. At Carlingford Lough, there were three AON on Green Island in 2024, compared to 15 AON in 2023.

Coastal colonies on the north coast are less well recorded, but addressing part of this gap, the MarPAMM census of Rathlin Island found that Herring Gulls increased on the island by 493% to 83 AON since the 1998–2002 census, while between Runkerry and Murlough, they increased by 645% to 82 AOT/AON. The RSPB LIFE Raft project counted 205 AON in 2024, which was up from 174 AON in 2023. A volunteer-led survey of The Skerries in 2020 revealed that it hosted an estimated 229 AON.

It is likely that urban-nesting Herring Gulls are on the rise around Northern Ireland, but little data exist outside of central Belfast. An NIEA-funded vantage-point survey from two of the tallest buildings in Belfast found that the very small population of eight AON recorded in the 1998–2002 census had increased to 39 in 2019 (Booth Jones *et al.* 2022b). Due to the complexity of the roof-scape and the limited number of vantages, observed Herring Gull AON are likely to be an underestimate of the total number present in central Belfast. Small numbers have bred inland at Lower Lough Erne since records began in 2000, but only three AON were recorded in 2022 (Table 6, Appendix).

Figure 18: Herring Gull numbers (AON) at Strangford Lough, 1986–2024. No data were collected in 2020. The dashed line represents the Locally Weighted Least Squares Regression trend in Herring Gull numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2024

No productivity data were collected for Herring Gull in 2022–2024, but in 2021, RSPB monitored 12 AON in Carlingford Lough, which fledged six chicks (0.50 chicks/nest).

Great Black-backed Gull

Larus marinus

Conservation status: Green-listed in the BoCCI4 (2020–2026), Red-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021).

Great Black-backed Gull, by Sam Langlois / BTO

Overview

Synopsis: The Great Black-backed Gull is the largest of the gulls, with an average wing length of around 470 mm and average weight of 1.5 kg (BTO 2023). The species has an extensive breeding range across the North Atlantic. Great Black-backed Gulls are mostly found in open shore habitats during the breeding season (BTO 2023).

UK population size, abundance and breeding success trends: The Outer and Inner Hebrides and the Northern Isles of Scotland are the main strongholds for Great Black-backed Gulls in the UK and Ireland (Burnell *et al.* 2023). During the 20th century their range and numbers grew on both sides of the Atlantic, rebounding from a period of decline that rendered the species virtually extinct as a breeder in Britain towards the end of the previous century (Mitchell *et al.* 2004). The UK population has been relatively stable across census periods, and at Seabird 2000 (1998–2002) it was estimated to be 16,735 AON. However, the most recent census (2015–2021) shows that the UK population of Great Black-backed Gulls has decreased by 52% to only 8,021 AON (Burnell *et al.* 2023). The UK abundance index was also 42% below the 1986 baseline in 2023 (Harris *et al.* 2024). During the winter, numbers of Great Black-backed Gulls increase to 77,000 (72,000–82,000) (Burton *et al.* 2013, Woodward *et al.* 2020).

There was an overall decline in UK productivity until 2005, after which it increased. UK productivity has varied between 0.70 and 1.70 chicks per AON since 1986, with the most recent data showing 1.13 chicks fledged per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: The population of Great Black-backed Gulls in Northern Ireland declined by 74% from 240 AON to 71 AON between the 1969–1970 and 1998–2002 censuses (Mitchell *et al.* 2004). However, the Northern Irish population appeared to have more than doubled between the previous two censuses and numbers have also increased in the Republic of Ireland (JNCC 2021), resulting in a move from Amber-listed to Green-listed in the latest BoCCI (Gilbert *et al.* 2021). Seabirds Count reported 449 AON in Northern Ireland, which was a five-fold increase since Seabird 2000 (Burnell *et al.* 2023). The most important site in Northern Ireland is on Great Minnis's Island, Strangford Lough. Approximately 1,000 Great Black-backed Gulls occur in Northern Ireland during the winter (Burton *et al.* 2013, Woodward *et al.* 2020).

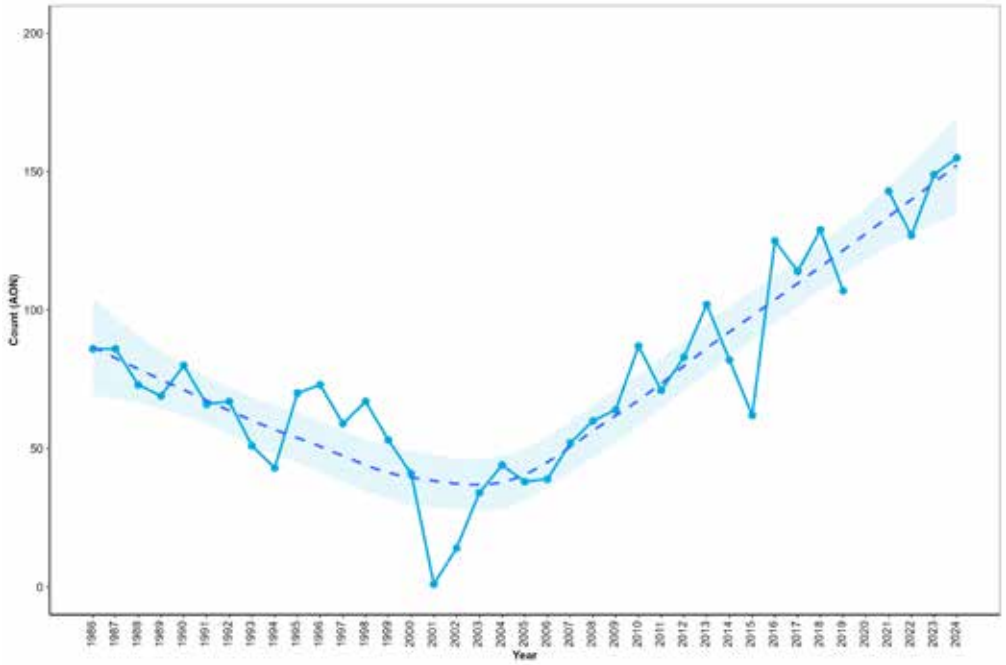
The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

Abundance in 2024

The biggest colony of Great Black-backed Gulls occurs on Strangford Lough, and 155 AON were counted in 2024, which is the highest count since 1972. This was a slight increase on the 149 AON recorded in 2023 (Figure 19). A breakdown of counts across different islands can be found in the Strangford report on page 82. Four AON were present on Muck Island in 2024, the same figure as in 2022 and 2023, although much lower than the record high of 11 AON in 2021 (Table 6, Appendix). One AON was recorded between Maggy's Leap and Newcastle in 2024, compared to two AON in 2022, and a further five AON were counted on Mew Island (Copeland Islands) in 2024. While inland, two individuals were counted on Lough Neagh in June 2024 (compared to five individuals in 2022) and one AON was present on Lower Lough Erne in 2024 (compared to two AON in 2022).

The MarPAMM census of Rathlin Island in 2021 found that Great Black-backed Gulls had increased on the island by 300% to 12 AON since the 1998–2002 census, while between Runkerry and Murlough, they increased by 17% to seven AOT/AON. The RSPB LIFE Raft project counted 27 AON in 2024, which is the highest number ever recorded on Rathlin Island, up from 20 AON recorded in 2023.

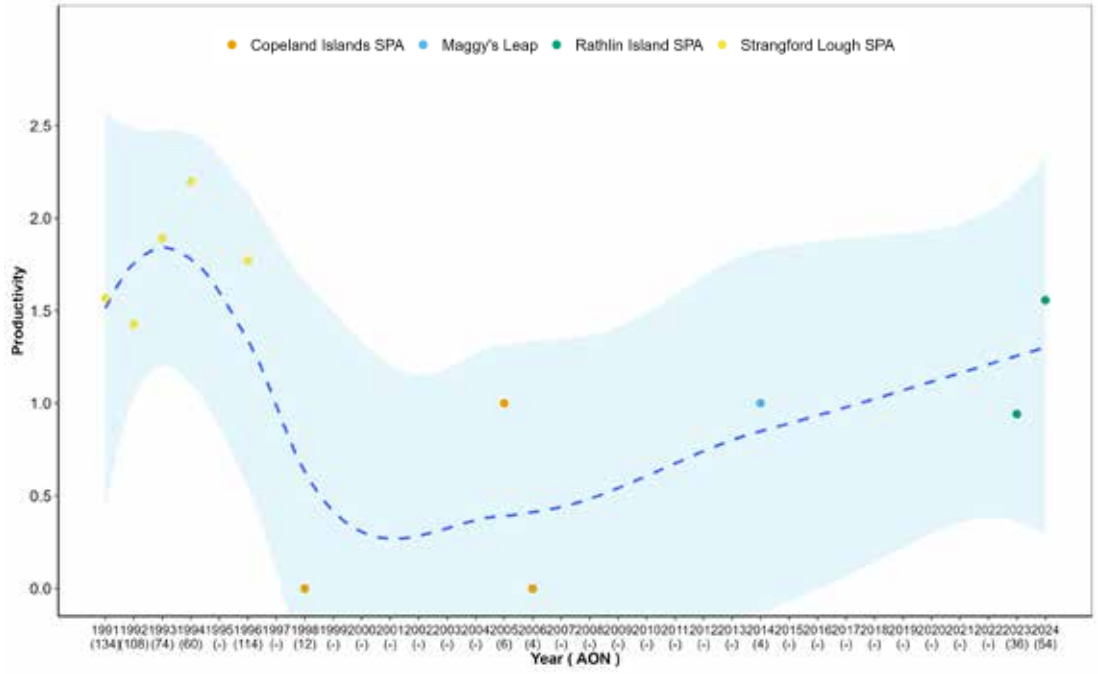
Figure 19: Great Black-backed Gull counts (AON) at Strangford Lough, 1986–2024. No data were collected in 2020. The dashed line represents the Locally Weighted Least Squares Regression trend in Great Black-backed Gull numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2024

Breeding productivity on Rathlin Island in 2024 was 1.56 chicks fledged per AON from 27 nests, which is higher than the 0.94 chicks fledged per AON in 2023 (RSPB LIFE Raft project).

Figure 20: Productivity (chicks/AON) for Great Black-backed Gull 1991–2024 across four sites in Northern Ireland. No data were available for 1995, 1997, 1999 to 2004, 2007, 2009, 2011 to 2013, or 2019 to 2022. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Great Black-backed Gull productivity between 1991 and 2024 include: Rathlin Island, Copeland Islands, Strangford Lough, and Maggy's Leap. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Little Tern

Sternula albifrons

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – listed in Annex 1 and as a migratory species, Least Concern – IUCN Red List Europe (BirdLife International, 2021).

Little Tern, by Philip Croft / BTO

Overview

Synopsis: Little Terns are the UK's smallest breeding tern species. They are exclusively coastal, usually nesting on beaches where their eggs are so well camouflaged they are almost invisible.

UK population size, abundance and breeding success trends: Numbers of Little Terns in the UK declined (-23%) between the 1985–1988 census and the 1998–2002 census, and again by -25% between 1998–2002 and the 2015–2021 censuses (Burnell *et al.* 2023). Although the population of 1,927 AON was higher during Seabird 2000 than during the original census of 1969–1970, recent estimates suggest the population size has reduced to 1,403 AON (Burnell *et al.* 2023). The long-term SMP abundance trend (1986–2023) shows a 26% decline (Harris *et al.* 2024).

Productivity for all regions has been below the figure of 0.70 chicks fledged per pair thought to be needed to maintain population stability (Cook & Robinson 2010) for much of the SMP monitoring period. The most recent data for 2023 was 0.64 chicks fledged per AON in the UK (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Little Tern is a rare breeding species on the island of Ireland (Burke *et al.* 2020), with its main breeding concentrations on the east coast. In Northern Ireland they have always been an infrequent breeding species and, prior to this year, had not been reported as definitely nesting since 1996.

Abundance in 2024

A pair was present during the breeding season on the Outer Ards in 2022 and 2023, but there was no proof of breeding. A pair nested on the Outer Ards in 2024, but unfortunately failed (Hugh Thurgate, pers. comm.).

Sandwich Tern

Thalasseus sandvicensis

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – Annex 1 and migratory species, Least Concern – IUCN Red List (Europe).

Sandwich Tern, by Philip Croft / BTO

Overview

Synopsis: The Sandwich Tern is the largest species of tern breeding in Northern Ireland. It is known for its extremely variable population trends and distribution, caused by the tendency for large numbers of individuals to move between colonies (JNCC 2021). Sandwich Terns almost always nest in shared colonies with Black-headed Gulls, potentially benefiting from the gulls' aggressive nest defence in response to predators (Smith 1975).

UK population size, abundance and breeding success trends: The UK holds approximately 9% of the world population of Sandwich Terns (Burnell *et al.* 2023). Census data indicate that the UK population increased by 33% between the 1969–1970 and 1985–1988 censuses, but that numbers then declined by 15% by 1998–2002 (Mitchell *et al.* 2004). Seabirds Count (2015–2021) found that the UK population of Sandwich Terns is stable at 12,980 AON (Burnell *et al.* 2023). However, birds have recently been impacted by HPAI outbreak and the UK population is estimated to have declined by 35% between Seabirds Count and 2023 (Tremlett *et al.* 2025). Annual SMP data indicates that the UK breeding abundance is 14% below the 1986 baseline (Harris *et al.* 2024).

UK productivity has averaged 0.66 chicks fledged per AON since 1986 (JNCC 2021). The most recent data are 0.16 chicks fledged per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: During Seabird 2000 (1998–2002), the population size of Sandwich Tern in Northern Ireland was 1,954 AON, an 11% decline since the previous census (Mitchell *et al.* 2004). There were 1,944 AON recorded during Seabirds Count, a similar number to Seabird 2000 (Burnell *et al.* 2023). In Northern Ireland most Sandwich Terns breed in a few large colonies at Strangford Lough, Larne Lough, Lower Lough Erne and Cockle Island, Groomsport. Sandwich Tern has the most complete and consistent monitoring record over the longest period and of any seabird species in Northern Ireland.

The collection of productivity data in Northern Ireland has been limited, but between 1990 and 2019 the mean breeding success was 0.31 chicks per pair per year (JNCC 2021). An all-Ireland trend is available intermittently up to 2019 (Harris *et al.* 2024).

Abundance in 2024

Presenting the total populations for the main coastal colonies together (Figure 21) is advantageous as terns may move colonies from year-to-year and it allows an overall appraisal of the Northern Ireland population.

The count of Sandwich Terns at Strangford Lough is the longest running population count of seabirds in Northern Ireland, and celebrated its 50th year in 2018 (Hugh Thurgate, pers. comm.). In 2024, the population continued to decline, with only 170 AON present, compared to 251 AON in 2023 (see page 82 for Strangford Lough report). Only one AON was present on Cockle Island, a substantial reduction from the 128 AON counted in 2023. This was probably a result of desertion following total failure in 2023 and also possibly from the impacts of HPAI (Hugh Thurgate, pers. comm.). The largest colony of Sandwich Terns in Northern Ireland currently nests in Larne Lough, where 621 AON were counted in 2024, which is the lowest count since 2014. This represents a 38% decline compared to 2023 when 1,002 AON were recorded. Numbers of Sandwich Terns have been relatively low in Carlingford Lough in recent years (Table 6, Appendix). 52 AON were counted in 2024, up from 39 AON recorded in 2023.

Sandwich Terns can also be found inland at Lower Lough Erne. 42 AON were counted in 2024, which is well below the 102 AON present in 2022 and the peak count of 316 AON in 2017.

Figure 21: Cumulative Sandwich Tern counts (AON) at Carlingford Lough SPA, Outer Ards SPA, Larne Lough SPA, Lower Lough Erne and Strangford Lough SPA, 1969–2024. Sandwich Terns were not counted in Carlingford Lough and were an estimate at Larne Lough in 2020. The total bar height represents the number of Sandwich Tern pairs per year, and the colour represents the number in each site.

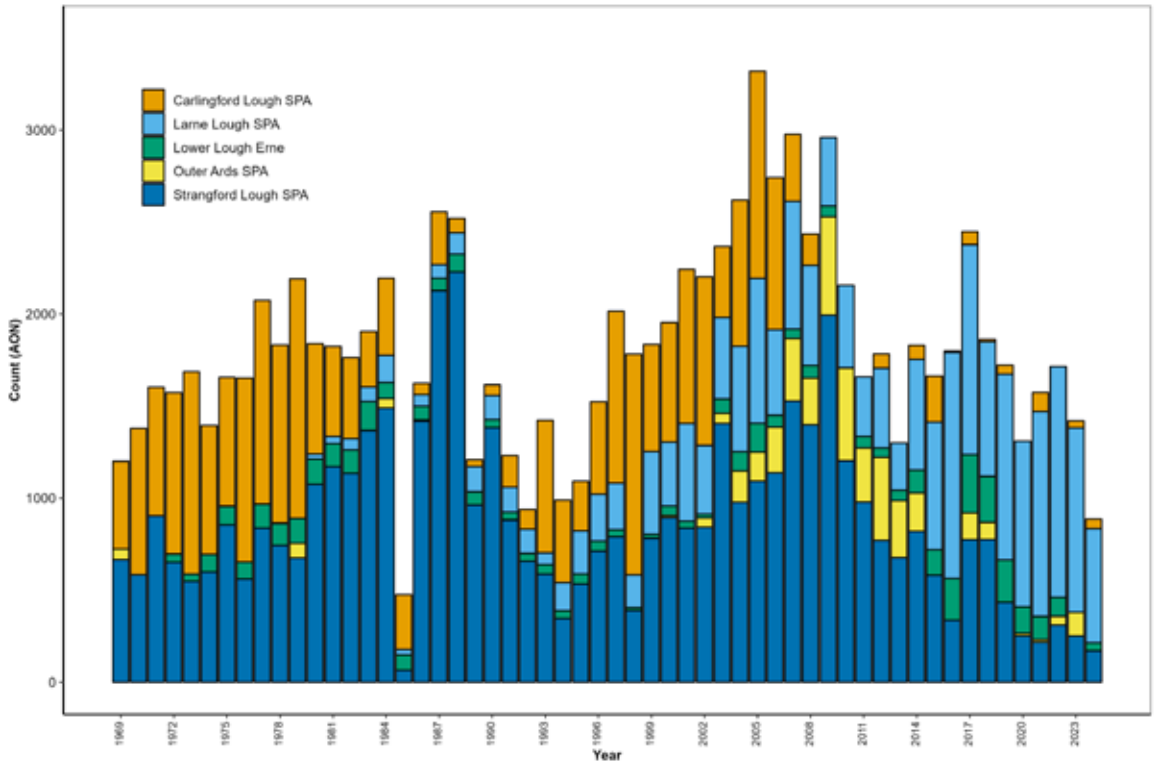
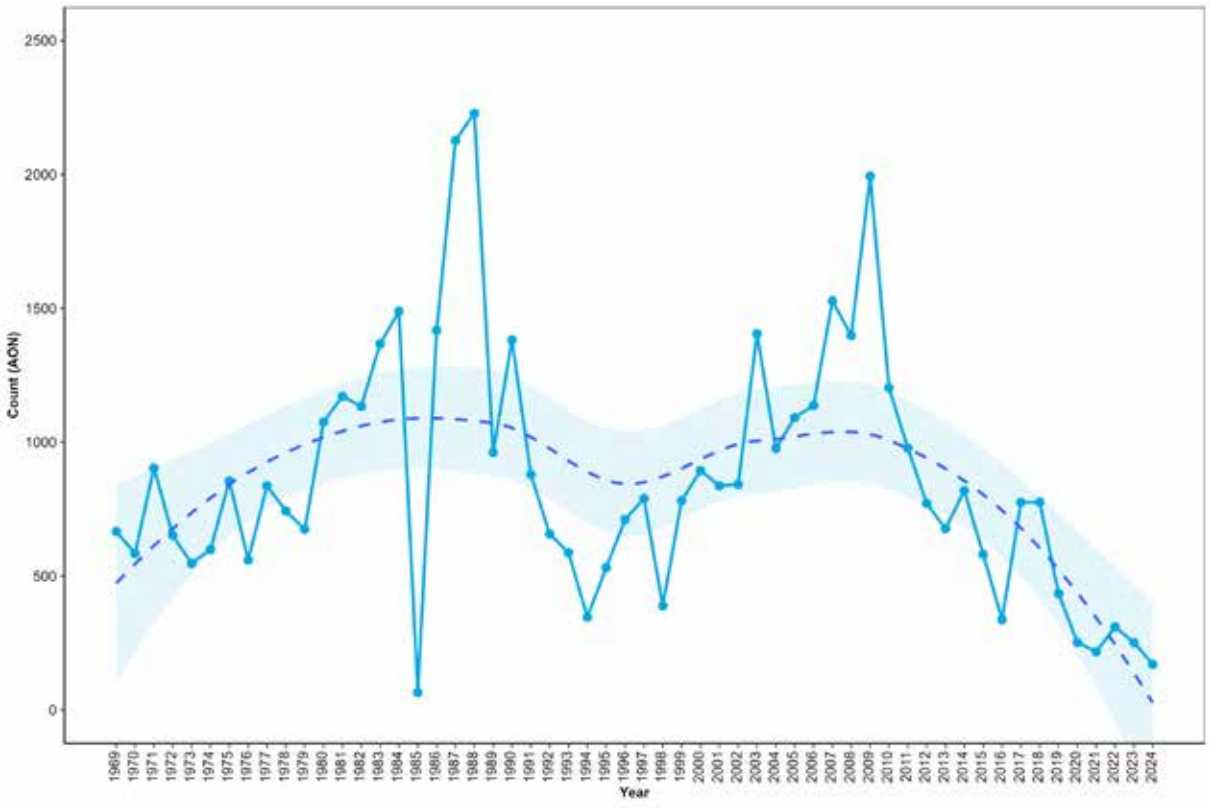


Figure 22: Sandwich Tern counts (AON) at Strangford Lough, 1969–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Sandwich Tern numbers over time. The shaded region represents the 95% confidence interval around the trend.



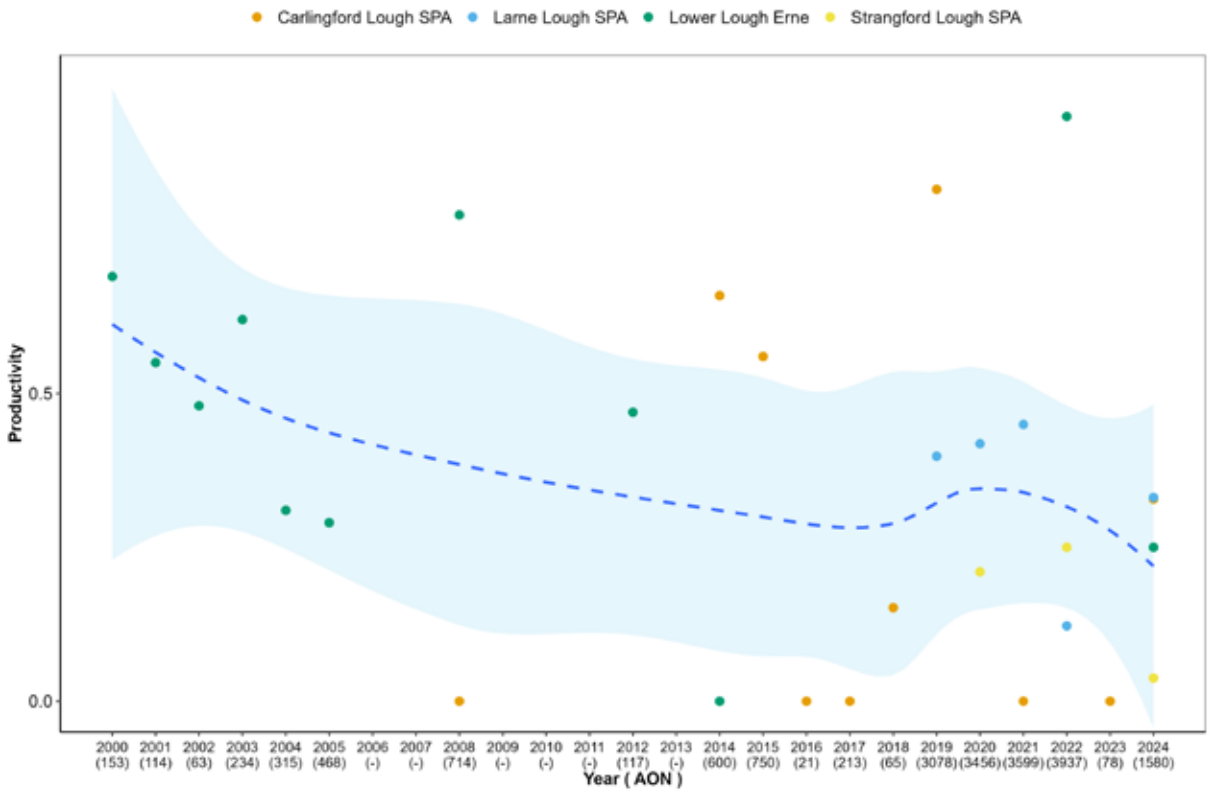
Breeding success in 2024

Sandwich Tern productivity has been measured intermittently at four colonies: Lower Lough Erne (RSPB), Carlingford Lough (RSPB), Larne Lough (RSPB), and Strangford Lough (National Trust) (Figure 23).

After the total breeding failure witnessed in 2023 which was possibly linked to HPAI, there was a slight improvement in breeding productivity during 2024.

On Larne Lough, productivity from 560 nests was 0.33 chicks fledged per AON in 2024 (compared to zero in 2023 and 0.48 in 2022). Breeding success on Strangford Lough was low at 0.02 chicks fledged per AON (compared with zero in 2023 and 0.25 in 2022). For more details, refer to the Strangford Lough Seabird Report on page 82 and Strangford Lough Breeding Tern Report on page 88). Breeding success on Lower Lough Erne was 0.25 chicks per AON (n=8 AON), although this figure was gained from a small sample and involved limited visits. This compares with 0.95 chicks per AON in 2022. Productivity improved at Carlingford Lough, with 0.33 chicks fledged per AON from 52 nests, compared to total breeding failure in 2023. Despite improving breeding success at Carlingford Lough from 2011–2015 due to an intensified programme of monitoring and conservation, productivity has been consistently low in recent years, caused by the suspected predation of eggs and young by Otter (Matthew Tickner, pers. comm).

Figure 23: Productivity (chicks/AON) for Sandwich Tern 2000–2024 across four sites in Northern Ireland. No data were available for 1995 to 1998, 2006, 2007, 2009 to 2011, or 2013. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Sandwich Tern productivity between 2000 and 2024 include: Larne Lough, Carlingford Lough, Strangford Lough, and Lower Lough Erne. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Common Tern

Sterna hirundo

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – listed in Annex 1 and as a migratory species, Least Concern – IUCN Red List Europe (BirdLife International, 2021).

Common Tern, by Moss Taylor / BTO

Overview

Synopsis: Despite the name, the Common Tern is not the most abundant UK tern species, but it is probably the most familiar because its breeding range extends around much of the coastline and inland to lakes and loughs across most of the UK (JNCC 2021).

UK population size, abundance and breeding success trends: Although the UK population rose slightly between the 1969–1970 and 1985–1988 censuses, numbers fell to 11,838 AON by Seabird 2000 (1998–2002), a similar number as recorded in the first census (Mitchell *et al.* 2004). The most recent census (2015–2021) shows that the UK Common Tern population has remained stable at 12,219 AON (Burnell *et al.* 2023). However, analysis of annual SMP data indicates that the population has decreased by 45% between 1986 and 2023 (Harris *et al.* 2024). This discrepancy is likely due to Common Terns being hit by HPAI during the 2022 outbreak, which particularly impacted several Common Tern colonies in England (Tremlett *et al.* 2025).

Productivity fluctuates between years as it is heavily influenced by weather conditions, predation and foraging success. Between 1986 and 2023, UK breeding success varied between approximately 0.30 and 0.80 chicks per pair per year, and most recently was 0.46 chicks per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Common Tern is the most widespread breeding tern species in Northern Ireland with coastal and inland populations. Historical data for the main Northern Ireland colonies are incomplete. In the late 1980s, there was a sudden increase in Common Terns to over 1,000 AON and, by Seabird 2000 there were 1,708 AON. The population has increased since then and Seabirds Count found 1,820 AON, an 7% increase from Seabird 2000 (Burnell *et al.* 2023). Significant numbers breed at several sites on Lough Neagh but these are patchily monitored. The main coastal sites are Strangford Lough, Larne Lough, Belfast Lough and Carlingford Lough.

Productivity data for Common Terns in Northern Ireland show they had an average fledging rate of 0.65 chicks per pair per year between 1999 and 2019 (JNCC 2021).

Abundance in 2024

Total numbers of Common Terns at key sites in Northern Ireland in 2024 declined to only 408 AON, a 30% reduction in numbers since 2023 when 586 AON were counted (Figure 24). This may be due to the impacts of HPAI on colonies during 2023. In 2020, the total coastal Northern Irish population (including Belfast Lough RSPB, Carlingford Lough, Cockle Island, Larne Lough and Strangford Lough) more than halved from 2019 levels due to losses at Larne and Belfast Loughs (Table 6, Appendix). This decline was thought to be genuine rather than due to the impact of COVID-19 restrictions on surveys since tern monitoring was not affected.

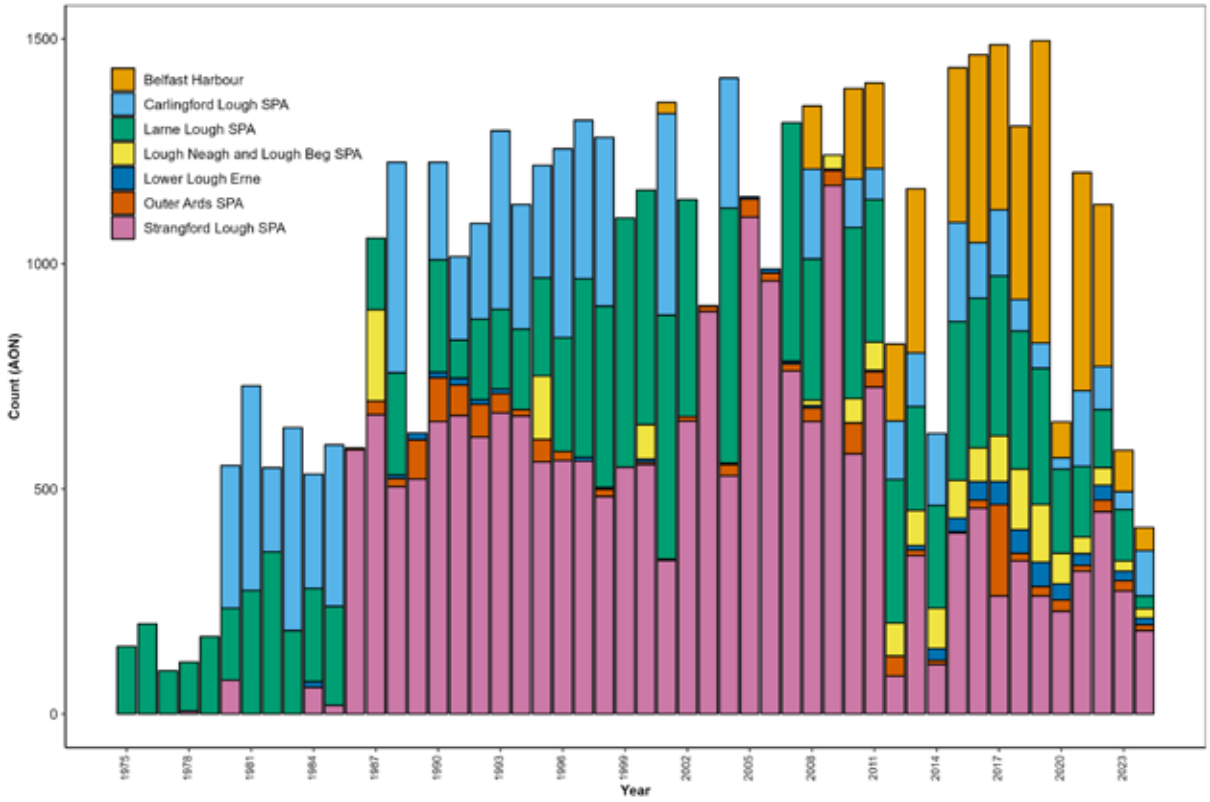
At Belfast Lough, only 51 AON were present in 2024, a 40% reduction since 2023 when 92 AON were counted. There has been a significant reduction at Belfast Lough since numbers peaked at 672 AON in 2019. There was a 75% reduction in breeding numbers at Larne Lough with only 28 AON present in 2024, compared to 114 AON in 2023.

Numbers on Strangford Lough appear to be down, with 179 AON counted plus an additional 81 'commic' tern AON (Hugh Thurgate, pers. comm.) and a further six Common Tern AON at Castle Espie in 2024. This

compares to an overall count on Strangford Lough of 273 AON in 2023. On Cockle Island, there were 13 AON in 2024, compared to 23 AON in 2023. 101 AON were counted on Green Island in Carlingford Lough, which is 153% increase on the 40 AON counted in 2023.

Common Terns can also be found breeding inland, and 21 AON were recorded at Portmore Lough RSPB reserve in 2024, slightly down on the 23 AON counted in 2023. At Lower Lough Erne, 15 AON were recorded in 2024, compared to 21 AON in 2023. At Moorlough Lake, Co. Fermanagh, six AON were counted in 2024, compared to three AON in 2023. Birds were recorded at two locations on Lough Neagh in June 2024, with a total of 186 individuals counted, compared to a maximum count of 220 individuals in 2022.

Figure 24: Cumulative Common Tern numbers (AON) at the coastal colonies of Belfast Harbour, Carlingford Lough SPA (count of 'commic' terns not included for 2022), Larne Lough SPA, Lough Neagh and Beg SPA, Lower Lough Erne, Outer Ards SPA, and Strangford Lough SPA, 1975–2024. The total bar height represents the number of Common Tern pairs per year, and the colour represents the number in each site.



Breeding success in 2024

While not all are surveyed every year, 10 sites have received some monitoring effort since 1999, and the overall picture is of a low and declining breeding success (Figure 25).

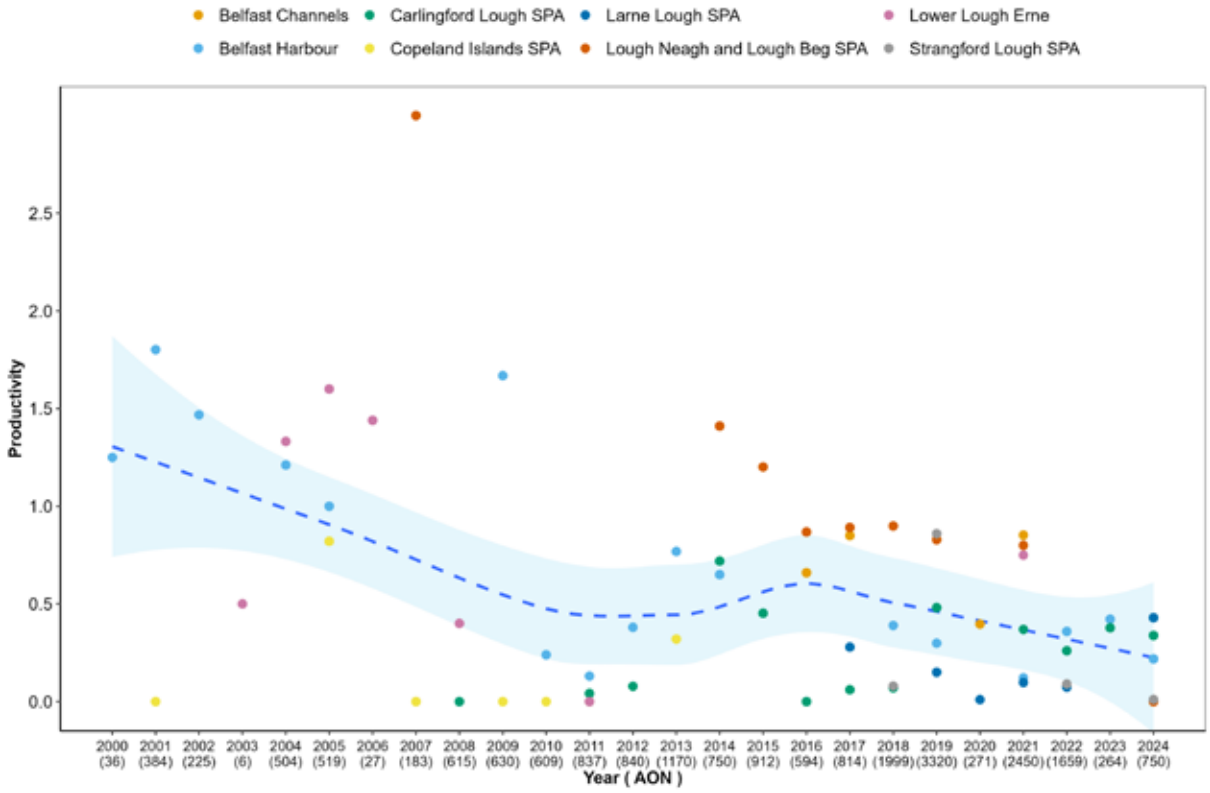
Five sites were monitored for breeding success in 2024, with an average of 0.22 chicks fledged per AON, which was similar overall to 2023 (0.27) and 2022 (0.23 chicks/AON), but lower than the average between 2000 and 2022 across all sites (0.58 chicks/AON, 95% CI: 0.42–0.74).

In 2024, colonies at Belfast Lough RSPB continued to have a low productivity of only 0.22 chicks fledged per AON (n=46 AON). This is lower than the 0.42 chicks fledged per AON recorded in 2023. Low productivity in 2024 was due to predation by Lesser Black-backed Gulls (Aoife de Bhál, pers. comm.). On Strangford Lough, there was very low productivity again of only 0.01 chicks fledged per AON in 2024 (n=179 AON). For more details, refer to the Strangford Lough Seabird Report on page 82 and Strangford Lough breeding tern report on page 88). This compares with 0.09 chicks fledged per AON in 2023. At Castle Espie, an average of one chick fledged per AON from six AON late in the breeding season after failing earlier (Maurice Turley, pers. comm.).

At Larne Lough, productivity was 0.52 chicks fledged per AON in 2024 (n=23 AON), which is a significant improvement on 2022 when only 0.02 chicks fledged per AON (n=129 AON). At Portmore Lough, there was zero productivity in 2024 from 21 AON, in contrast to 2021 when this colony had a relatively high breeding

success of 0.80 chicks fledged per AON (RSPB). The complete failure at Portmore in 2024 was due to the tern raft fencing being breached by American Mink at the start of July, and the rafts abandoned a couple of days later. Breeding terns were nesting much later than usual and were still on eggs at the time, whereas Black-headed Gulls were almost finished breeding and were largely unaffected (Laura Smith, pers. comm.). Finally, Green Island in Carlingford Lough had a productivity of 0.34 chicks fledged per AON in 2024, similar to 2023 when 0.38 chicks fledged per AON.

Figure 25: Common Tern productivity (chicks/AON) 2000–2024 across eight sites in Northern Ireland. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Common Tern productivity between 2000 and 2024 include: Larne Lough, Copeland Islands, Lower Lough Erne, Strangford Lough, and Portmore Lough, among others. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Roseate Tern

Sterna dougallii

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Red-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – listed in Annex 1 and as a migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Roseate Tern, by Tom Cadwallender / BTO

Overview

Synopsis: Roseate Terns are whiter than the Common Tern and sometimes have a pinkish tinge, likely obtained from the carotenoid Astaxanthin found in their diet (Hays *et al.* 2006). Roseate Terns were nearly hunted to extinction for the millinery trade in the 19th century, and although they did recover in numbers during the 20th century, they are now the most range-restricted tern species in the UK with breeding occurring at only a few colonies (Burnell *et al.* 2023).

UK population size, abundance and breeding success trends: In the Seabird 2000 (1998–2002) census only 56 AON were recorded, a decline of 83% from the previous census (Mitchell *et al.* 2004). However, the population is now showing some early signs of recovery and in 2018 there were 120 AON reported (Eaton *et al.* 2020). The Seabirds Count census (2015–2021) showed that the Britain and Ireland population of Roseate Tern increased by 152% since Seabird 2000 to 1,989 AON. The stronghold for the species within Britain and Ireland is now in the east of the Republic of Ireland at Rockabill Island and Lady's Island Lake (Burnell *et al.* 2023).

In Scotland, the main colony at the Firth of Forth appears to have been largely extirpated, partly due to competition for nesting sites with gulls, and now only single pairs appear in mixed tern colonies in Scotland (JNCC 2021). The only colony in England, on Coquet Island, has had greater success, increasing during the last decade from under 40 AON to over 100 AON (Harris *et al.* 2024). It may have benefited from emigration from other sites, as well as the provision of nest sites and protection from predators (JNCC 2021). However, this colony was impacted by HPAI outbreak and this led to an overall reduction in the UK population by 21% between Seabirds Count and 2023 (Tremlett *et al.* 2025). Declines in Roseate Terns in Wales may have been due to emigration to more suitable breeding sites in the Republic of Ireland, and only a single pair was recorded to have nested in 2018 (Eaton *et al.* 2020). The SMP long-term breeding abundance indices shows a 63% decline between 1986 and 2023 (Harris *et al.* 2024)

The UK productivity trend for Roseate Tern has fluctuated across the SMP monitoring period, but with a gradual overall increase until recent years, partly due to effective conservation management. Since 2000, productivity has varied between approximately 0.40 and 0.80 chicks per pair per year (Harris *et al.* 2024). However, 2022 saw a decline in productivity to a value of 0.30 chicks fledged per pair due to HPAI on Coquet Island, which caused high mortality of chicks and adults. HPAI was also present in the colony in 2023, therefore no productivity data were submitted to the SMP (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Historically Mew Island in the Copeland Group was one of the major sites for Roseate Tern in Ireland (Thompson 1851). However, the species ceased to breed in Northern Ireland around 1880 before apparently re-colonising in the first quarter of the 20th century (Deane 1954) and good numbers were again breeding on Mew by 1941 (Williamson *et al.* 1941) before rapidly decreasing to extinction on the island in the 1950s. Carlingford Lough formerly held a population of up to 40 AON in 1987. There was also a breeding colony on Strangford Lough up until the 1980s (Bob Brown, pers. comm). Numbers of Roseate Terns were also highest in the late 1980s on Larne Lough, but it has clung on as a breeding species there since, albeit in very small numbers. Between the 1985–1988 and the 1998–2002 censuses, the number of Roseate Terns in Northern Ireland declined by 94% from 62 to four AON (Mitchell *et al.* 2004).

Only a single pair of Roseate Terns has nested in Northern Ireland in recent years, including during the most recent Seabirds Count census (Burnell *et al.* 2023). The species productivity in Northern Ireland between 1991 and 2019 was 0.68 chicks fledged per pair per year (JNCC 2021).

Abundance in 2024

It is disappointing to report that no Roseate Tern bred at Larne Lough in 2024. There was a single pair in 2023 (Table 6, Appendix).

Breeding success in 2024

The last successful breeding was a pair at Larne Lough in 2022 that fledged one chick (RSPB, pers. comm.).

Arctic Tern

Sterna paradisaea

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Red-listed in the BoCC5 Seabird Addendum (2023), EC Birds Directive – listed in Annex 1 and as a migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021).

Arctic Tern, by Sam Langlois / BTO

Overview

Synopsis: Similar in appearance to the Common Tern, but with a longer tail and without any black on the beak, the Arctic Tern is the commonest tern species in the UK. However, due to its more northerly distribution, it is less familiar to many than the Common Tern (JNCC 2021).

UK population size, abundance and breeding success trends: The UK population has fluctuated greatly since the 1960s. There was an apparent 50% increase in numbers between the 1969–1970 and 1985–1988 censuses, though there is uncertainty as to the true magnitude of this change due to questions of compatibility of methods between censuses. The Seabird 2000 census (1998–2002), estimated the population to be 53,380 AON, a decrease of 31% since 1985–1988 (Mitchell *et al.* 2004). The Seabirds Count census (2015–2021) shows that the Arctic Tern population in the UK has declined by 37% since Seabird 2000 to 30,451 AON (Burnell *et al.* 2023). Annual SMP data indicated a breeding abundance change of 12% below than the 1986 baseline in 2023 (Harris *et al.* 2024).

Arctic Terns suffer the lowest breeding success of any seabird species in the UK, remaining below 0.30 chicks per pair in most years, potentially linked to prey shortages, extreme weather, and predation (Harris *et al.* 2024). The most recent data in 2023, for the UK, was 0.11 chicks fledged per AON (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: In Northern Ireland the species is concentrated into just a few colonies including the Copeland Islands, Strangford Lough, Belfast Harbour, Cockle Island, Outer Ards (Bird Island), and Carlingford Lough (Green Island). The population grew in the intervals between the previous censuses, rising by 257% between 1969–1970 and 1985–1988, and again by 78% to 767 AON by Seabird 2000 (Mitchell *et al.* 2004). There was a slight increase in numbers to 800 AON by Seabirds Count (Burnell *et al.,* 2023).

Between 1991 and 2019, Arctic Tern breeding success in Northern Ireland was similar to that elsewhere in the UK, producing an average of 0.30 chicks per pair per year (JNCC 2021).

Abundance in 2024

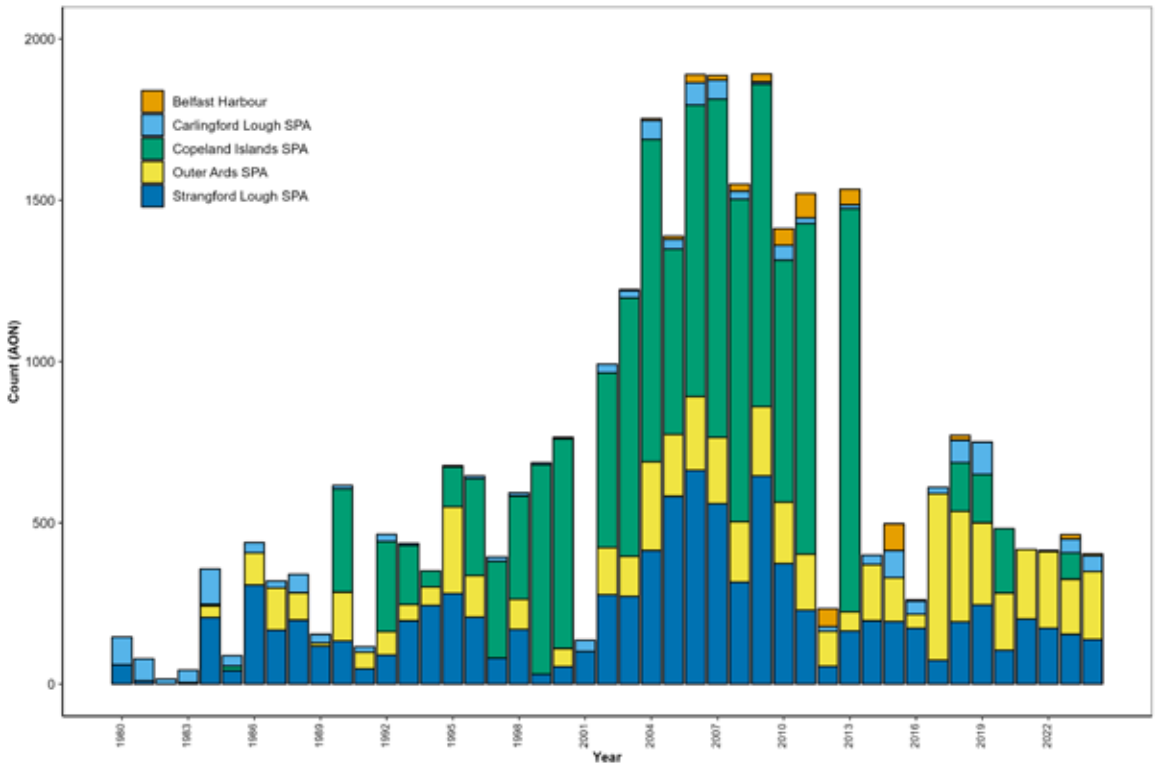
Colonies of Arctic Terns around Northern Ireland are highly variable in their size year-to-year (Figure 26). In the last 25 years, the Copeland Islands and Strangford Lough have held the majority of breeding Arctic Terns in Northern Ireland. The colony at the Copeland Islands fluctuated between 600 and 1,250 AON between 2000 and 2013, but no full survey has taken place on all three islands since 2013 and it is thought that the breeding terns of the islands have largely moved elsewhere. During rare access to Big Copeland, approximately 200 Arctic Tern AON were estimated to be present in 2020 (Gareth Platt, pers. comm.), more than the estimate for the previous year (75 AON, Table 6, Appendix). In 2019, 150 individuals were present on Lighthouse Island, Copelands, and these experienced a complete breeding failure potentially due to high levels of predation from Jackdaws, *Corvus monedula* (Chris Acheson and David Galbraith, Copeland Bird Observatory, pers. comm.). No Arctic Terns nested on Lighthouse Island in 2021 (Katherine Booth Jones, Copeland Bird Observatory, pers. obs.). In 2023, an estimated 82 AON were present on the Copeland Islands (Table 6, Appendix). In 2024, 51 AON nested but there was a complete failure mainly due to a combination of Eurasian Otter and large gull predation (Steven Fyffe, pers. comm.).

Numbers present at Strangford Lough have declined in the past decade, falling from a high of 663 AON in 2006 (Figure 26). Numbers on the seven Strangford Lough island colonies declined further in 2024 to 138 AON, down from 154 AON in 2023 (Table 6, Appendix). However, there were an additional 81 'commic' tern AON counted in 2024 (Hugh Thurgate, pers. comm.).

Although numbers of Arctic Terns were between 48 and 83 AON in Belfast Lough RSPB between 2010 and 2015, they have been much scarcer since, with no breeding pairs in 2020 or 2021 and only three AON in 2022. In 2023, the number of Arctic Terns at Belfast Lough increased to 13 AON, but subsequently declined to six AON in 2024 (Table 6, Appendix). The colony on Cockle Island, Outer Ards has been particularly variable and has decreased from 216 AON in 2021 to only 70 AON in 2024. However, elsewhere on the Outer Ards, 115 AON were counted on Bird Island and 26 AON on Green Island in 2024. Both of these islands intermittently hold breeding Arctic Tern, with the peak count in the past decade being 248 AON on Green Island and 140 AON on Bird Island in 2017.

Forty-nine Arctic Tern AON were counted at Carlingford Lough in 2024, compared to 43 AON in 2023. No Arctic Tern bred on Larne Lough again in 2024, the last time being one AON in 2015.

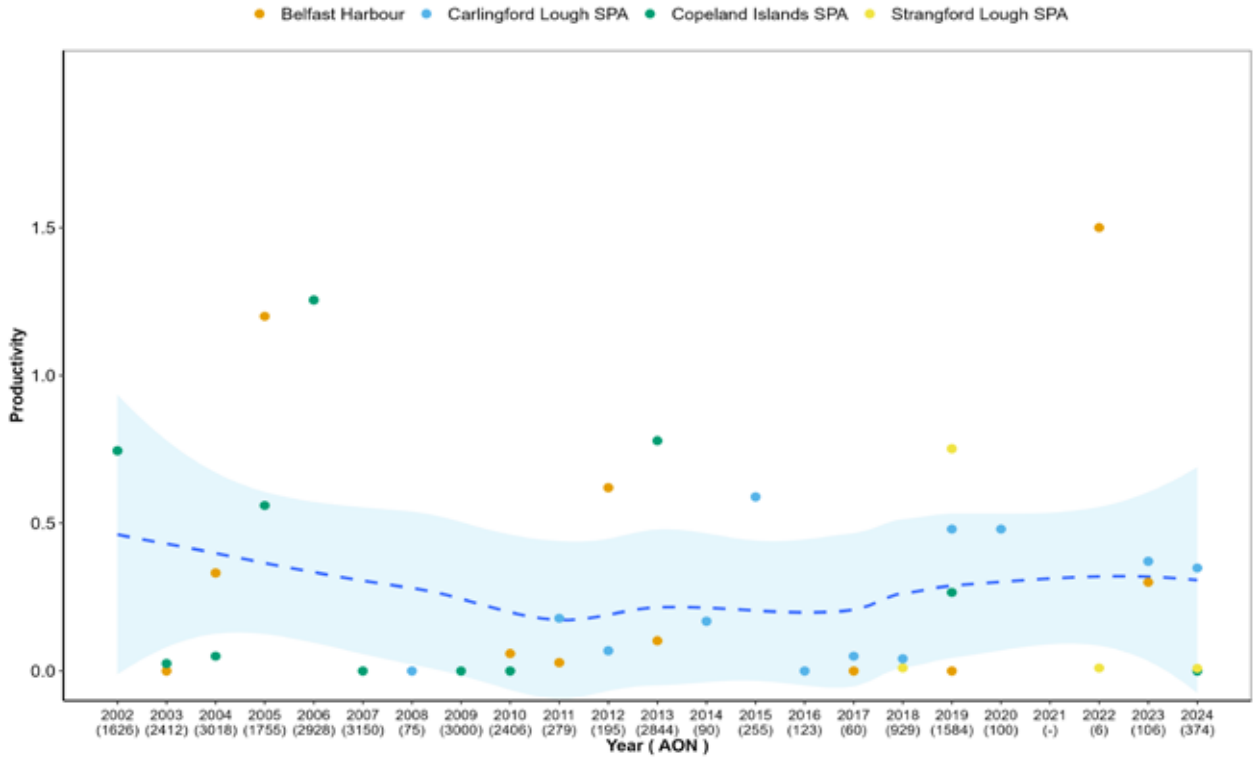
Figure 26: Cumulative Arctic Tern counts (AON) at Belfast Harbour, Carlingford Lough SPA, the Copeland Islands SPA, Outer Ards SPA, and Strangford Lough SPA 1980–2024. Arctic Terns were not counted at Carlingford Lough in 2020 or 2021, and counts of 'commic' terns in 2022 were also not included. The Copeland Islands consist of a group of three islands that have not been fully surveyed since 2013 and contain estimated numbers. The area filled represents the number of Arctic Tern pairs per year, and the colour represents the number in each site.



Breeding success in 2024

Eight sites have received some productivity monitoring effort since 1990, but few of these are regularly monitored. The last productivity data available for Larne Lough were collected in 1990 (zero fledged from four AON) and from Cockle Island in 1996 (50 fledged from 120 AON). In 2024, Strangford Lough, Carlingford Lough and the Belfast Lough RSPB reserve were monitored for productivity. At Belfast Lough, there was zero productivity in 2024 due to an increase in predation by Lesser Black-backed Gulls (Aoife de Bhál, pers. comm.). This compares with 0.30 chicks fledged per AON in 2023 (n=13 AON). Monitoring of Arctic Tern in Strangford Lough found a near-complete breeding failure, with only approximately 0.01 chicks fledged per AON, compared to 0.09 chicks fledged per AON in 2023. For more information, refer to the Strangford Lough Seabird Report on page 82 and Strangford Lough Breeding Tern Report on page 88). Green Island in Carlingford Lough had a productivity of 0.35 chicks fledged per AON in 2024 (n=49 AON), a similar figure to 2023 when 0.37 chicks fledged per AON.

Figure 27: Arctic Tern productivity (chicks/AON) 2002–2024 across four sites in Northern Ireland. No data were available for 2021. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Arctic Tern productivity between 2002 and 2024 include: Belfast Lough Copeland Islands, Strangford Lough, and Carlingford Lough. The total number of AON monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Guillemot

Uria aalge

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021).

Guillemot, by Philip Croft / BTO

Overview

Synopsis: The Guillemot is one of the most abundant seabirds in the northern hemisphere. Guillemots are extremely gregarious and colonies can contain many tens of thousands of individuals, and these very large populations occur both in the Atlantic and Pacific Oceans (Burnell *et al.* 2023).

UK population size, abundance and breeding success trends: The most recent Seabirds Count census (2015–2021) shows that the UK population of Guillemot has declined by 11% to 1,265,888 individuals (Burnell *et al.* 2023). Seabird 2000 showed a large population increase compared to the previous survey, although some of this may have been due to better coverage and survey methods (Mitchell *et al.* 2004). Between the 1969–1970 and 1998–2002 censuses, the numbers of individuals recorded rose from 611,281 to 1,416,334 (Mitchell *et al.* 2004). Annual SMP data indicated breeding abundance change was 23% above the 1986 baseline in 2023, although it was noted that that figure should be treated with caution as the large number of smaller colonies included in the sample were likely to have had a disproportionate influence on the index (Harris *et al.* 2024).

The average breeding success of Guillemots in the UK between 1986 and 2002 was approximately 0.70 chicks per pair, but subsequently declined steeply until 2007. Recent years have seen a recovery in breeding success and in 2019, UK productivity was 0.62 chicks fledged per pair (JNCC 2021). The most recent data was 0.37 chicks fledged per AON in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: In Northern Ireland the main colony is on Rathlin Island with smaller satellites at The Gobbins, Muck Island and at scattered cliff faces between Ballycastle and Portrush. Between the 1969–1970 and 1985–1988 censuses, the numbers of Guillemot appeared to remain stable, but had more than doubled to 98,546 individuals by Seabird 2000 (JNCC 2021). Following a 50% decrease between 1999 and 2007, numbers of Guillemots rose by 60% to 130,445 individuals in 2011 on Rathlin Island (Allen *et al.* 2011). This made Rathlin Island the largest colony in the UK and Ireland. Seabirds Count found a total of 155,890 individuals in Northern Ireland, a 57% increase since Seabird 2000 (Burnell *et al.* 2023).

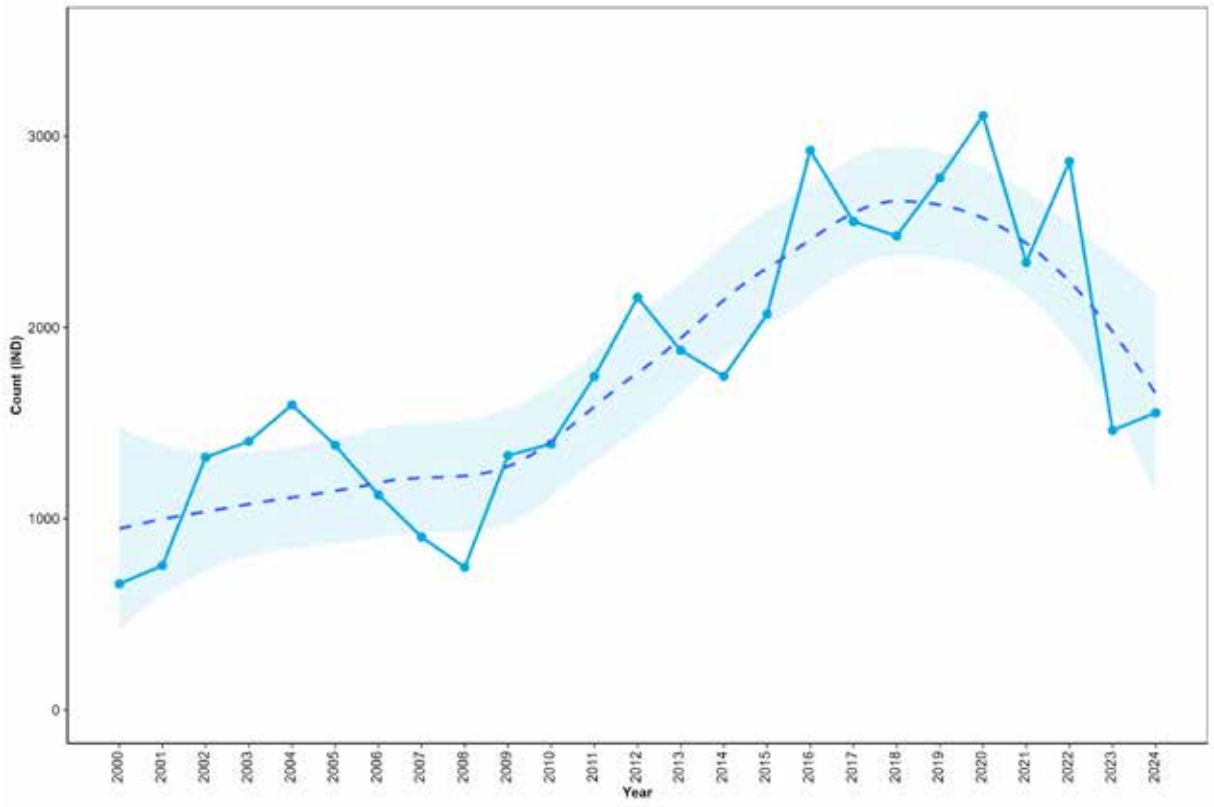
The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

Abundance in 2024

On Rathlin Island, the RSPB carry out annual comparative counts of study plots to monitor population levels. 584 individual Guillemots were counted in the north cliffs study plot in 2024, compared to 630 in 2023 and 691 in 2022. A full census of Rathlin Island was carried out for MarPAMM in 2021 and found a total of 149,510 individuals, which was an increase of 13% on the last census in 2011. A further census of Rathlin Island was undertaken by RSPB in 2023 to monitor the impact of HPAI on the colony and it found that numbers had declined by 19% since 2021, with 110,574 individuals counted. This census also attempted to estimate 'hidden' birds, and taking into account them, the decline may have been as much as 24% with a total of 113,504 individuals counted (Mackley *et al.* 2023). Along the North Antrim coast between Runkerry and Murlough, Guillemots increased by 57% to 981 individuals in 2021 since Seabird 2000 (Booth Jones *et al.* 2022a).

Numbers of Guillemot at Muck Island, which has received continuous monitoring for this species since 2000, increased by 6% between 2023 and 2024 to 1,554 individuals. This colony has had a generally positive trend in numbers since 2000, but the 2024 figure is well below the recent peak of 3,107 individuals recorded in 2020 (Figure 28). While no surveying was carried out on The Gobbins in 2020 or 2021, in past years the trend at this neighbouring site has generally matched that seen on Muck Island (Table 6, Appendix).

Figure 28: Guillemot counts (individuals) at Muck Island, 2000–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Guillemot numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2024

No breeding success data have been collected for Guillemot since 2019, when a sample of 29 nests was monitored on Rathlin Island near the West Light, producing 19 'jumplings' (0.66 chicks per AON; Else & Watson, 2019).

Razorbill

Alca torda

Conservation status: Red-listed in the BoCCI4 (2020–2026), Amber-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Razorbill, by Dakota Reid / BTO

Overview

Synopsis: The Razorbill is an auk of the North Atlantic and Arctic Ocean, breeding on both sides of the Atlantic. Razorbills nest on ledges with Guillemots and Kittiwakes, but also frequently in clefts, holes and under boulders.

UK population size, abundance and breeding success trends: Razorbill populations have shown successive increases between the national censuses, though the population of 132,734 individuals recorded at the time of the first census in 1969–1970 may have been underestimated because the small ledges they nest on can often be hidden from view, making them difficult to count (Mitchell *et al.* 2004). By Seabird 2000 (1998–2002), the estimated population size was 187,052 individuals, a 21% increase on the previous 1985–1988 census. The most recent census Seabirds Count (2015–2021) confirms that the Razorbill UK population is still increasing and a total of 225,015 individuals was counted (Burnell *et al.* 2023). The UK breeding abundance index was 121% above the 1986 baseline in 2023 (Harris *et al.* 2024).

UK productivity was stable from 1986 to 2001 but declined to 0.38 chick/pair in 2008. Productivity had then been increasing up to an average of 0.63 chicks fledged per pair in 2019, however the most recent data was 0.51 chicks fledged per pair in 2023 (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Between the 1969–1970 and 1985–1988 censuses, the numbers of Razorbills increased by 58%, and had more than doubled to 24,084 individuals by Seabird 2000 (Mitchell *et al.* 2004). Seabirds Count found that the population was stable at 24,730 individuals since the last census in 1998–2002 (Burnell *et al.* 2023). In Northern Ireland the main colony is on Rathlin Island with smaller satellites at The Gobbins, Muck Island and at scattered cliff faces between Ballycastle and Portrush. The 2011 survey of Rathlin Island recorded 22,975 individuals (Allen *et al.* 2011), when it was the second largest colony of Razorbills in the UK at the time (JNCC 2021). During Seabirds Count, Rathlin Island was the third largest Razorbill colony in the UK (Burnell *et al.* 2023). Razorbills have been upgraded from Amber-listed to Red-listed in the latest BoCCI due to their changed European status (Gilbert *et al.* 2021).

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

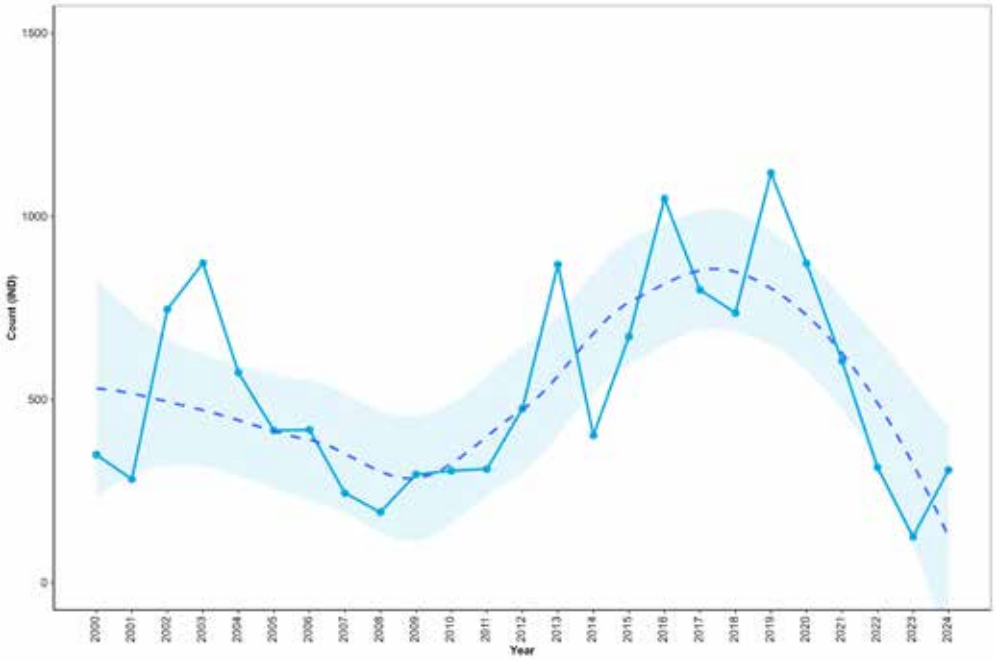
Abundance in 2024

In 2024, 149 individual Razorbills were recorded in the Rathlin Island RSPB reserve's north cliffs study plot, compared to 136 in 2023 and 130 in 2022. A full census of Rathlin Island and of the North Antrim coastline between Runkerry and Murlough occurred as part of the MarPAMM project in 2021 (Booth Jones *et al.* 2022b). These surveys found that Razorbills increased very slightly (by 7%) on Rathlin Island to 22,421 individuals since the 1998–2002 census, but in contrast on the North Antrim coast stretch they declined by 70% to 582 individuals.

The number of Razorbills was at the highest level ever recorded on Muck Island in 2019 at 1,118 individuals. Since then it has fallen, with only 125 individuals recorded in 2023, the lowest count on record since annual monitoring commenced in 2000. In 2024, 307 individuals were counted, which was a 60% increase on the 2023 figure. However, it should be noted that numbers of Razorbills in attendance at the colony can be subject to large

fluctuations, as in some years, many birds may not breed. Numbers at the neighbouring colony at The Gobbins decreased by 23% between 2018 and 2019, to 679 individuals (Table 6, Appendix), but no counts have been carried out since.

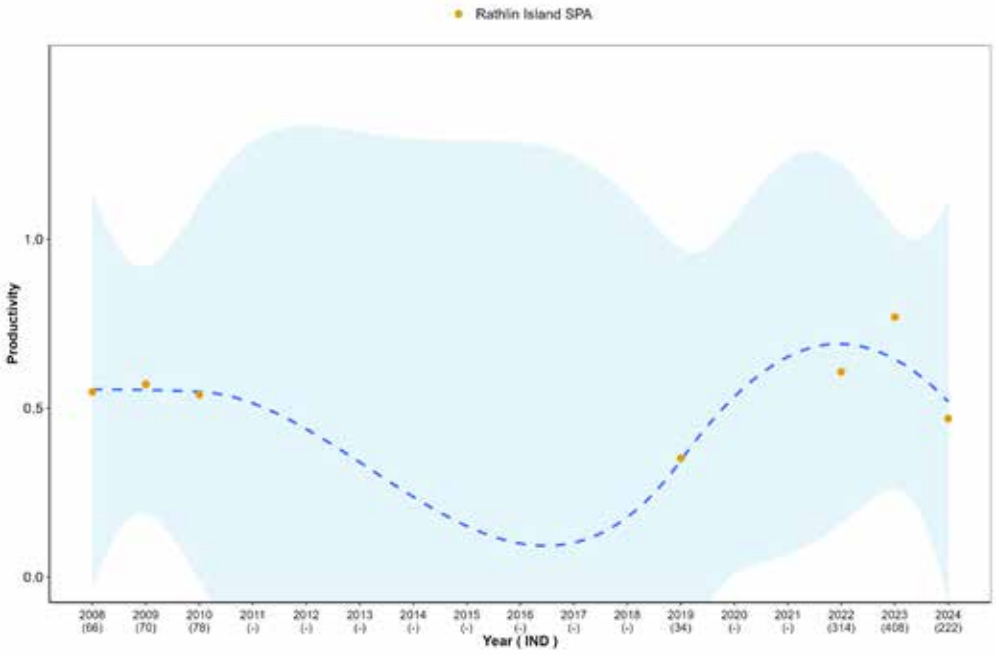
Figure 29: Razorbill counts (individuals) at Muck Island 2000–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Razorbill numbers over time at Muck Island. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2024

The RSPB LIFE Raft project recorded productivity of 0.47 chicks per AOS in 2024, which is lower than the previous two years (0.61 in 2022 and 0.77 in 2023). The cause of this is not known, although bad weather in early July, when many of these failures occurred, could have been a factor (Else *et al.* 2024). In 2019 a sample of 17 AOS (not a formal SMP plot) were monitored on Rathlin Island near the West Light, producing six successful fledglings (0.35 chicks per AOS) (Else & Watson 2019).

Figure 30: Productivity (chicks/AOS) for Razorbill 2008–2024 across the Rathlin Island SPA. Data were only available for 2008 to 2010, 2019, 2022 to 2024. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. The total number of AOS monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Black Guillemot

Cepphus grylle

Conservation status: Amber-listed in the BoCCI4 (2020–2026), Green–listed in the BoCC5 Seabird Addendum (2024), Least Concern – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Black Guillemots, by Daniel Johnston / BTO

Overview

Synopsis: The striking Black Guillemot (or Tystie) is a circumpolar auk which in the UK has historically been a predominantly Scottish species. They can be found around rocky shores and nest in natural or artificial crevices, making records of breeding pairs difficult. When Black Guillemots carry fish in their bills the way the fish point suggest that some individuals are right-handed, whilst some are left-handed (Ewins 1988).

UK population size, abundance and breeding success trends: There was insufficient coverage in the 1969–1970 census to create a robust population estimate for Black Guillemot. Numbers appeared to remain stable between the 1985–1988 census (37,745 individuals) and Seabird 2000 (38,714 individuals) (Mitchell *et al.* 2004). The Seabirds Count census (2015–2021) showed that the UK population of Black Guillemot declined by 11% since Seabird 2000 to 35,193 individuals (Burnell *et al.* 2023). The SMP abundance index for Black Guillemot shows the UK population at 21% below the 1986 baseline (Harris *et al.* 2024).

There was no statistically significant trend in Black Guillemot productivity at study sites (restricted to Orkney and Co. Down), which was on average 1.05 chicks per pair between 1986 and 2018 (JNCC 2021). An insufficient number of Black Guillemot colonies are monitored frequently enough to allow for calculation of productivity values for the UK or any region (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Between the censuses in 1969–1970 and 1985–1988 Black Guillemots expanded their range in the Irish Sea, adopting the use of artificial structures such as harbour walls and jetties as nest sites. This is likely to have contributed to the 120% increase in Black Guillemots between the 1985–1988 and 1998–2002 censuses, to 1,174 individuals (Mitchell *et al.* 2004). Seabirds Count found that the population was stable at 1,166 individuals (Burnell *et al.* 2023).

The breeding success of Black Guillemots in Northern Ireland is mostly monitored through a study colony in Bangor, Co. Down (Greenwood 2010, Leonard & Wolsey 2014). On average between 1986 and 2018 productivity was 0.98 chicks per nest (JNCC 2021).

Abundance in 2024

Monitoring effort for Black Guillemots was once again exceptional in 2024 (Table 6, Appendix), with 38 sub-sites surveyed predominantly by volunteers. A total of 1,280 Black Guillemots was counted around the coast in 2024, with the greatest concentrations found at Carrickfergus to Whitehead (179 individuals), Rathlin Island (307 individuals) and Larne Lough (114 individuals). The 2024 count for Rathlin Island was a new record count (RSPB LIFE Raft project), although this may be due to increased coverage (Ric Else, pers. comm.). Numbers at Carrickfergus to Whitehead increased by 17% compared to 2023, while Larne Lough showed an increase of 6% since 2023 (Table 6, Appendix).

A full survey of Belfast Harbour found 115 individuals in 2023, the second highest count since 2015.

Notably, a survey of The Skerries in 2021 observed that there were 54 individuals late in the season (June). While this is too late to get a good indication of the true number of breeders, it is a colony that has not been counted for the SMP in the past. This colony requires a boat to survey, and therefore has not been monitored since then.

Increases and decreases around the Northern Irish coastline do not appear to have a spatial pattern and therefore may be due to stochastic effects; overall total numbers counted between 2021 and 2024 appear to be fairly stable.

Breeding success in 2024

In 2024, on Lighthouse Island (Copelands), three chicks fledged from three breeding pairs (Steven Fyffe, Copeland Bird Observatory). No other sites were monitored for Black Guillemot breeding success in 2024.

Only Annalong was monitored for breeding success in 2022, surveys recording 10 chicks from 21 AOS (0.48 chicks per breeding pair, Marc Vinas and Jessica Koquert pers. comm.). The breeding success of this colony has been consistent between the years it has been monitored (2020, 0.50 chicks per breeding pair; 2021, 0.48 chicks per breeding pair), even though fewer nesting crevices were available to the 2022 colony due to ongoing harbour works. It is likely that sensitive installation of nest boxes such as those deployed in Bangor Marina would benefit the Annalong colony and provide alternative nesting areas to crevices blocked during the development of the harbour.

On Lighthouse Island in 2021, 24 AOS were followed to chick stage out of the total of 27 AOS. Although the ultimate fate of all of the chicks could not be monitored, 19 chicks were presumed to have fledged, giving an estimated productivity of 0.79 chicks per nest (Daniel Johnston/Katherine Booth Jones, BTO, and the Copeland Bird Observatory).

Figure 31: Black Guillemot counts (individuals) at Rathlin Island 2014–2024. No counts were made in 2022. The dashed line represents the Locally Weighted Least Squares Regression trend in Black Guillemot numbers over time. The shaded region represents the 95% confidence interval around the trend.

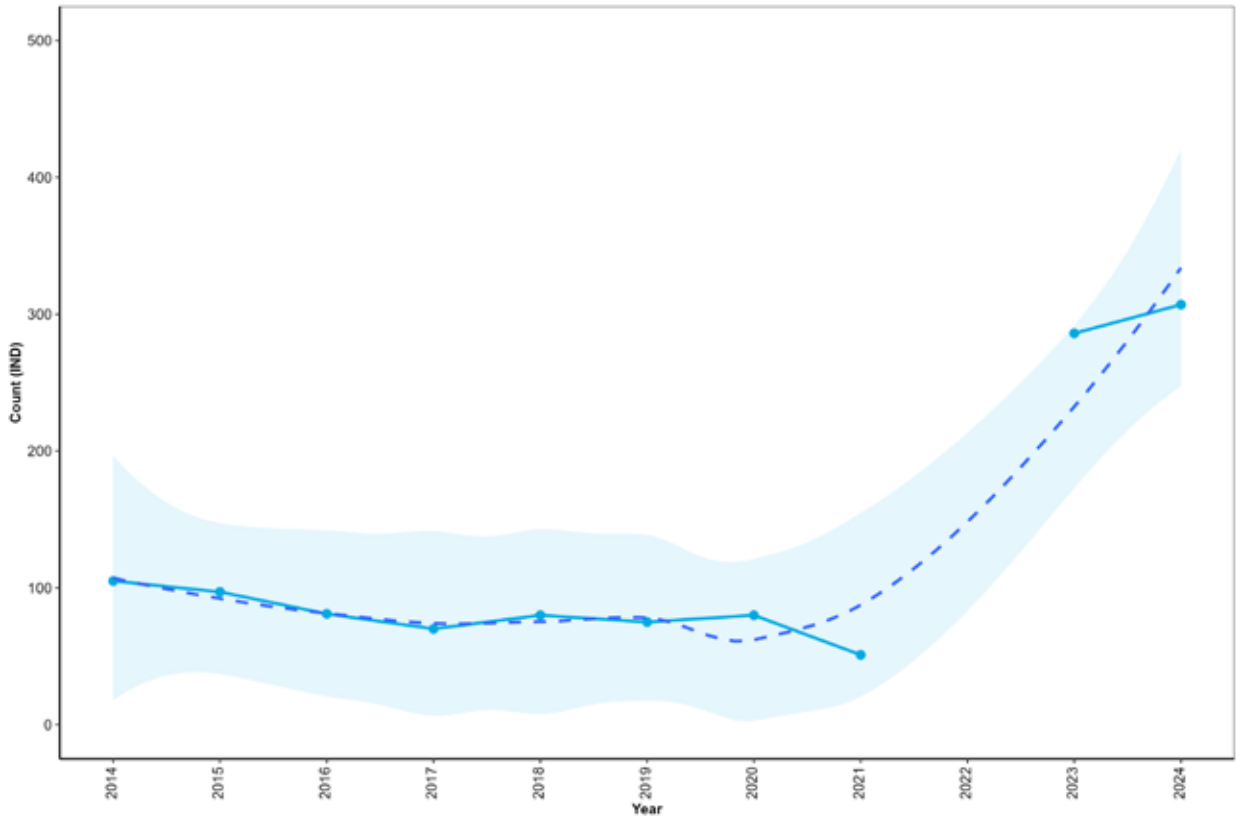
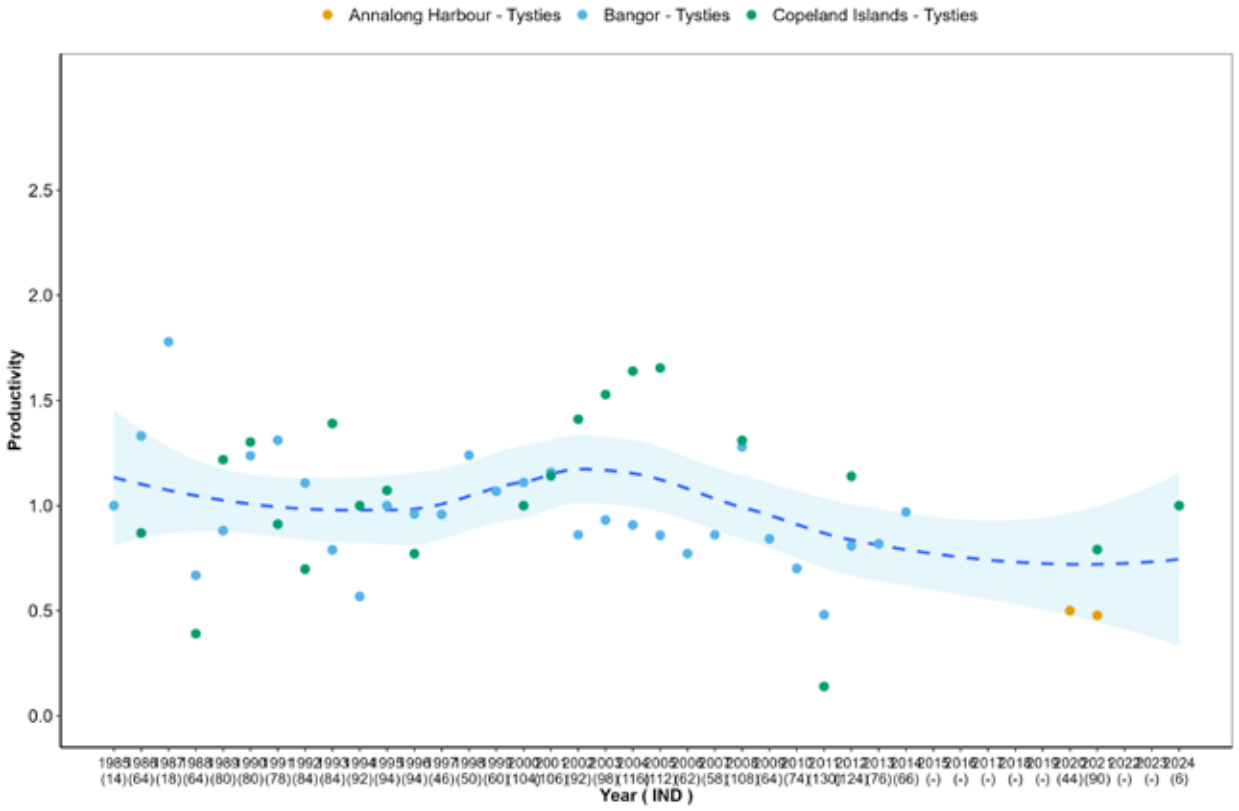


Figure 32: Productivity (chicks/AOS) for Black Guillemot 1985–2024 at three sites across Northern Ireland. No data were available for 2015 to 2019, 2022, or 2023. The dashed line represents the Locally Weighted Least Squares Regression trend in productivity over time. The shaded region represents the 95% confidence interval around the trend. Sites measured for Black Guillemot productivity between 1985 and 2024 include: Annalong Harbour, the Copeland Islands, and Bangor Marina. The total number of AOS monitored per year is included in brackets under the year, with unknown numbers denoted by a hyphen (-).



Puffin

Fratercula arctica

Conservation status: Red-listed in the BoCCI4 (2020–2026), Red-listed in the BoCC5 Seabird Addendum (2024), EC Birds Directive – migratory species, Endangered – IUCN Red List Europe (BirdLife International 2021), Northern Ireland Priority Species (DAERA 2023).

Puffin, by Sam Langlois / BTO

Overview

Synopsis: The Puffin is the most iconic and well-loved of all North Atlantic seabirds. This is a secretive bird on land, nesting in burrows, and until recently relatively little was known about its pelagic lifestyle. The colourful beaks have been recorded carrying up to 83 small fish in one go (Robinson 2005).

UK population size, abundance and breeding success trends: Around 8% of the global Puffin population breeds in Britain and Ireland, where it is the second most abundant breeding seabird (Burnell *et al.* 2023). The UK Puffin population increased by 13% between the 1969–1970 and 1985–1988 censuses, and by a further 19% to 580,714 AOB by Seabird 2000 (Mitchell *et al.* 2004). The most recent census Seabirds Count (2015–2021) showed that the UK population had declined by 14% to 474,679 individuals (Burnell *et al.* 2023). Too few Puffin colonies are monitored in Britain and Ireland to enable the production of valid annual breeding abundance trends for any region, due to the logistical and financial challenges involved in monitoring this burrow-nesting species (Harris *et al.* 2024).

Productivity values for the UK have fluctuated between years over the SMP recording period. The trend declined from the mid 1990s to a low in 2007, following which they increased overall until 2021. More recently in 2023, average breeding success was 0.48 chicks per pair (Harris *et al.* 2024).

Northern Ireland population size, abundance and breeding success trends: Although there was an apparent increase of 86% in Puffin AOB between the 1969–1970 and 1985–1988 censuses, Puffins had declined by 40% to 1,610 AOB by Seabird 2000 (Mitchell *et al.* 2004). The population was estimated to be only 574 AOB during Seabirds Count, which represents a 64% decline since Seabird 2000 (Burnell *et al.* 2023). Due to their changed European status, Puffins have been upgraded from Amber-listed to Red-listed in the latest BoCCI report (Gilbert *et al.* 2021). The main colony in Northern Ireland is on Rathlin Island and it holds approximately 98% of the Northern Irish population. Small numbers also breed at The Gobbins and some are occasionally seen at Muck Island although breeding has not been confirmed. A conservation project on the Copeland Islands, using decoys and sound lures to attract birds, has resulted in a new colony with breeding confirmed in 2015 (Wolsey & Smyth 2017). This was a tremendous achievement and hopefully the start of a viable colony, proof that the use of sound lures and decoys can work for this species without the need for translocations.

The collection of productivity data in Northern Ireland has been limited; therefore productivity estimates cannot be modelled at the regional level (Harris *et al.* 2024).

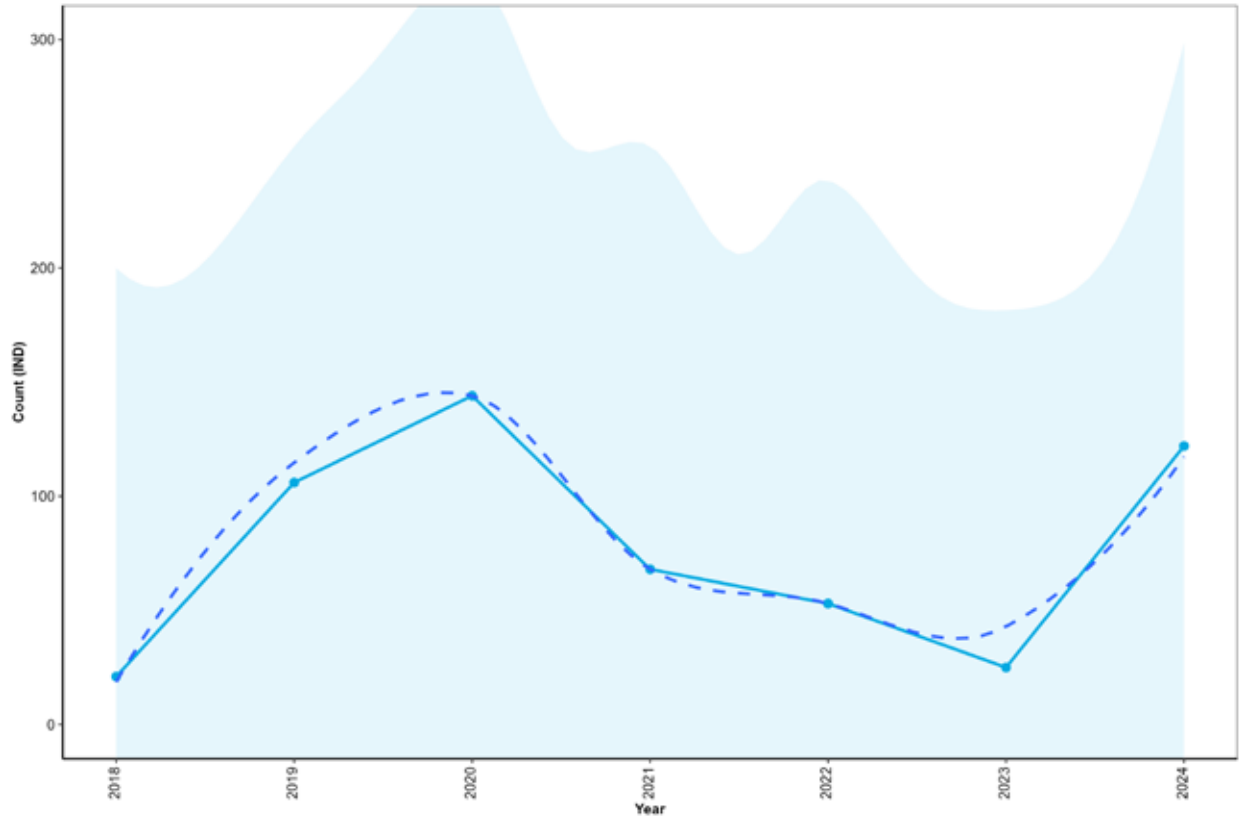
Abundance in 2024

The full census of Rathlin Island for MarPAMM in 2021 revealed a count of 407 individuals, which represented a decline of 74% since the 1998–2002 census. However, it must be noted that all censuses of Puffin on Rathlin Island are made later in the season than recommended (Walsh *et al.* 1995) due to the logistical difficulty of surveys, and therefore may not closely indicate the true size of the breeding population (Booth Jones *et al.* 2022a). The 2024 Puffin population estimate on Rathlin Island was 1,172 individuals during mid June, which is very consistent with the previous year's count (RSPB LIFE Raft project) and a significant improvement on the 2021 count. MarPAMM surveys also recorded two individuals at Sheep Island in 2021.

Puffins continued to be present in encouraging numbers at Lighthouse Island, Copeland Islands during 2024, with 56 individuals counted in May and 127 individuals in June, compared to 25 individuals recorded in May 2023 (Table 6, Appendix). In 2022, the area of potential AOB, while not currently monitored, appeared to have expanded outside the traditionally used area on the island (Katherine Booth Jones, Copeland Bird Observatory, pers. obs.).

In 2019, a peak count of 54 individuals was recorded at The Gobbins, in the same range as counts during 2013–2018 (Table 6, Appendix), however this site has not been counted since.

Figure 33: Puffin counts (individuals) at Copeland Island 2018–2024. The dashed line represents the Locally Weighted Least Squares Regression trend in Puffin numbers over time. The shaded region represents the 95% confidence interval around the trend.



Breeding success in 2024

In 2024, Puffin nests were monitored by the RSPB LIFE Raft project on Rathlin Island and breeding success was 0.46 chicks fledged per AOB across 85 AOB, up from 0.37 chicks fledged per AOB across 101 AOB in 2023.

The Puffin colony on Lighthouse Island is not yet monitored for breeding success, but Puffins continue to be observed bringing prey back to the colony, confirming breeding (Copeland Bird Observatory, pers. comm.).

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Update on the status of the UK's breeding seabirds - addendum to BoCC5 published in 2024

Ronan Owens

Higher Scientific Officer, DAERA, NIEA

Common Gull, by Ronan Owens

An update on the status of breeding seabirds in the UK, completing the fifth Birds of Conservation Concern (BoCC), was published in 2024. Four seabirds (Common Gull, Great Black-backed Gull, Arctic Tern and Great Skua) which breed in Northern Ireland (NI) have been added to the Red List. Eight of 20 breeding seabirds in NI are now on the Red List, 10 are on the Amber List, and two are on the Green List. Conservation actions underway have an important role in driving recovery in the status of seabirds.

Regular reviews of the status of bird species in Birds of Conservation Concern (BoCC) assessments are extremely useful in determining priorities for conservation. The UK BoCC is a periodic review of the status of all the regularly occurring birds in the UK, Channel Islands and Isle of Man and is produced by a partnership of organisations involving RSPB, BTO, Game and Wildlife Conservation Trust (GWCT), Joint Nature Conservation Committee (JNCC), Natural England, Natural Resources Wales, NatureScot, and Northern Ireland Environment Agency (NIEA).

In the fifth BoCC (BoCC5) the authors had hoped to incorporate the results from Seabirds Count (Burnell *et al.* 2023), the recent national seabird census, in the review, but owing to delays in fieldwork caused by the COVID-19 pandemic, this was not possible (Stanbury *et al.* 2021). The authors stated that an addendum to BoCC5 would be produced when Seabirds Count results became available. Seabird assessments from BoCC4 (Eaton *et al.* 2015) were transcribed into BoCC5, apart from Leach's Petrel, for which most of the relevant data were already available (Stanbury *et al.* 2021).

Seabirds Count was published in 2023, meaning that assessments of the UK's breeding seabirds could be undertaken for the addendum to complete the BoCC5 review (hereafter, BoCC5a). Since Seabirds Count surveys were completed during 2015–2021 and before the recent highly pathogenic avian influenza (HPAI) outbreak, it was important that assessments should also review the impacts of HPAI on seabird populations. In total, 28 current and former breeding seabirds in the UK were assessed and status assessments involved a two-stage process. Stage one assessments followed the same process as previous BoCC reviews, with species assessed against Red and Amber List criteria. Species were assessed against a pre-HPAI baseline, using the results from Seabirds Count and other relevant information. In stage two, assessments were updated using information available on the impact of the HPAI outbreak. Sources of data for stage two included the HPAI Seabird Surveys Report (Tremlett *et al.* 2024), which reported on repeat colony counts in 2023 for a suite of priority species, and additional mortality data collected during the outbreak.

In total, 26 currently occurring breeding seabirds in the UK were assessed in BoCC5a. In stage one of the assessments, both Great Black-backed Gull and Arctic Tern moved from the Amber List to the Red List, owing to severe population declines over the longer term and over 25 years, respectively. Advancement of the 25 year time window during stage two also resulted in Common Gull moving from Amber to Red, due to severe population decline between the two most recent seabird censuses. Shag moved from Red to Amber as Seabirds Count results (Burnell *et al.* 2023) revealed a moderate rather than severe decline in its population over 25 years, while Black Guillemot moved from Amber to Green. Black Guillemot qualified for Amber in BoCC4 (Eaton *et al.* 2015) due to moderate decline in its range over 25 years, but Seabirds Count showed minimal range change since the previous census (Burnell *et al.* 2023).

In stage two, the status of two species changed due to HPAI impacts on their populations. Great Skua moved from Amber to Red as Tremlett *et al.* (2024) reported that counts conducted in 2023, representing 83% of

the UK population, showed a decline of 76% since pre-HPAI counts. Despite uncertainty around the total population impact of HPAI, it was deemed highly likely that the population had experienced severe decline over the 25 year time window. In stage one, Common Tern moved from Amber to Green as it no longer qualified for Amber as a localised breeder, but moved back to Amber during stage two, after HPAI impacts on the population were assessed. Tremlett *et al.* (2024) reported that counts in 2023, representing 40% of the UK population, showed a decline of 42% since pre-HPAI counts. Despite similar uncertainty around the total population impact of HPAI, it was deemed highly likely that the population had experienced moderate decline over the 25 year time window (Stanbury *et al.* 2024).

Once the two stages of the BoCC5a assessments were complete, 10 (38%) of 26 currently occurring seabird species in the UK met the Red List criteria, 14 (54%) met the Amber List criteria, while two (8%) met neither criteria and were placed on the Green List (Table 1). Eight (40%) of 20 currently occurring seabird species in Northern Ireland (NI) are now on the UK Red List, 10 (50%) are on the Amber List and two (10%) are on the Green List (Figure 1). BoCC5a completed all the assessments for the fifth BoCC review of the status of 245 regularly occurring species in the UK. Seventy-three (30%) species are now on the UK BoCC Red List, 99 (40%) are on the Amber List and 73 (30%) are on the Green List (Stanbury *et al.* 2024).

Table 1. UK BoCC5a species assessments for breeding seabirds in the UK, Channel Islands and Isle of Man (Stanbury *et al.* 2024).

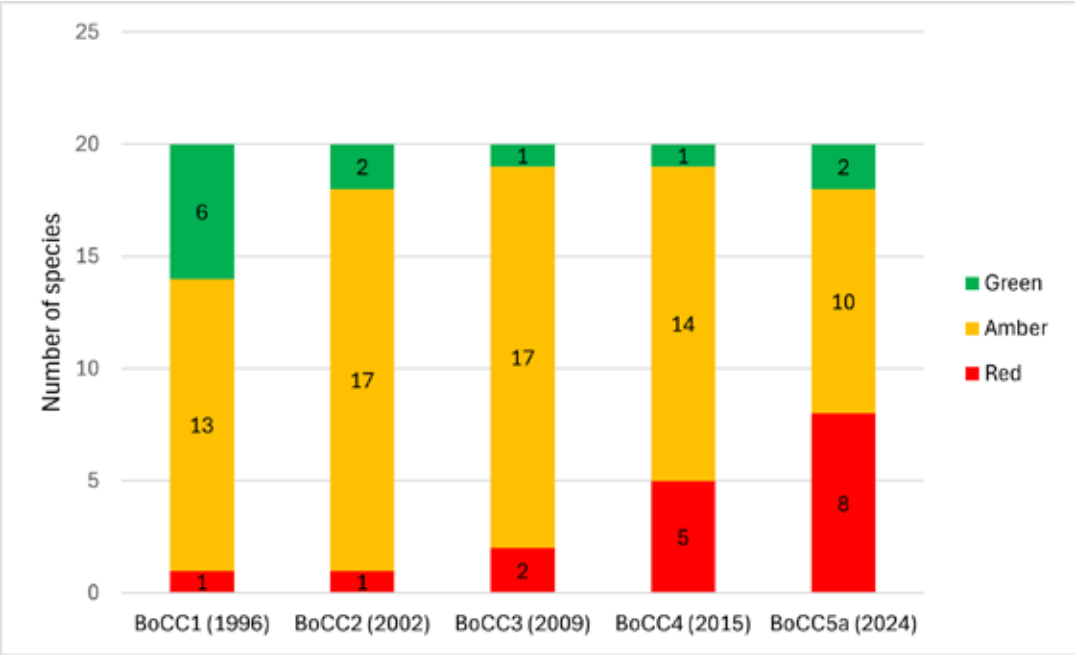
Red List	Amber List	Green List
Leach's Petrel ↑	Storm Petrel[1]	Cormorant
Kittiwake	Fulmar	Black Guillemot ↓
Common Gull ↑	Manx Shearwater	
Great Black-backed Gull ↑	Gannet[1]	
Herring Gull	Shag ↓	
Roseate Tern	Black-headed Gull	
Arctic Tern ↑	Mediterranean Gull	
Arctic Skua[1]	Yellow-legged Gull[1]	
Great Skua ↑	Lesser Black-backed Gull	
Puffin	Sandwich Tern	
	Little Tern[1]	
	Common Tern	
	Razorbill	
	Guillemot	

Arrows indicate species with a change in status since BoCC4 (Eaton *et al.* 2015). In BoCC5a (Stanbury *et al.* 2024), species moved; on to the Red List from Amber (Leach's Storm-petrel, Common Gull, Great Black-backed Gull, Arctic Tern and Great Skua), from the Red List to Amber (Shag) and from the Amber List to Green (Black Guillemot). [1] Not a regular breeding seabird in Northern Ireland.

Since BoCC4 (Eaton *et al.* 2015) the number of seabirds on the Red List has increased by four, from six species to 10, and by ten-fold since BoCC1 when there was only one seabird on the Red List (Gibbons *et al.* 1996). Five seabirds have been newly Red-listed since BoCC4, while Kittiwake, Herring Gull, Roseate Tern, Arctic Skua *Stercorarius parasiticus* and Puffin all remain Red-listed (Table 1).

The number of regular breeding seabirds in Northern Ireland on the Red List has increased by three since BoCC4, the number on the Amber List has decreased from 14 species to 10, while the number on the Green List has increased from one species to two (Figure 1). Four regular breeding seabirds in Northern Ireland have joined the Red List, including Common Gull, Great Black-backed Gull, Arctic Tern and Great Skua (Table 1). There is positive news with improvements in status for two seabirds. Shag moved from Red to Amber and Black Guillemot moved from Amber to Green (Table 1).

Figure 1. Length of the Red, Amber and Green Lists across the five UK BoCC reviews for the 20 regular breeding seabirds in Northern Ireland (Stanbury *et al.* 2024).



Kittiwake and Puffin remain Red-listed as they are globally threatened with extinction, with both classed as Vulnerable (ICUN 2024). Kittiwake also qualified for the Red List due to severe decline in its breeding population over 25 years. Herring Gull remains Red-listed due to a severe decline in its non-breeding population. Roseate Tern was the only seabird on the Red List in the first two BoCC reviews and remains Red-listed due to severe long-term decline in its breeding population and range.

All previous BoCC reviews of all of the UK's regularly occurring bird species reported a continued decline in the status of UK bird populations, with an ever-growing Red List (Stanbury *et al.* 2021). Unfortunately, these trends continued in this latest review of the status of the UK's breeding seabirds, with further deterioration in their status since the last comprehensive review in BoCC4 (Stanbury *et al.* 2024). Trends for increasing numbers of seabirds on the Red List, along with few on the Green List, is apparent across all of the BoCC reviews, including for breeding seabirds in Northern Ireland (Figure 1). Despite the declining trend in the conservation status of the UK's seabirds there are reasons to be optimistic for a change in the fortunes of our seabirds. Pressures and threats impacting upon seabirds throughout their breeding and non-breeding seasons have been identified. Several management measures to address these pressures and threats across the UK are now either underway or planned and have the potential to drive recovery in seabird populations. Work to halt and reverse the number of seabirds on the UK Red List cannot be done by any one individual or organisation, but it will require many people and organisations working in partnership to find solutions.

In Northern Ireland, we are fortunate to have the Northern Ireland Seabird Network, the BTO Northern Ireland Seabird Coordinators and this annual Seabird Report, with both the Seabird Network and publication of the Seabird Report coordinated by the Seabird Coordinator. Northern Ireland is the only country within the UK and Ireland to have its own country-specific annual seabird report, with the Northern Ireland Seabird Report now into its 12th edition.

Country-specific seabird conservation strategies have been either published or planned across the UK. DAERA held a public consultation on a Seabird Conservation Strategy and Action Plan for NI. The first Environmental Improvement Plan for NI was published by DAERA in 2024, and this includes a list of ambitious actions and targets relating to protecting nature on land and at sea. Predator management on seabird islands has proven to be effective in restoring seabird populations and the LIFE Raft project on Rathlin Island aims to eradicate invasive non-native Brown Rats *Rattus norvegicus* and Feral Ferrets *Mustela putorius* subsp. *furo* from Rathlin, the largest seabird colony in Northern Ireland. Similar projects across the UK have been successful, resulting in a rapid increase in seabird numbers.

UK BoCC and Birds of Conservation Concern in Ireland (BoCCI) reviews provide important evidence for decision making in conservation in Northern Ireland and help ensure that resources are targeted towards those species in most need of conservation action. BoCCI examines similar but not identical, Red and Amber List criteria to the UK BoCC to review the status of birds on the island of Ireland (Gilbert *et al.* 2021). The Northern Ireland Priority Species list (DAERA 2023) compiled by NIEA, is a list of species of principal importance for conserving biodiversity in Northern Ireland. UK BoCC and BoCCI assessments provide critical evidence, supporting criteria to select priority bird species on this list. This list is periodically reviewed and reflects new evidence presented in the UK BoCC and BoCCI. Once endorsed by the Council for Nature Conservation and the Countryside (CNCC) and approved, the list is published on the DAERA website. DAERA will also use UK BoCC and BoCCI reviews to inform decision making related to conservation for birds, in consultation responses to development proposals, as well as informing other proposals related to wild birds and their habitats in Northern Ireland.

The full details of the BoCC5a assessments can be found in an article in the September 2024 issue of the journal *British Birds*. The article is also available online on the journal's website. Further details, including race-level assessments for all relevant species, can be found in the Supplementary Online Material (SOM).

Acknowledgements
Many thanks to all the volunteer and professional surveyors who have monitored seabird populations over the past 50+ years. Without these invaluable contributions, reviews of national seabird conservation status would just not be feasible.

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Update on avian influenza in Northern Ireland's seabirds during 2024

Ronan Owens

Higher Scientific Officer, DAERA, NIEA

Kittiwake, by Ronan Owens

In 2024 there was little to no evidence of the impacts of highly pathogenic avian influenza (HPAI) in seabirds in Northern Ireland. HPAI remains a threat to the conservation of our seabirds. Surveillance and monitoring are key to understanding the impacts of HPAI.

Avian influenza (AI) also known as 'avian flu' and 'bird flu', is a highly contagious viral disease that affects both domestic and wild birds (WOAH 2024). There are different strains of AI and these are placed into one of two categories according to the severity of disease in poultry: low pathogenicity avian influenza (LPAI) or highly pathogenic avian influenza (HPAI) (WOAH 2024). H5N1, a highly infectious subtype of HPAI, has caused severe impacts in wild birds and poultry in recent years. Since 2021 unparalleled excess mortality in wild bird populations has been recorded across the UK as result of an unprecedented outbreak of HPAI (Pearce-Higgins *et al.* 2023). Unprecedented mortality among wild birds was not only recorded in the UK, but severe impacts were also reported in the Republic of Ireland, across Europe and globally (EFSA *et al.* 2024, Giralt Paradell *et al.* 2023, Lane *et al.* 2024).

H5N1 HPAI was first detected in breeding seabirds in the UK in July 2021 when Great Skua carcasses in Scotland tested positive for the virus, with mass mortalities reported on several Scottish islands (Banyard *et al.* 2022). H5N1 HPAI was first detected in Barnacle Goose *Branta leucopsis* carcasses in the Solway Firth, Scotland in November 2021 (Ross *et al.* 2024). By the end of winter 2021/22, it was estimated that approximately one third of the Svalbard Barnacle Goose flyway population had died due to HPAI (NatureScot 2023). H5N1 HPAI was also first detected in Northern Ireland in November 2021, in a Greylag Goose *Anser anser* and an unspecified swan. During the rest of winter 2021/22 in Northern Ireland, H5N1 HPAI was confirmed in more unspecified swans (7), unspecified geese (2) and a Buzzard *Buteo buteo*.

H5N1 HPAI emerged in more seabird species in summer 2022 in the UK and unprecedented numbers of dead seabirds were reported from colonies across the UK (Cunningham *et al.* 2022, NatureScot 2023). Northern Ireland's seabird populations were not left unscathed from the impacts of HPAI. The first detection of H5N1 HPAI in seabirds and wild birds in Northern Ireland in 2022, was in a Gannet *Morus bassanus* carcass collected from Bangor in June 2022. H5N1 HPAI was first detected in our seabird colonies in the first week of July 2022 when Guillemot carcasses collected from Rathlin Island tested positive for the virus. HPAI evidently had a significant impact in our seabird colonies during both 2022 and 2023 (Else & Watson 2022, 2023, Gray 2023, Owens 2024). A large number of Guillemot mortalities and a high number of HPAI findings in Guillemots were recorded during a summer 2022 HPAI wave, while a large number of Black-headed Gull mortalities and a high number of HPAI findings in Black-headed Gulls were recorded during a summer 2023 HPAI wave (Owens 2024).

There were H5N1 HPAI findings in 12 bird species in Northern Ireland from winter 2021/22 to 2023. Signifying the widespread impact that HPAI had on seabirds, six of the 12 species were seabirds (Table 1). All six are at least Amber-listed (species of moderate conservation concern) in the BoCCI (Gilbert *et al.* 2021). A collation of the total number of birds reported with each HPAI finding for each species is displayed in Table 1. This provides an indication of the significant impact that HPAI had on Black-headed Gulls and Guillemots in Northern Ireland. There were also H5N1 HPAI findings in unspecified gulls and unspecified terns, but these were not reported to species level.

Table 1. Seabird species which tested positive for H5N1 HPAI and the numbers reported with each H5N1 HPAI finding in Northern Ireland during 2022 and 2023, along with the current assessments of their conservation status. Data: DAERA Avian Influenza Map Viewer.

Species	Total number of birds reported	BoCC Ireland 4 (2021)	UK BoCC 5 (2024)	Global IUCN Red List status
Black-headed Gull	49	Amber	Amber	Least Concern
Common Guillemot	35	Amber	Amber	Least Concern
Gannet	5	Amber	Amber	Least Concern
Kittiwake	4	Red	Red	Vulnerable
Herring Gull	2	Amber	Red	Least Concern
Razorbill	1	Red	Amber	Least Concern

The unpredictable nature of HPAI continued in 2024, but this time there is more positive news to report. In 2024 there was little to no evidence of HPAI in Northern Ireland's seabirds. There were no positive HPAI cases in all wild birds tested for avian influenza in Northern Ireland (at the time of writing 30 November 2024). The last HPAI positive case in wild birds was in an unspecified swan carcass collected on 15 September 2023. The last HPAI positive case in seabirds in Northern Ireland was in an unspecified gull carcass collected on 8 September 2023 (as of 30 November 2024).

The Department of Agriculture, Environment and Rural Affairs (DAERA) AI Map Viewer available shows that more than 20 wild bird carcasses were tested for avian influenza from 1 January to 30 November 2024. Carcasses of several different seabird species were tested during the breeding season, including Black-headed Gull, Cormorant, Gannet and Herring Gull. All samples were negative for HPAI.

No mass mortalities of dead wild birds in NI were reported to DAERA or recorded in the additional mortality reporting options of BirdTrack, Epicollect and WeBS from 1 January to 30 November 2024. These additional reporting systems are available to collect additional information to assess the impact of any disease outbreak on bird populations and were outlined in Owens (2024). Mortality among all wild birds in Northern Ireland in 2024 appeared to have returned to 'normal' or typical levels of mortality as suggested by the much-reduced number of reports of dead birds to DAERA and lower number of dead bird records added to BirdTrack, Epicollect and WeBS in 2024, as compared to 2023. A large majority of the reports in all of these systems were of single dead birds.

Although no carcasses were tested, an incursion of HPAI was suspected to have occurred in Black-headed Gull and tern colonies in Strangford Lough in 2024. Leonard (2024) reported that suspected HPAI was the cause of mortalities in two adult Black-headed Gulls, at least 20 Black-headed Gull chicks on Black Rock, one adult Arctic Tern, as well as tern chicks on Greenisland Rock and Salt Rock (Leonard 2024).

Seabird monitoring results from the 2024 season in Northern Ireland are still being input into the Seabird Monitoring Programme (SMP) database at the time of writing (as of 30 November 2024), but anecdotal evidence from seabird surveyors suggests that some of the species which appeared to be severely impacted by HPAI such as Black-headed Gulls in 2023, were fewer in number at their colonies in 2024 in comparison with previous years. Annual monitoring of those seabirds which were evidently impacted by HPAI in 2022 and 2023, through the SMP and other monitoring initiatives, will be crucial in efforts to determine the short-, medium- and long-term impacts of HPAI.

Reporting dead birds to DAERA's AI wild bird surveillance programme

DAERA's dead wild bird online reporting tool is where you should report any dead birds you see or find in NI. If you find a dead bird, you should not touch or handle the carcass but leave it in situ and immediately report to DAERA, using the online reporting tool available at: www.daera-ni.gov.uk/services/daera-dead-wild-bird-online-reporting-tool. The sooner the dead bird/s is reported the better, as fresh carcasses are most suitable for testing. Reports are assessed by DAERA's Veterinary Service and Animal Health Group who decide whether to collect and sample the carcass/es for avian influenza testing. Testing for avian influenza in wild birds in Northern Ireland is undertaken by the Agri-Food and BioSciences Institute (AFBI).

If you can submit more information on the dead bird/s to BirdTrack, Epicollect or WeBS, please also indicate in the 'comments' fields of these systems whether or not the birds have been reported to DAERA. The combination

of reports to DAERA's AI surveillance programme and the additional information submitted through Epicollect, BirdTrack and WeBS greatly improved the level of detail on the number of mortalities and the spread and impact of HPAI during 2023 (Owens, 2024).

Please be vigilant and report any dead birds you see to DAERA if you are undertaking seabird monitoring and/or other bird monitoring in 2025. Before you undertake your site visits remember to consider biosecurity measures to help prevent any potential spread of HPAI. Good biosecurity practices should be a routine everyday activity all year round, especially when entering and leaving sites such as nature reserves. HPAI has proven to be ever-changing and unpredictable and new cases can occur at any time.

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Further sources of information

BTO Avian influenza website: **www.bto.org/understanding-birds/avian-influenza**

BTO HPAI Ringing Framework: **www.bto.org/hpai-ringing-framework**

DAERA Avian Influenza: **www.daera-ni.gov.uk/ai**

DAERA Wild Birds and Advice for the Public: **www.daera-ni.gov.uk/articles/wild-birds-and-advice-public**

Department for Environment Food and Rural Affairs (Defra) Bird flu (avian influenza) (Britain): cases in wild birds: **www.gov.uk/government/publications/avian-influenza-in-wild-birds**

Department of Agriculture, Food and the Marine Avian Influenza (bird flu) (Republic of Ireland): **www.gov.ie/en/publication/50ce4-avian-influenza-bird-flu**

If you have any further questions relating to AI in wild birds, please email NIEA at: **BCSGeneral@daera-ni.gov.uk**

Copeland gull colour-ringing project

Roisin Kearney
Copeland Bird Observatory

Lesser Black-backed Gulls, by Edmund Fellowes / BTO

Introduction

Many of you will be familiar with Copeland Bird Observatory (CBO) and those of you that are not, I would encourage you to look us up and visit our beautiful island! Along with an impressive range of breeding seabird species, CBO hosts one of the biggest mixed gull colonies in Northern Ireland, with breeding Lesser Black-backed and Herring Gulls along with a small number of Common Gulls (~15 Apparently Occupied Nests, AON).

After a dramatic decline in numbers in the late 1980s due to botulism, the numbers of gulls on the island have been steadily increasing. CBO has run an annual census since 2018, which allows us to monitor the population on the island – see the article in the Northern Ireland Seabird Report 2023 (Booth Jones & El Haddad 2024) for more details on our census. The 2024 census gave us a total of 831 Herring Gull AON and 448 Lesser Black-backed Gull AON (total 1,279) which is lower than 2023 (1,552) but comparable to 2022 (1,282). The lower numbers are likely due, at least in part, to the slight lateness of the survey, which was a week later than planned due to unavailability of boats. This meant many of the chicks had already hatched and left the nest. Empty nest depressions cannot be counted as we cannot be sure if they were used or not. In 2024, we also did a count of CBO's neighbouring Mew Island using scopes from CBO which recorded 250 Herring Gull, 108 Lesser Black-backed Gulls and five Great Black-backed Gulls AON.

CBO gull ringing

CBO has a long history of ringing gulls on the island but sporadic in terms of numbers ringed each year. There used to be large numbers ringed each year with Herring Gull being the sixth highest ringed species on the island over the lifetime of the Observatory. But recent years have seen much lower numbers ringed, with only around 20 ringed on average each year. Myself and a few other keen seabird ringers have been trying to increase the numbers ringed in recent years and have brought the numbers up significantly. Colour-ringing of the gulls seems like the next natural step to improving our knowledge of the movements of these birds. It would give us more knowledge of both small-scale movements, on the island itself or between the island and the local mainland, as well as information on larger scale movements such as Lesser Black-backed Gull migration.

Project methods

In general, gull ringing at CBO is split into two periods of the year. During mid late May, we nest trap adult gulls. This is quite labour intensive and numbers of adults ringed per year are generally fewer than 15. The main ringing period is during late June and early July when the chicks are ringed. Chick ringing in a mixed colony can't be done earlier than this, as it is very difficult to tell Herring and Lesser Black-backed Gull chicks apart before they reach a certain size and their wing feathers have almost fully grown. Chicks are caught by hand. We also catch gulls, both adults and juveniles, sporadically in our crow or Heligoland traps throughout the year.

Project start

The gull colour-ringing has become a part of our normal ringing activities but I wanted a push to ensure that we got a significant level of ringing effort as the more birds ringed, the greater the chance of re-sightings. I was also very keen that we use the project as a training opportunity for ringers and involve as many ringers as we safely could, especially those that were looking for seabird handling experience. Seabird ringing in Northern Ireland

is very limited, there are no other current gull colour-ringing projects in Northern Ireland as far as I know, and it can be hard to get opportunities. It also provides an excellent opportunity to gain colour-ringing experience which requires a different method to the usual metal rings. I was also aware of how much valuable experience that I got at CBO as a ringer and I wanted to pass that on in some way.

Given those things, I applied for the BTO Seabird Ringing Grant in 2023 to run specialised seabird ringing trips to colour-ring gull chicks. This was advertised to ringers who could then apply to go on the trip and were subsidised to attend to ensure that costs were not a barrier to participation. We were successful in obtaining the grant and had a number of ringers out who were new to the island, including one from England.

We successfully applied for the grant again in 2024. This year we used the grant to fund a gull ringing trip to Mew Island. Mew Island is an uninhabited island directly beside the Observatory's island and CBO members go there once a year in May to ring Eider Ducks *Somateria mollissima*. As far as I am aware, gulls have never been ringed on Mew Island before, or if they have, it would have been over a decade ago. So, it was a learning experience all around, for both the new grant-funded ringers and CBO ringers. It was a great experience and one that I hope we will be able to repeat.

Results so far

Despite only having 18 months' worth of data so far, the number of sightings (as of November 2024) that we have gotten back has been amazing with 13% of the Herrings and 15% of the Lesser Black-backed Gulls being re-sighted at least once. To put that in perspective, out of the 151 Herring Gulls ringed between 2014 and 2022 (i.e. before the colour-ringing was in place), only 11 individuals (7%) were sighted over that nine-year period compared to 13% of colour-ringed birds in less than two years. This is similar for the Lesser Black-backed Gulls with 10 individuals out of 186 birds (5%) ringed in the same period compared to 15% of colour-ringed birds.

	Herring Gull	**Lesser Black-backed Gull**
Total Ringed	149 (102 in 2023 & 47 in 2024)	98 (50 in 2023 & 48 in 2024)
No. Sightings	40	36
No. Individual Birds Sighted	19	15
% of Birds Re-sighted	13%	15%
Notable Sightings	One bird sighted nine times from 15/10/23–21/07/24 around Manchester. Five birds seen three or more times.	One bird sighted 10 times from 09/09/23–16/08/24 around Spain. Four birds seen three or more times.

In addition to this, for the migratory Lesser Black-backed Gulls, sightings for metal ringed birds outside the UK and Ireland were few and far between with only four Lesser Black-backed Gull sightings in Spain, all of which were of the same individual. As of November 2024, we have had 29 sightings of 10 individual birds outside of the UK and Ireland, mostly in Spain and Portugal but also a sighting from Morocco. It has been amazing to see where 'our' Lesser Black-backed Gulls have been spending their winters. The Herring Gull sightings have been interesting too. I didn't expect too much movement of the Herring Gulls beyond NI, but we have had 13 re-sightings of four individuals outside the island of Ireland, including South Ayrshire in Scotland, Cumbria and Manchester in England and the Calf of Man. We have also had sightings on Rathlin Island, up in Portballintrae on the NI north coast and down in Dublin.

Conclusion

We hope to continue this project for many years to come and look forward to receiving news about our gulls! In the meantime, if you see any of our colour-ringed gulls, please get in touch. Our rings are orange with three numbers followed by a ':C', for example – '028:C'. If you spot any of our colour-ringed birds please report their ring number, location and any other information to CopelandBirds@outlook.com. Additionally, if anyone would like to visit our beautiful island, please get in touch. We love to see new faces! Visit **www.thecbo.org.uk** for more information.

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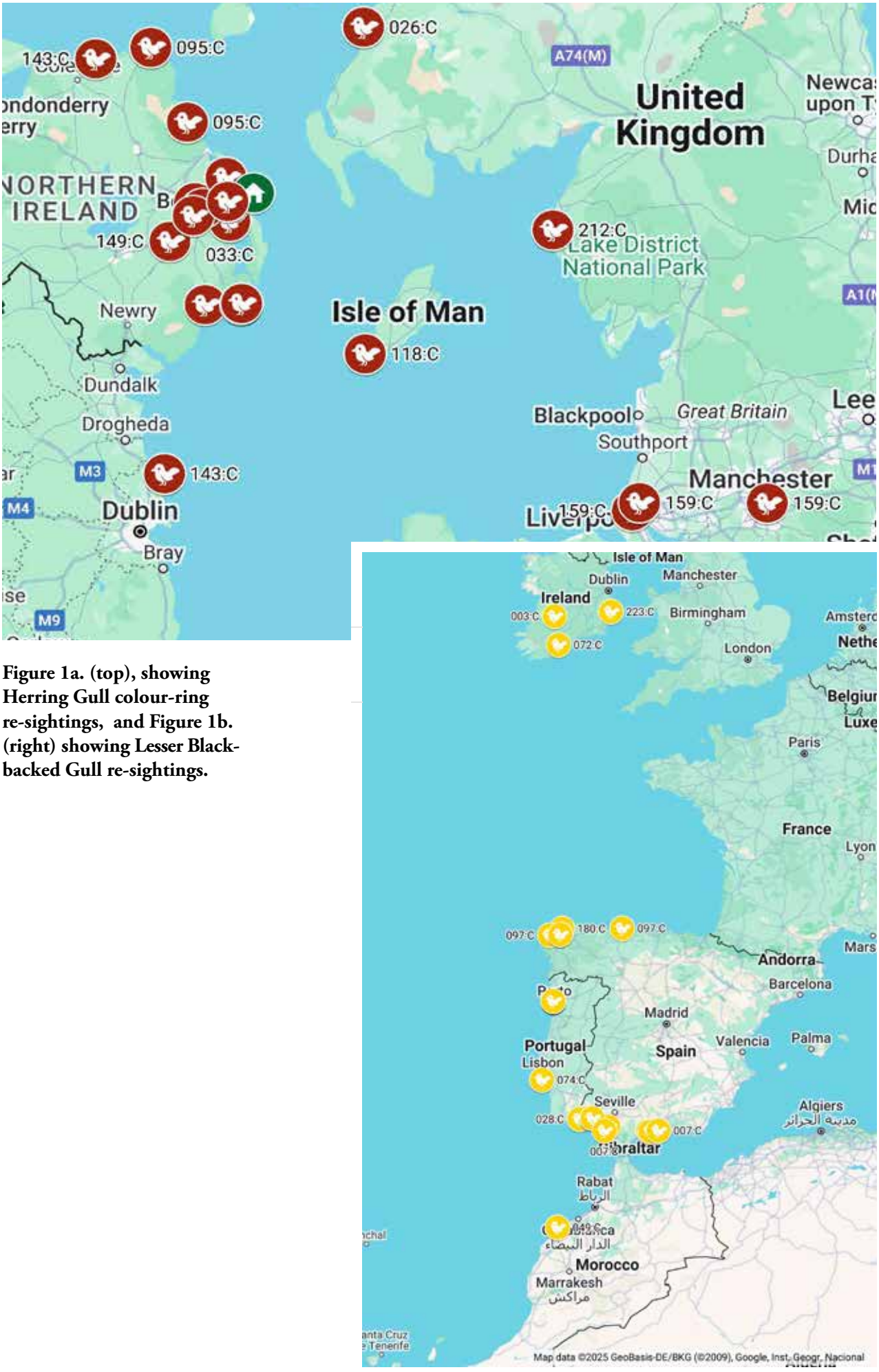

Figure 1a. (top), showing Herring Gull colour-ring re-sightings, and Figure 1b. (right) showing Lesser Black-backed Gull re-sightings.

Strangford Lough seabird monitoring report 2024

Hugh Thurgate

Strangford Lough and The Ards Peninsula Lead Ranger, National Trust

Great Black-backed Gull, by Edmund Fellowes / BTO

Cormorant: 379 AON (Apparently Occupied Nests) on two islands. Productivity – 1.55 chicks fledged per nest.

This year's count represented a 15% drop from that in 2023, but was only 2.5% down on the five-year rolling mean ending 2024. The new colony established on West Boretree Island in 2023 increased from 13 AON to 20, an increase of 54%. For the first time ever in Northern Ireland, the breeding productivity of a Cormorant colony was monitored on the Lough's principal nesting location on Bird Island off Kircubbin (clutch size at the time of the annual monitoring visit was recorded for Cormorant breeding on Sheep Island, Co. Antrim by staff of NIEA but no record, as far as I am aware, was made of fledging success). This work was carried out by Daniel Johnston of BTO Scotland in collaboration with the BTO Northern Ireland office and National Trust.

Two trail cameras were erected on scaffolding on 20 March, focusing on two different nest clusters. Five nests within the colony already contained eggs. Unfortunately, on 6 and 7 April a high tide coupled with a storm surge destroyed the nests in the study plot. However, by 15 April birds had started to re-lay and were not subject to any further catastrophic wash-outs. The cameras were left in place for the duration of the breeding season and were taken down on 24 September. The results of this work can be found in a separate article in this edition of the Northern Ireland Seabird Report (see page 87).

Black-headed Gull: 653 AON on 10 islands (555 AON on Strangford Lough itself and 98 AON at Castle Espie).

Last year's total of 1,179 AON equated to 93% of the 10-year rolling mean of 1,273 AON, the population of this species having been remarkably stable since 2011. However, 2024 saw a dramatic downturn in numbers almost certainly, at least in part, a reflection of the impact of HPAI in 2023, particularly the outbreak at the Castle Espie colony which saw a 81% drop in numbers from 2023 to 2024. The drop in Strangford Lough was significantly less at 17%, probably a reflection of avian flu having less impact on a large number of more widely spread and less dense smaller colonies (14 in 2024) on the Lough.

The largest colony this year occurred on Black Rock (Ringdufferin) with 161 AON followed by Green Island (Killyleagh) with 125 AON and Swan Island with 114 AON. This year there was anecdotal evidence that outbreaks of avian flu occurred at some colonies, with sick adults and fully-feathered young that were close to or had in fact fledged being found at some colonies. Larger numbers of young chicks were also found dead at some colonies, again with avian flu thought to be the culprit (Leonard 2024). The colony on Swan Island had very low fledging success with the presence of Brown Rats on the island impacting early in the season, resulting in egg loss and widescale disturbance. In 2023 Jackdaw Island hosted the largest Black-headed Gull colony on the Lough but birds failed to return in 2024 with just eight AON recorded this year.

Mediterranean Gull: 3 AON on two islands.

A pair of Mediterranean Gull appeared to be holding territory on Jackdaw Island when the island was visited on 1 May and two pairs nested on Black Rock (Rungdufferin), the first being detected on 3 June with a clutch of two. The two chicks from this nest were ringed on 19 June.

The seabird colony on Black Rock had to contend with multiple threats this season including predation by Otters and Great Black-blacked Gulls, tidal wash-outs and avian flu. That any chicks fledged is a wonder but visits to the

island on 27 June and 1 July revealed that at least one Mediterranean Gull chick was still alive. The picture below was taken on 12 June with the chick estimated as being under five days of age. If this was the chick that was observed on 1 July it would have then been roughly three weeks of age and still two weeks away from fledging so it is not possible to say whether it definitely fledged or not.

A well-camouflaged Mediterranean Gull chick, showing classic 'zebra' stripes and spikey down tufts, Hugh Thurgate.

Common Gull: 282 AON on 19 islands.

This year's count of 282 AON was 14% down on last year's total and compares with a 10-year rolling mean to 2023 of 312. Since 2007 numbers have only twice dipped down below 300 pairs. The three largest colonies remain on Roe Island (65), The Chanderies (34) and the newly established colony on Pawle Island, now the largest of them all at 72 AON.

Lesser Black-backed Gull: 293 AON on 10 islands.

Numbers on a par with last year, though interestingly on far fewer islands than in 2023 when 18 islands were occupied. The largest colony (141 AON) occurs within the main Herring Gull colony on Green Island (Killyleagh) and represents almost half the total breeding population. East Boretree Island remains their second largest colony with 66 AON recorded this year.

Herring Gull: 1,920 AON on 24 islands.

As with its close cousin the Lesser Black-backed Gull, Herring Gull numbers essentially matched those of 2023. This species is the most widespread of all the seabirds on the Lough, occupying more islands than any other species. Eight of the colonies exceed one hundred pairs; Inishanier – 128 AON, East Boretree – 111, Bird Island (Kircubbin) – 171, Jackdaw Island – 217, Round Island – 198, Drummond Island – 213, Gabbock – 124 and Green Island, Killyleagh – 523.

Great Black-backed Gull: 155 AON on 11 islands.

This year's count superseded that of 2023 in being the second highest on record (systematic, Lough-wide counts of breeding seabirds began in 1969) and approaching the record count of 176 pairs, recorded in 1972. The

breeding population is concentrated in one large colony on Great Minnis's (114 AON in 2024) with a growing colony on West Boretreee Island (20 AON in 2023 and 2024). Five of the islands have just one pair and it will be interesting to see whether these begin to develop into larger colonies or not.

Once again, this species is having a significant negative impact on fledging success of breeding terns. Trail camera footage on Black Rock revealed that nocturnal visits by possibly as few as one or two individuals led to wholesale loss of Sandwich Tern eggs and chicks over two nights. Terns are particularly vulnerable to night-time predation as they cannot see the pending threat and cannot muster an airborne collective defence, which is what they would do in daylight. Once the gulls land they simply walk through the colony hoovering up eggs and chicks with gay abandon (Booth Jones 2020, Leonard 2023, 2024).

The impact of the 2023 outbreak of avian flu on the larger gulls on Strangford Lough seems to have been negligible, with the number of breeding pairs of two species remaining level and one actually increasing. We may yet see a dip (temporary?) in breeding numbers in three years' time, as a result of low recruitment of juveniles in 2023, if avian flu had a bigger impact on young birds than we thought. However, it would appear that HPAI had an insignificant impact on the adult population of large gulls on the Lough.

Sandwich Tern: 170 AON on two islands – Productivity (Fledged young per AON) – 0.024. Mean Clutch Size – 1.39.

In 2022 avian influenza (HPAI) had a massive impact on Sandwich Terns breeding in mainland Europe, with entire colonies wiped out in the Netherlands, northern France and Germany and with thousands of adults found dead. In the late winter of 2022/23 and early spring 2023, many Black-headed Gulls were found dead in their wintering areas and spring staging sites in central and western Europe. In April and May many countries in Europe reported incidences of mortality due to HPAI among adult Black-headed Gulls in breeding colonies. At first it appeared that Sandwich Terns breeding amongst Black-headed Gulls were unaffected by the virus, but later in the season reports started to come in of unexpectedly high numbers of Sandwich Tern chicks dying in some colonies, where Terns were breeding 'cheek by jowl' with Black-headed Gulls. So, although some Sandwich Tern colonies fared well, particularly those that were not densely packed nesting amongst large numbers of Black-headed Gulls, overall, 2023 saw another significantly poor year in terms of productivity of Sandwich Tern and a drop in overall numbers.

The consequences of the outbreak of HPAI among Sandwich Terns in 2022 had clearly detectable effects on the size of the breeding population of the species in north-west (NW) Europe in 2023. In the Netherlands and Flanders the number of breeding pairs of Sandwich Tern in 2023 was less than half the one in 2022 (9,000 vs 19,000 pairs) and breeding colonies that were severely affected by HPAI in 2022 stayed vacant in 2023. Against a backdrop of the impact of HPAI in the NW European Sandwich Tern populations in 2022 and 2023, and almost zero fledgling success on Strangford Lough itself in 2023, it shouldn't have been a surprise that the numbers of breeding Sandwich Tern returning to the Lough to breed in 2024 fell by 32% from 2023, with an historic low of just 170 pairs.

In 2024, birds initially gravitated to Swan Island. This island had been spared from the negative impacts of Otter or large gull predation and from high tide wash-outs for over 20 years (from 2001) and so settlement of breeding Sandwich Terns during this period would have been considered to be a 'good move' on their part. However, in recent years Swan Island has started to show its vulnerability. The first confirmed predation of terns by Otters on Swan Island occurred in 2019 (picked up during the second summer of Shane Wolsey's predation and productivity study – see Northern Ireland Bird Report 2019 (Booth Jones 2020)) but took place after the peak of the Sandwich Tern breeding season and whose impact was largely felt by Common and Arctic Terns. In 2020 and 2021, the Swan Island colony was not subject to any significant predation with a good number of mature Sandwich Tern chicks suitable for colour-ringing.

In 2022 Sandwich Tern opted not to settle on the island for the first time in 10 years, which was surprising given their good fledging success in 2021. Birds stayed on Jackdaw Island for the second year running and the remainder chose to nest on Black Rock (Ringdufferin). Despite the Jackdaw Island colony performing well there was complete failure on Black Rock and this is the possible reason why in 2023 birds opted not to return Black Rock but to settle en masse on Swan Island. However mass desertion then occurred early on in the incubation period as a result of Otter predation and although the majority relocated to Black Rock they were then ultimately subject to wholesale predation by Great Black-backed Gulls. So, the Swan Island colony that had had consistently good fledging success for the first two decades of this century had finally succumbed to mammalian predation.

Worse was to follow in 2024, when Brown Rats were discovered on the annual 'spring-clean' visit to the island ahead of the nesting season. This is when the main colony location is weeded and cleaned-up, the surrounding vegetation cut and tern boxes deployed to encourage the terns to nest. Although sonic deterrents were deployed around the main nesting area and some rat bait used, the colony was still subject to a significant amount of egg predation during the incubation period, and both Black-headed Gull and Sandwich Tern colonies were in disarray by the end of May. Although Brown Rats were clearly present at the time of the monitoring visit on the 31 May, and were later to be seen to eat and stash a significant number of Common Tern and Black-headed Gull eggs, many of the predated Sandwich Tern eggs appeared to have been abandoned in the first instance and then predated at a later stage, with some suggesting Black-headed Gull predation and others a larger mammal, possibly Otter. Either way, Brown Rats were thought to have caused the complete failure of the Sandwich Tern colony and its early abandonment.

Clockwise from top left: Brown Rat egg cache under a tern box; sonic animal deterrents in position; predated Sandwich Tern eggs.

However as it happened relatively early in the season it appeared that virtually all of the pairs attempted to nest again relocating on the Lough. Fifty-eight of the deserting 83 pairs joined a pre-existing colony of 87 on Black Rock bringing it to 145 AON and 24 of the remaining 25 instead of relocating to North Boretree Rock which had been typical of their behaviour in the past, opted to settle on the nearby Chanderies. By 11 June numbers had built up to 145 on Black Rock and by 18 June 18 on the Chanderies having never nested there before.

Common Tern: 249 AON on 10 islands – Productivity 0.008.

The first clutches to hatch were found on Ogilby Island on 10 June when clutches of 2/3 eggs hatched, 1/2 & 1/3 were located amongst 25 nests. With a 1–2 day laying interval and a maximum incubation period of 23 days

this would put the earliest possible laying date as 14 May (Harrison 1975). The two main colonies this year were on Black Rock and Shones Island. The largest on Black Rock peaked at 61 AON on 5 June; however, during the fourth week of the month it suffered calamitous losses due to nocturnal Great Black-backed Gull predation of chicks and eggs, at least one visit to the colony by Otter, HPAI and peripheral egg loss due to high tide wash-outs (though the island didn't get completed covered by over-topping as had happened in 2023).

All seemed to be going well on Shones Island at the time of a visit by K. Leonard *et al.* of Sterna Environmental on 18 June as part of their seabird productivity monitoring work. On that visit 41 Common Tern nests and 18 chicks were counted. However, on 27 June most of the chicks had disappeared, three dead chicks were found apparently killed and there was some evidence of egg predation, although the number of nests had actually gone up to 54. By 1 July there was evidence of further egg and chick predation with just 18 clutches remaining and no chicks found. Camera trap footage from 4 July revealed the probable culprit of all or some of the earlier predation, a Fox *Vulpes vulpes* was seen going through part of the colony clearly feeding and appearing to go from nest to nest. Shones Island is not a good choice for terns to breed on, being susceptible to the full gambit of mammalian predators, as it dries out to the mainland at low tide.

Arctic Tern: 160 AON on seven islands – Productivity 0.006.

While the adult population remained stable (the 2023 count of 154 AON was just 9% below the 10-year rolling average) productivity as with the other tern species was pitifully low with just one chick appearing to fledge across the Lough's islands in 2024. The three islands that make up the Chanderies had 80 AON, by far and away the largest colony on the Lough as was the case in 2023. Although some losses were thought to have resulted from high tide wash-outs, particularly early in the season, the pattern and appearance of egg damage later-on strongly indicated predation by large gulls.

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Bird Island camera-trapping: initial results

Daniel Johnston

Senior Research Ecologist, Wetland & Marine Team, BTO

Cormorants, by Edmund Fellowes / BTO

Camera traps can supplement efforts to monitor Cormorant breeding timing and productivity. Two cameras were placed on Bird Island Strangford Lough on 20 March 2024 on different subsections of the colony. A subsample of 22 nests was monitored for egg-laying and hatching dates, with monitoring continuing until chicks roamed from the nest and outside the field of view.

On 6 and 7 April, a combination of high tides and a storm surge resulted in flooding, which removed all nest materials and contents. Following the storm, nests were quickly rebuilt between the 8–15 April, with the first eggs for each monitored nest appearing between 15 April and 11 May. Clutch sizes generally ranged from three to four eggs per nest. For each nest, the first eggs hatched between 15 May and 11 June.

Among the 22 monitored nests, the average hatching success was 0.48 (± 0.27), with fledging success being relatively high at 0.92 (± 0.27). Overall, productivity was 1.55 (± 0.76) chicks fledged per nest.

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Strangford Lough breeding terns productivity monitoring surveys 2024

Kerry Leonard
Sterna Environmental Ltd.

Arctic Terns, by Liz Cutting / BTO

Introduction

The author was commissioned by the National Trust to carry out surveys of breeding terns on Strangford Lough during 2024. This is the third consecutive year that there has been productivity monitoring. Previously, productivity monitoring was carried out by Shane Wolsey on behalf of the National Trust, in 2018 and 2019 (Wolsey 2019). The main aim of the work was to measure the breeding productivity of nesting terns at selected colonies within the Lough, with a secondary aim to determine causes of breeding failure. The species monitored are Sandwich Tern, Common Tern and Arctic Tern.

Personnel

The surveys were carried out by Kerry Leonard. Boat services were provided by Michael Stinson of Erne Environmental. Michael also acted as a second surveyor and recorder. Boat services were provided by Philip Galbraith on two dates in June, when Michael was unavailable.

Methods

Strangford Lough is a well-known nesting site for breeding terns, but the populations are spread over many islands within the Lough. In any one year an island may not be used, and birds are prone to moving between islands. National Trust personnel carried out monitoring visits from April to mid June 2024, in order to count the seabirds across Strangford Lough. This identified tern breeding sites for the year upon which productivity monitoring efforts would concentrate. All of the sites listed below were visited at least twice by the author in 2024, even if no terns were present during earlier National Trust surveys, as late terns may arrive or failed breeders may move to new islands. Early visits are to (hopefully) monitor the progression of successful Sandwich Terns. Later visits monitor egg-laying and chick rearing of all species. There is constant feedback to the National Trust, so that predation events or other failures/successes are reported on the same day of the survey.

A total of 10 productivity visits took place between 5 June and 22 July 2024. The islands visited at least twice were Dunsy Rock, North Boretree Rock, Jackdaw Island, Black Rock, Shones Island, Greenisland Rock, Gull Rock (Boretrees), Salt Rock, North Sheelahs, South Sheelahs, Dunnyneill Islands, Gabbock Island, Swan Island, Rat Island and The Chandries. Wildlife Licence DSB/051/24 was obtained to allow the monitoring of terns on Strangford Lough.

All the colonies being monitored were either small islands, or small parts of larger islands. In discussion with the National Trust, it was decided that counts would be on an all-island/colony basis i.e. all nests and chicks on each island would be counted, there would be no use of fencing or smaller on-island study areas. Walked transects were used, mostly using two observers, to count nests, clutch size and chicks. This approach worked very well. Nest counts do not necessarily give a full account of the total number of pairs as at any one time as there will be pre-breeding birds yet to lay, birds with empty scrapes, and younger birds can arrive and lay later in the season, even when other birds have chicks. Thus, nest counts will never represent an absolute population figure, but peak counts are a repeatable measure of breeding attempts at each colony.

Trail cameras were deployed on some islands, in an attempt to monitor predation, those islands being Swan Island, the Shones and Black Rock. The cameras deployed were provided by the National Trust. The cameras were Browning Elite HP4 Spec Ops HD.

Results

All islands could not be visited on every day, most of the main breeding sites in use in 2024 were visited on nearly every survey day. Some islands were however seldom visited due to poor weather in 2024. The weather was predominantly from the north and west in 2024, and often unsettled, making surveying uncomfortable at times. In these conditions approaching an island from the 'wrong' direction can be problematic, with a risk of beaching and some exposed islands are just too dangerous to visit. North Sheelahs and South Sheelahs are in shallow water with many rocks and could only be visited twice each.

The species/island results are presented in Table 1. No Roseate Terns were recorded. A single Little Tern was observed at Salt Rock on 12 June but was not seen subsequently. Across all the islands monitored just six Sandwich Terns, two Common Terns and one Arctic Tern fledged. This was 0.024 Sandwich Terns per nest, 0.008 Common Terns per nest and 0.006 Arctic Terns per nest.

Table 1. Results of tern productivity monitoring at Strangford Lough in 2024.

	Sandwich Tern		Common Tern		Arctic Tern		
Island	Peak nest count	Chicks fledged	Peak nest count	Chicks fledged	Peak nest count	Chicks fledged	Notes/issues
Black Rock	145	6	61	0	20	0	Egg and chick predation was very high and nearly wiped out the entire colony. Camera trapping showed that night-time Great Black-backed Gull predation was responsible for the loss of eggs and likely many chicks. An Otter was responsible for the loss of chicks, and probably scavenged dead chicks. Avian influenza likely killed a number of gull and tern chicks. Six Sandwich Tern chicks fledged.
Dunnyneill Islands	0	0	5	0	23	0	The Dunnyneill Islands had small numbers of Arctic Terns in early June, which gradually built through the month. There was a late June influx of failed breeders from elsewhere. There was a succession of hatching from mid June but on each visit older chicks seemed to have disappeared. The site is difficult to survey, with thick mats of Sea Beet, and it was not certain if chicks may have been hidden. However, the site was abandoned and it is considered most likely that the chicks were predated by gulls. The island has a high density of big gulls.
Dunsy Rock	0	0	44	2	4	0	There was evidence of high tides and wash-outs of nests. The site is known to have issues with Great Black-backed Gulls, and the disappearance of many chicks suggests gull predation. The pair of Great Black-backed Gulls present in 2024 apparently failed to produce any chicks.
Gabbock Island	NA	NA	NA	NA	NA	NA	Island not used in 2024.
Greenisland Rock	0	0	25	0	0	0	A small low-lying island close to Dunsy Rock and Whiterock. High tides caused egg losses around the edge of the island. At the highest tide only a 3–4 metre wide strip remained above sea level. The colony was essentially wiped out by presumed avian flu, killing young chicks.
Gull Rock (Boretrees)	0	0	21	0	0	0	A small colony of Common Terns were present, but the site had been abandoned by 18 June, with all Black-headed Gulls also gone. It is difficult to ascertain what happened. There may have been some wash-outs, but it would be expected that birds would re-lay. For birds of all species to vanish mid June, predation is highly likely. There is a history of Great Black-backed Gull predation on nearby North Boretree, and very probable predation on the nearby Chandries. It seems most likely that gulls were responsible for the colony desertion.

	Sandwich Tern		Common Tern		Arctic Tern		
Island	**Peak nest count**	**Chicks fledged**	**Peak nest count**	**Chicks fledged**	**Peak nest count**	**Chicks fledged**	**Notes/issues**
Jackdaw Island	NA	NA	NA	NA	NA	NA	Island not used in 2024.
North Boretree Rock	0	0	1	0	0	0	No terns present at the start of the season. Common and Arctic Terns arrived later in June but only one egg was laid. No tern chicks of any species fledged.
North Sheelabs	0	0	0	0	32	0	North Sheelahs is a low shingle island, prone to flooding, with a concentration of Herring Gull nests. There was a maximum of 32 Arctic Tern nests found by the National Trust in early June (Hugh Thurgate pers. comms.), all but two were lost by the time the site was visited by the author on 18 June. There was evidence of a very high tide, the ridge is very susceptible to over-washing.
Rat Island	NA	NA	NA	NA	NA	NA	Island not used in 2024.
Salt Rock	0	0	0	0	14	1	As in the previous two years, there were small numbers of Arctic Terns. There was loss of eggs due to high tides on several occasions. At least one chick died from presumed avian flu (a flying bird). One chick fledged.
Shones Island	0	0	54	0	0	0	Predation of eggs started before hatching, some nests progressed to hatching. All chicks, and remaining nests, were predated. Camera evidence showed that there was night-time predation of the colony by a Fox.
South Sheelabs	0	0	5	0	2	0	South Sheelahs had five Common Tern nests on the first visit in June, two Arctic Tern nests recorded by the National Trust a few days earlier were absent. The island now has practically no vegetation as it is over-washed regularly. There is an extremely high density of nesting and resting Herring Gulls on this small island, fledging tern chicks seems impossible. The author observed an Oystercatcher *Haematopus ostralegus* chick being predated by a Herring Gull.
Swan Island	83	0	34	0	10	0	Swan Island was surveyed by the National Trust on 17 May, when 83 Sandwich Tern nests were present. By early June most of the eggs, particularly all the Sandwich Tern eggs, had been predated by Brown Rats. Rats have become established on the island. The island was completely abandoned by 30 June.
The Chandries	22	0	18	0	80	0	The Chandries are three islets connected at low tide. The results presented are for all islets combined. The season started strongly with two Arctic Tern colonies and one Common Tern colony. A small Sandwich Tern colony then became established on the western islet. The Arctic Tern nests and chicks gradually disappeared. Certainly, high tides resulted in the loss of many nests on the eastern islet. On the western islet there was evidence of predation of Sandwich Tern eggs, and all tern and small gull eggs/chicks disappeared. This disappearance is the same as 2023. Great Black-backed Gull was observed in 2023 attacking Common Gull chicks. There is a history of nocturnal predation on the nearby North Boretree and predation was suspected on Gull Rock in 2024. The pattern of disappearance and egg damage is indicative of gull predation.

Causes of failure

Tides and weather

High tides caused losses on several islands. The islands on Strangford are low-lying and susceptible to high tides and poor weather. There were thankfully no gales as in 2023, but the weather was rarely settled. The poor weather and high tides in 2024 had recorded negative impacts in terns at Salt Rock, Dunsy Rock, Greenisland Rock, The Chandries, Black Rock and Swan Island. Weather and tidal events, impacting the low-lying island colonies, is the single biggest long-term issue for the Strangford colonies.

Gull predation

Over the period of monitoring since 2018, gull predation, particularly by Great Black-backed Gull, has been the largest single cause of predation loss. In previous years Great Black-backed Gull predation has been confirmed at Dunsy Rock and North Boretree. In 2024 it was confirmed at Black Rock. It has been strongly suspected in multiple years at The Chandries, in 2024 at Gull Rock (Boretrees). It is almost certain the species predates nests on other islands. In 2023 a Great Black-backed Gull with a full crop was observed flying away from The Chandries in early July. A Great Black-backed Gull was observed on 5 July 2023 attacking and attempting to predate a flying Common Gull chick on the water near The Chandries (it escaped). Recorded predation almost exclusively occurs at night, with birds walking into the colony. Adult terns find it difficult to deal with the gulls and they act with impunity. A major issue is that some of the islands where night-time predation occurs do not have breeding Great Black-backed Gulls. These birds are visitors, which makes it nearly impossible to prevent it.

Otters

Otter predation was proven at Black Rock where an animal was caught on camera. There are holts on two islands. Otter predation is a very site-specific problem which could crop up at any island in a given year.

Brown Rat

Brown Rats were responsible for the destruction of the Swan Island colony and have now become established on the island. Swan Island was predated in 2023, but the modus operandi was completely different, and more typical of Otter. There was no evidence of Brown Rats in 2023.

Fox

Fox predation was proven at Shones Island. The species was a suspect in 2022 when there was a mass predation event of chicks. The 2024 footage is supporting evidence that a Fox was responsible at that time. Shones Island is accessible from the mainland at low tide.

Avian influenza

Although not tested, the signs of birds dying from avian flu are quite unique compared to other causes. Only one adult Arctic Tern died from avian flu, it being a sick bird which later was found dead. This was much reduced from 2023. Chicks were found dying on Greenisland Rock and Salt Rock. Deaths were probable on Black Rock. In addition to these terns two adult Black-headed Gull were thought to have died from avian flu. On Black Rock at least 20 Black-headed Gull chicks were thought to have died from avian flu, collapsing at fledging. This may be an underestimate.

Acknowledgements

Strangford Lough Yacht Club have kindly provided permission for launching of the survey boat from their jetty at Whiterock, during 2022–2024 and this has greatly assisted the survey efforts. It would be nearly impossible to carry out the surveys as they are currently without their help. The work was funded through the National Trust and DAERA Environment Fund.

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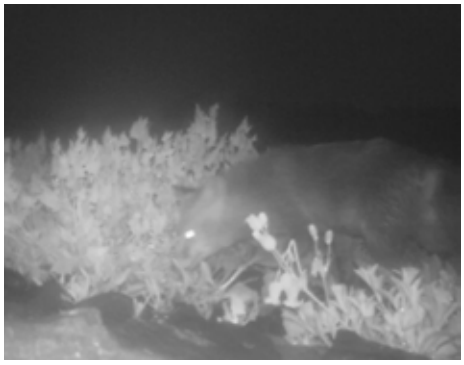
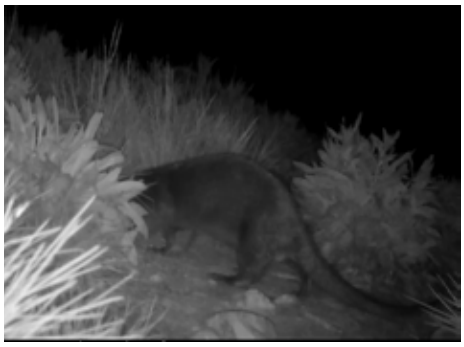
Figures (clockwise from top left): Inundation of grassy areas on Swan Island during a high tide; Fox predating Common Tern nests on Shones Island, captured on trail camera; Great Black-backed Gull chasing a small gull chick at night, Black Rock, captured on trail camera; Otter on Black Rock, captured on trail camera; Brown Rat hole, Swan Island; Sandwich Tern chick predated by Otter, Black Rock.





Outer Ards: 2024 Seabird Nesting Report

Hugh Thurgate

Strangford Lough and The Ards Peninsula Lead Ranger, National Trust

Arctic Tern, by Edmund Fellowes / BTO

Summary

	Sandwich Tern	Arctic Tern	Common Tern	Little Tern	Black-headed Gull	Common Gull
Bird Island (Portavogie)		115		1		
Green Island (Portavogie)		26				
Sandy Island	N/C	N/C	N/C	N/C	N/C	N/C
Gun's Island	N/C	N/C	N/C	N/C	N/C	N/C
Burial Island (Ballyhalbert)	N/C	N/C	N/C	N/C	N/C	N/C
North Rocks (Portavogie)	N/C	N/C	N/C	N/C	N/C	N/C
Cockle Island	1	70	13		112	6
Total	1	211	13	1	112	6

Selected species accounts

Arctic Tern

In 2024 a total of 211 AON for the Outer Ards islands represented 57% of the combined Strangford Lough and Outer Ards population. Cockle Island in Groomsport Harbour would normally hold the largest Arctic Tern colony in the Outer Ards. However, after failing to fledge a single chick there in 2023, over half the birds did not return in 2024 and it's possible that these birds re-located to Bird Island (in 2023 the combined total for Cockle Island and Green & Bird Islands off Portavogie was 386 AON and in 2024 it was 369 AON). The colony on Bird Island is highly susceptible to high tide wash-outs but at least in 2024 the island did not appear to have been over-topped and a significant number of fledged young (24) were found in the vicinity of the islands on 2 July and 13 young chicks were still present at the colony.

Little Tern

Between 2001 and 2018, sightings of Little Tern during annual seabird monitoring off the Outer Ards coast were few and far between. Any individuals seen were presumed to be post-breeding birds dispersing from colonies at either Point of Aird on the Isle of Man or from one of those on the east coast of the Republic of Island, quite possibly flying up from Baltry, in County Louth. On 6 June 2019, three individuals were recorded between Bird and Green Islands off Portavogie but despite thorough searching no nests were located. In 2022, two were present at the same location on 21 June and in 2023 a pair were observed performing courtship flights on 6 July but again no clutches or chicks were located. In 2024 two adults were recorded flying amongst Arctic Tern during a monitoring visit to the islands on 17 June. After patiently tracking these birds for some minutes, one of them was seen to repeatedly come back to the same area, eventually settling on an apparent nest on Bird Island. This was later confirmed to be a clutch of two eggs, lying in a shallow scrape in fine shingle, loosely lined with white shell fragments.

Little Terns typically arrive in Ireland in mid May and if the clutch found on 17 June was in the latter stages of incubation, unfledged chicks would have been expected to be present by the next visit to the island on 2 July (fledging time 28 days). If the eggs had just been laid on 17 June, then the eggs would not have hatched by 2 July as the incubation period lasts for 22 days. Unfortunately, neither eggs nor young were found and the pair were deemed to have failed.

The species is described in the NIBA *Northern Ireland Bird Report* (vol. 16) (containing records for 2003 & 2004), as an uncommon passage-migrant and summer transient to coasts, breeding erratically in very small numbers, most recently in Down (1996). Up until 1984 there was a small but regular breeding colony up at Magilligan Strand in Co. Londonderry. The value of protecting colonies from disturbance and predators has been well documented and clearly demonstrated in the Irish east coast colonies of Louth, Dublin and Wicklow, where wardening commenced at four colonies in 1986. The result of this greater protection was an increase in breeding numbers, a concentration into fewer colonies and improved productivity. The nearest Irish colony to the Outer Ards is at Baltry in Co. Louth at the mouth of the River Boyne. In 2024 the Baltry colony had a record year with 112 nests counted with a fledging success of 1.49 chicks per nest. It was also a record year at the biggest Irish colony at Kilcoole in County Wicklow with 285 nests recorded and at Portrane, Co. Dublin with at least 53 chicks fledging and a further 62 nests recorded at Cahore, Co. Wexford. If these east coast sites continue to thrive it is likely that summer sightings of Little Tern in Northern Ireland will increase and the prospect of further nesting enhanced.

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Little Tern eggs / Hugh Thurgate

Appendix: Species counts

Cumulative counts (n) of all species of seabird within Seabird Monitoring Programme (SMP) 'Master Sites' in Northern Ireland between 2015–2024. The number of sub-sites surveyed in a Mastersite, an indication of relative survey effort between years, is included in brackets next to the count unless the sub-sites were not specified (NR = not recorded). Hyphens (–) denote that no data were collected. Seabirds are counted using recommended census units from Table 3, unless specified with the record. EST means that numbers are an estimate, based on the best available method. Asterisks (*) denote that the count was made late in the season and therefore may not be as accurate. Sample Plot counts submitted and IND counts for any species other than auks were not included to avoid duplication. For total seabird data for any specific site, please make a data request through SMP.

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Species (Count units)	**Master Site**	**N (sites)**	**N (sites)**	**N (sites)**	**N (sites)**	**N (sites)**	**N (sites)**	**N (sites)**	**N (sites)**	**N (sites)**	**N (sites)**
Fulmar	Blackhead	3 (1)*	3 (1)	29 (1)	30 (1)	31 (1)	19 (1)*	6 (1)	11 (1)	6 (1)*	7 (1)
(AOS)	Downhill	250 (1)*	78 (4)*	81 (4)	118 (6)	95 (5)*	–	130 (6)*	140 (6)	111 (5)	–
	East Antrim Coast	3 (2)*	45 (16)	60 (11)*	32 (11)	39 (14) EST*	29 (13) EST*	39 (12)*	32 (11)*	20 (7) EST	20 (7)*
	Larne Lough to Portmuck	2137 (1)*	292 (2)	322 (3)*	328 (2)*	198 (2)*	–	2 (1)	1 (1)	–	–
	Muck Island	3 (1)*	68 (1)	80 (1)	72 (1)	43 (1)	56 (1)*	61 (1)	69 (1)	39 (1)	72 (1)
	North Antrim coast	20 (1)*	37 (10)	38 (10)	16 (7)	21 (6)*	4 (1)*	12 (7)	13 (7)	7 (1)	–
	Whitehead	402 (1)	3 (1)	5 (1)	7 (1)	5 (1)*	8 (1)*	–	5 (1)	2 (1)	4 (1)
	Maggy's Leap	–	–	1 (1)	–	2 (1)*	–	–	–	–	–
	Causeway Coast	–	–	–	84 (1)*	165 (4)*	159 (3)*	880 (18)*	–	–	–
	Giant's Causeway Coast	–	–	–	57 (3)	134 (2)*	81 (2)*	209 (4)*	–	–	–
	Maggy's Leap to Newcastle	–	–	–	–	–	2 (1)	0 (1)*	0 (1)*	0 (1)*	0 (1)*
	Binevenagh	–	–	–	–	–	–	11 (5)	7 (5)	8 (4)	–
	Copeland Islands SPA	–	–	–	–	–	–	13 (1) EST*	–	10 (1)	16 (1)
	Rathlin Island SPA	–	–	–	–	–	–	1038 (1)	–	–	–
	Sheep Island SPA	–	–	–	–	–	–	61 (1)	–	–	–
	Skerry Islands	–	–	–	–	–	–	43 (6) EST	–	–	–
Cormorant	Larne Lough to Portmuck	2 (1)*	12 (1)	13 (1)	12 (1)	0 (1)	–	–	–	–	–
(AON)	Strangford Lough SPA	20 (1)	343 (1)*	360 (1)	314 (1)	388 (1)*	167 (1)*	–	364 (1)	446 (1) EST	379 (1) EST
	Sheep Island SPA	–	84 (1)	100 (1)	88 (1)	–	–	139 (1)	86 (1) EST*	–	–
	Skerry Islands	–	–	160 (1)	94 (1)	137 (1)	–	82 (6) EST	193 (1) EST*	–	–
	North Antrim coast	–	–	–	0 (1)*	2 (1) EST	6 (2) EST*	4 (7) EST*	–	3 (1) EST*	–
	Outer Ards SPA	–	–	–	53 (1)	77 (1)*	0 (1)*	–	–	–	–
Shag	Downhill	92 (2)	0 (1)	–	–	–	–	13 (5)	13 (1)	12 (1)	–
(AON)	Larne Lough to Portmuck	506 (1)*	22 (1)*	20 (1)	25 (1)	18 (1)	–	–	–	–	–
	Maggy's Leap	4 (1)*	3 (1)*	5 (1)	–	9 (1)*	–	–	–	–	–

	Muck Island	2070 (1)*	21 (1)	30 (1)	34 (1)	38 (1)	31 (1)*	67 (1)	71 (1)	13 (1)	23 (1)
	Rathlin Island SPA	135 (1)	47 (1)	30 (1)	55 (1)*	20 (1)	–	74 (1)	100 (1) EST*	70 (1) EST	56 (1) EST
	Skerry Islands	0 (1)	–	–	–	–	–	–	–	–	–
	Maggy's Leap to Newcastle	–	3 (1)	–	–	–	15 (1)	12 (1)	10 (1) EST	8 (1)*	9 (1) EST
	North Antrim coast	–	1 (6)	1 (7)	2 (2)*	0 (1)	–	8 (7)	6 (2)	9 (2)	–
	Sheep Island SPA	–	84 (1)	–	–	–	–	–	–	–	–
	The Maidens	–	–	–	20 (1) EST	–	–	–	–	–	–
Great Skua (AOT)	Rathlin Island SPA	135 (2)*	1 (1)	1 (1)	1 (1)*	–	–	2 (1) EST	1 (1) EST*	1 (1) EST	1 (1) EST
Kittiwake	Downhill	135 (6)*	–	–	–	–	–	102 (6)	130 (1)	117 (1)*	–
(AON)	Larne Lough to Portmuck	2 (1)*	1072 (1)*	1053 (1)	683 (1)	1145 (1)	–	–	–	–	–
	Maggy's Leap	2 (1)*	78 (1)*	76 (1)	68 (1)*	91 (1)*	–	–	–	92 (1)	–
	Muck Island	0 (1)	351 (1)	369 (1)	314 (1)	519 (1)	521 (1)*	603 (1)	711 (1)*	299 (1)	415 (1)
	North Antrim coast	52 (1)*	279 (10)*	236 (10)	293 (9)*	332 (6)*	141 (1)*	423 (7)	499 (2)*	366 (2)	–
	Maggy''s Leap to Newcastle	–	–	–	513 (1)*	671 (1)*	717 (1)*	759 (1)*	–	545 (1)*	588 (1) EST
	Rathlin Island SPA	–	–	–	–	–	–	13706 (1)	–	9629 (1)	–
	Sheep Island SPA	–	–	–	–	–	–	230 (1)	–	–	–
	Skerry Islands	–	–	–	–	–	–	58 (6) EST	–	–	–
Black–headed Gull	Belfast Harbour	450 (1) EST*	386 (1)*	717 (1)	607 (1)	560 (1)	806 (1)*	720 (1)	1500 (1)	587 (1)*	402 (1)*
(AON)	Carlingford Lough SPA	1 (1)*	–	–	–	0 (1)*	–	–	–	–	1 (1)*
	Larne Lough SPA	1 (1)*	3201 (1)*	3060 (1)*	2895 (1)*	2618 (1)	2000 (1)*	2236 (1)	2089 (1)	2888 (1)*	1620 (1) ST *
	Lough Neagh/Lough Beg SPA	20 (1)*	179 (8)*	115 (1)*	146 (2)*	143 (1)	104 (1) EST*	121 (1)	252 (2) EST*	107 (1)*	104 (1)*
	Lough Vearty	0 (1)	0 (1)	0 (1)	–	–	–	–	–	–	–
	Lower Lough Erne	95 (1)*	1238 (1)*	1218 (1)*	1371 (1)*	1718 (1)	–	1416 (1)	1255 (1)	–	–
	Outer Ards SPA	0 (1)*	67 (1)*	93 (1)	189 (2)*	239 (1)*	0 (1)*	135 (2)	29 (2)*	255 (1)*	112 (1)*
	Strangford Lough SPA	0 (1)	1312 (1)*	1271 (1)	1267 (1)*	1305 (1)*	–	–	1297 (1)*	1179 (2)*	653 (2)*
	Antrim Town	245 (1)*	15 (1) EST	–	–	–	–	–	–	–	–
	Moorlough Lake	–	0 (1)*	–	93 (1)*	–	–	67 (1) EST	58 (1) EST	10 (1) EST*	11 (1) EST
	Copeland Islands SPA	–	–	–	–	–	–	1 (1) EST*	0 (1)	–	–
	Rathlin Island SPA	–	–	–	–	–	–	5 (1)*	–	–	40 (1) EST
Mediterranean Gull	Larne Lough SPA	353 (1)*	5 (1)*	2 (1)*	5 (1)*	1 (1)	1 (1)*	3 (1)	4 (1)	5 (1)*	2 (1) EST*
(AON)	Strangford Lough SPA	1265 (1)*	0 (1)	0 (1)	2 (1)*	0 (1)*	–	–	2 (1)*	2 (1) EST	3 (1)*
	Belfast Harbour	–	2 (1)*	5 (1)	7 (1)	6 (1)	–	1 (1)	4 (1)	5 (1)*	2 (1)*

	Lough Neagh/Lough Beg SPA	–	–	–	–	–	–	–	–	–	1 (1)*
Common Gull (AON)	Carlingford Lough SPA	1 (1)*	3 (1)*	6 (1)*	6 (1)*	18 (2)*	1 (1)	7 (2)*	–	–	8 (1)*
	Larne Lough SPA	1825 (1)*	27 (1)*	32 (1)*	37 (1)*	9 (1)	22 (1)*	28 (1)	45 (1)	47 (1)*	49 (1) EST*
	Lough Vearty	0 (1)*	–	8 (1)	–	–	–	–	–	–	–
	Lower Lough Erne	84 (1)*	189 (1)*	143 (1)*	262 (1)*	337 (1)	–	–	238 (1)	–	–
	Muck Island	86 (1)*	–	–	–	–	34 (1) EST	23 (1)	28 (1)	–	3 (1) EST
	Outer Ards SPA	225 (1)*	1 (1)*	8 (1)	10 (1)	5 (1)*	0 (1)*	7 (1)	5 (1)*	7 (1)*	6 (1)*
	Rathlin Island SPA	207 (3)*	84 (1)	52 (1)	62 (1)*	21 (1)	–	69 (1)*	42 (1)	37 (1)*	33 (1)*
	Strangford Lough SPA	97 (1) EST*	333 (1)*	322 (1)	293 (1)*	346 (1)*	–	–	320 (1)	329 (1) EST	282 (1)*
	Antrim Town	679 (1)*	15 (1) EST*	–	–	–	–	–	–	–	–
	Copeland Islands SPA	–	–	–	15 (1)	–	–	–	–	–	6 (1)
	East Antrim Coast	–	–	–	–	0 (1)*	–	3 (1) EST*	–	–	–
	Causeway Coast	–	–	–	–	–	40 (1) EST*	16 (1)*	–	–	–
Lesser Black–backed Gull (AON)	Lower Lough Erne	164 (1)*	1185 (1)*	1316 (1)*	1622 (1)*	1584 (1)	–	–	1653 (1)	–	–
	Strangford Lough SPA	194 (1)	298 (1)*	343 (1)*	310 (1)*	316 (1)*	–	–	339 (1)*	293 (1)*	288 (1)*
	Antrim Town	1 (1)*	600 (1) EST*	–	–	–	–	–	–	–	–
	Belfast Harbour	–	–	1 (1)	1 (1) EST*	1 (1)	–	–	–	–	–
	Belfast	–	–	–	101 (1)*	221 (1)	–	–	–	–	–
	Copeland Islands SPA	–	–	–	365 (1)*	547 (1)*	–	390 (1) EST*	602 (1)	683 (1) EST*	556 (2) EST
	Carlingford Lough SPA	–	–	–	–	2 (2)*	–	0 (2)*	2 (1)*	–	–
	Muck Island	–	–	–	–	–	13 (1) EST*	11 (1)*	19 (1)	2 (1)	12 (1) EST
	Outer Ards SPA	–	–	–	–	–	0 (1)*	–	1 (1)	–	–
	Causeway Coast	–	–	–	–	–	–	3 (2)*	–	–	–
	Rathlin Island SPA	–	–	–	–	–	–	519 (1)	–	825 (1)	726 (1) EST
	Sheep Island SPA	–	–	–	–	–	–	88 (1)*	–	–	–
	Skerry Islands	–	–	–	–	–	–	537 (6) EST	–	–	–
	Gun's Island Northern Island	–	–	–	–	–	–	–	10 (1) EST	–	–
Herring Gull (AON)	Larne Lough to Portmuck	0 (1)*	2 (1)	1 (1)	–	–	–	–	–	–	–
	Lower Lough Erne	1026 (1)*	5 (1)*	5 (1)*	5 (1)*	3 (1)	–	–	3 (1)	–	3 (1)*
	Strangford Lough SPA	64 (1)*	1177 (1)*	1070 (1)*	1062 (1)*	1273 (1)*	–	–	1523 (1)*	1920 (1)*	1900 (1)
	Antrim Town	433 (1)*	15 (1) EST*	–	–	–	–	–	–	–	–
	Belfast	–	–	–	16 (1)*	39 (1)	–	–	–	–	–
	Copeland Islands SPA	–	–	–	483 (1)*	483 (1)*	–	585 (1) EST*	680 (1)*	869 (1) EST*	1081 (2) EST
	Outer Ards SPA	–	–	–	187 (2)*	199 (1)*	0 (2)*	4 (1)	3 (1)*	–	–

	Portrush Harbour	–	–	–	2 (1)*	–	–	–	–	–	–
	Carlingford Lough SPA	–	–	–	–	2 (2)*	–	24 (2)*	20 (1)*	15 (1)*	3 (1)*
	Maggy's Leap	–	–	–	–	1 (1)*	–	–	–	–	–
	Maggy's Leap to Newcastle	–	–	–	–	–	1 (1)	0 (1)*	–	0 (1)*	0 (1)
	Muck Island	–	–	–	–	–	17 (1) EST*	18 (1)	25 (1)	–	74 (1) EST
	Causeway Coast	–	–	–	–	–	–	9 (3)*	–	–	–
	North Antrim coast	–	–	–	–	–	–	1 (7)	–	–	–
	Rathlin Island SPA	–	–	–	–	–	–	83 (1)	–	174 (1)	205 (1) EST*
	Sheep Island SPA	–	–	–	–	–	–	55 (1)	–	–	–
	Skerry Islands	–	–	–	–	–	–	229 (6) EST	–	–	–
	Gun's Island – Northern Is.	–	–	–	–	–	–	–	5 (1) EST	–	–
Great Black–backed Gull (AON)	Carlingford Lough SPA	2 (1)*	2 (1)*	2 (1)*	4 (1)	0 (1)*	–	0 (2)*	–	–	–
	Larne Lough to Portmuck	201 (1)*	1 (1)	2 (1)	2 (1)	–	–	–	–	–	–
	Lower Lough Erne	16 (1)*	4 (1)*	4 (1)*	2 (1)*	3 (1)	–	1 (1)	2 (1)	–	1 (1)
	Muck Island	0 (1)	–	2 (1)	2 (1)	–	4 (1)*	11 (1)	4 (1)	–	4 (1) EST
	Strangford Lough SPA	1 (1)*	125 (1)*	114 (1)	129 (1)*	107 (1)*	–	–	127 (1)	149 (1)*	155 (1)*
	Lough Neagh/Lough Beg SPA	–	–	1 (1)	1 (1)*	–	2 (2) EST*	–	–	–	–
	Maggy's Leap	–	–	2 (1)	–	1 (1)*	–	–	–	–	–
	Outer Ards SPA	–	–	–	40 (1)	42 (1)*	0 (1)*	–	–	–	–
	Maggy's Leap to Newcastle	–	–	–	–	–	1 (1)	0 (1)*	2 (1) EST*	0 (1)*	1 (1) EST
	Rathlin Island SPA	–	–	–	–	–	–	12 (1)	–	20 (1)	27 (1) EST
	Sheep Island SPA	–	–	–	–	–	–	7 (1)	–	–	–
	Skerry Islands	–	–	–	–	–	–	4 (6) EST	–	–	–
	The Maidens	–	–	–	–	–	–	–	5 (1) EST*	–	–
	Copeland Islands SPA	–	–	–	–	–	–	–	–	–	5 (1)
Little Tern (AON)	Outer Ards SPA	–	–	–	–	–	0 (1)*	–	–	–	1 (1)
Sandwich Tern (AON)	Carlingford Lough SPA	0 (1)*	7 (1)*	71 (1)*	13 (1)*	48 (2)*	–	52 (1)*	–	39 (1)*	52 (1)*
	Larne Lough SPA	1 (1)*	1229 (1)*	1141 (1)*	732 (1)*	1010 (1)	900 (1)*	1113 (1)	1254 (1)	1002 (1)*	621 (1) EST*
	Lower Lough Erne	30 (1)*	226 (1)*	316 (1)*	250 (1)*	230 (1)	143 (1) EST*	126 (1)	102 (1)	–	42 (1)*
	Outer Ards SPA	17 (1)*	0 (1)*	145 (2)	92 (2)*	0 (1)*	14 (3)*	14 (1)	48 (1)*	128 (1)*	1 (1)
	Strangford Lough SPA	229 (1)*	337 (1)*	775 (1)*	776 (1)*	434 (1)*	252 (1)	–	310 (1)	251 (1)*	170 (1)
Common Tern	Belfast Harbour	344 (1)*	418 (1)*	367 (1)	385 (1) EST*	672 (1)	80 (1)*	485 (1)	360 (1)	92 (1)*	51 (1)*

(AON)	Carlingford Lough SPA	220 (1)*	123 (1)*	147 (1)*	70 (1)*	56 (2)*	25 (1) EST*	168 (2)*	96 (1)*	40 (1)*	101 (1)*
	Larne Lough SPA	24 (1)*	333 (1)*	355 (1)*	307 (1)*	303 (1)	187 (1)*	157 (1)	129 (1)	114 (1)*	28 (1) EST*
	Lough Neagh/Lough Beg SPA	0 (1)*	75 (12)*	102 (1)*	135 (3)*	128 (1)	68 (1) EST*	37 (1)	39 (2) EST*	23 (1)*	21 (1)*
	Lower Lough Erne	5 (1)*	41 (1)*	51 (1)*	52 (1)*	54 (1)	36 (1) EST*	26 (1)	33 (1)	21 (1)*	15 (1)
	Moorlough Lake	1211 (1)*	–	–	2 (1) EST*	–	–	9 (1) EST	12 (1) EST*	3 (1) EST	6 (1) EST*
	Outer Ards SPA	671 (1)*	18 (1)*	203 (2)	17 (1)	21 (1)*	25 (3)*	13 (1)	26 (2)*	23 (1)*	13 (1)
	Strangford Lough SPA	22 (1)	457 (1)	262 (1)	340 (1)	262 (1)*	228 (1)	–	449 (1)*	273 (1)*	185 (2)*
	Belfast Channels	–	12 (1)*	13 (1)*	0 (1)	17 (1)	29 (1) EST*	32 (1) EST*	–	–	–
Roseate Tern (AON)	Larne Lough SPA	5 (1)*	1 (1)*	1 (1)*	1 (1)*	–	1 (1)*	1 (1)	1 (1)	1 (1)*	0 (1)*
Arctic Tern	Belfast Harbour	83 (1)*	4 (1)*	–	15 (1) EST*	1 (1)	–	–	3 (1)	13 (1)*	6 (1)*
(AON)	Carlingford Lough SPA	85 (1)*	41 (1)*	20 (1)*	70 (1)	100 (2)*	–	–	–	43 (1)*	49 (1)*
	Larne Lough SPA	25 (14)	0 (1)*	0 (1)*	0 (1)*	0 (1)	–	–	–	–	–
	Outer Ards SPA	1 (1)*	43 (1)*	517 (3)	343 (2)*	255 (1)*	177 (3)*	216 (1)	238 (2)*	171 (1)*	211 (3)
	Strangford Lough SPA	3 (2)*	173 (1)	73 (1)*	193 (1)	245 (1)	105 (1)	–	173 (1)	154 (1)*	138 (1)
Guillemot	Copeland Islands SPA	–	–	–	150 (1) EST*	150 (1) EST*	200 (1) EST*	0 (1)*	–	82 (1) EST	51 (1) EST
(IND)	Larne Lough to Portmuck	63 (1)*	2675 (1)*	2326 (1)	2284 (1)	2617 (1)	–	–	–	–	–
	Muck Island	138 (1)*	2926 (1)	2554 (1)	2478 (1)	2782 (1)	3107 (1)*	2340 (1)	2868 (1)*	1462 (1)	1554 (1)
	Causeway Coast	–	–	–	–	–	–	278 (3)*	–	–	–
	Rathlin Island SPA	–	–	–	–	–	–	149510 (1)	–	110534 (1) EST	–
	Sheep Island SPA	–	–	–	–	–	–	703 (1)	–	–	–
Razorbill	Larne Lough to Portmuck	835 (1)*	858 (1)*	560 (1)	882 (1)	679 (1)	–	–	–	–	–
(IND)	Muck Island	0 (1)	1048 (1)	799 (1)	736 (1)	1118 (1)	871 (1) EST*	605 (1)	314 (1)	125 (1)	307 (1)*
	Causeway Coast	–	–	–	–	–	–	361 (7)*	–	–	–
	Copeland Islands SPA	–	–	–	–	–	–	20 (1) EST*	–	–	–
	Rathlin Island SPA	–	–	–	–	–	–	22421 (1)*	–	–	–
	Sheep Island SPA	–	–	–	–	–	–	221 (1)*	–	–	–
	Skerry Islands	–	–	–	–	–	–	30 (6) EST	–	–	–
Black Guillemot	Rathlin Island	16 (5)	81 (1)*	70 (1)*	80 (1) EST*	75 (1) EST*	80 (1) EST*	51 (1) EST*	–	286 (1) EST*	307 (1) EST*
(IND)	Annalong Harbour	62 (1)*	39 (1)	–	34 (1)*	58 (1)*	–	58 (1) EST*	–	–	52 (1)*
	Ardglass	581 (1)	16 (1)*	18 (1)*	–	–	–	13 (1) EST*	10 (1)	–	12 (1)*
	Ballycastle	–	12 (3)*	–	–	–	–	10 (2) EST*	–	–	–
	Ballyhalbert	–	2 (1)*	0 (1)*	–	1 (1)*	–	–	–	–	–

	Ballywalter	–	8 (1)*	2 (1)*	–	8 (1)*	–	–	–	–	–
	Bangor	–	56 (1)*	–	76 (1)*	57 (1)*	–	75 (1) EST*	89 (1) EST*	–	63 (1)*
	Bangor to Groomsport	–	0 (1)	0 (1)*	10 (1)*	–	–	–	–	–	–
	Belfast (Harbour)	–	113 (1)	113 (1)*	–	–	–	58 (3) EST*	133 (4)*	115 (4)*	69 (3)*
	Belfast to Grey Point	–	0 (1)*	0 (1)*	7 (1)*	–	–	7 (1) EST*	–	–	–
	Carlingford Lough	–	46 (3)*	37 (3)*	47 (3)*	42 (2)*	–	19 (3) EST*	22 (3)*	33 (4)*	26 (4)*
	Carrickfergus/White Head	–	150 (2)*	198 (2)*	140 (1)*	93 (1)*	–	163 (1) EST*	156 (2) EST*	153 (2) EST*	179 (2) EST*
	Donaghadee	–	8 (1)*	–	–	9 (1)*	–	–	–	–	–
	Grey Point to Bangor	–	0 (1)*	0 (1)*	–	1 (1)*	–	4 (1) EST*	11 (1) EST*	–	–
	Groomsport	–	10 (1)*	–	–	–	–	–	–	–	25 (1)*
	Groomsport to Donaghadee	–	0 (1)*	0 (1)*	–	–	–	–	23 (1)*	21 (1)*	14 (1)*
	Larne Lough Island Magee	–	195 (4)*	111 (4)*	161 (4)*	92 (2)*	16 (1) EST*	55 (1) EST*	83 (1) EST*	107 (1)*	114 (1)*
	Larne Lough to Portmuck	–	38 (3)	–	32 (3)*	–	–	36 (2) EST*	44 (2) EST*	38 (1)*	27 (2)*
	Larne to Torr Head	–	8 (2)*	78 (4)*	84 (4)*	9 (3)*	58 (1) EST*	70 (10) EST*	72 (4) EST*	61 (1)*	102 (8) EST*
	Lough Foyle	–	6 (2)*	0 (3)*	–	–	–	20 (1) EST*	–	–	–
	Muck Island	–	8 (1)*	–	14 (1)*	–	42 (1)*	4 (1) EST*	8 (1) EST*	9 (1)*	–
	Portavogie	–	12 (1)*	2 (1)*	–	12 (1)*	–	–	–	–	–
	Portbradden/Island Lean Quay / Carrickarede – Tysties	–	7 (1)	–	–	0 (1)*	–	16 (2) EST*	–	–	–
	Strangford Lough	–	17 (2)*	30 (7)*	23 (1)*	–	0 (2)*	–	0 (1)*	8 (3)*	37 (2)*
	The Barmouth (River Bann)	–	11 (1)	–	22 (1)*	26 (1)*	–	–	16 (1) EST*	15 (1)*	–
	Whitehead Town	–	0 (1)*	0 (1)*	1 (1)*	0 (1)*	–	–	0 (1)*	0 (1)*	0 (1)*
	Ballywalter to Ballyhalbert	–	–	0 (1)*	–	–	3 (1) EST*	–	–	–	–
	Bloody Bridge to Newcastle	–	–	–	9 (1)*	26 (1)*	–	–	48 (1) EST*	–	30 (1) EST*
	Copeland Islands	–	–	–	100 (1)*	60 (1)*	–	60 (1) EST*	64 (1) EST*	69 (2)*	94 (2)*
	Kilkeel Harbour	–	–	–	12 (1)*	–	–	14 (1) EST*	–	–	–
	Mourne Coast	–	–	–	25 (1)*	11 (1)*	–	–	–	–	7 (1) EST*
	Ramore Head/White Rocks	–	–	–	14 (1) EST*	25 (1) EST*	–	25 (2) EST*	0 (1)	22 (1)*	10 (1)*
	Bengore Head	–	–	–	–	3 (1)*	–	–	–	–	–
	Magilligan to Castlerock	–	–	–	–	16 (1)*	–	10 (1) EST*	15 (1) EST	–	11 (1)*
	Runkerry to Benbane Head	–	–	–	–	62 (2)*	–	58 (2) EST*	8 (2) EST*	32 (2)*	29 (2)*
	White Rocks/Runkerry Point	–	–	–	–	–	–	–	3 (1)*	–	–

Puffin	Larne Lough to Portmuck	694 (1)*	52 (1)*	57 (1)	55 (1)	54 (1)	–	–	–	–	–
(IND)	Copeland Islands SPA	–	–	–	21 (1) EST*	106 (1)*	144 (1) EST*	68 (1) EST*	53 (1) EST	25 (1)*	–
	Muck Island	–	–	–	–	–	1 (1)	–	0 (1)*	–	–
	Rathlin Island SPA	–	–	–	–	–	–	407 (1)	–	1171 (1) EST	1172 (1) EST*
	Sheep Island SPA	–	–	–	–	–	–	1 (1)*	–	–	–

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KATHERINE BOOTH JONES

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Apologies if we have inadvertently omitted anyone.

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British Trust for Ornithology
Head Office:
The Nunnery, Thetford
Norfolk IP24 2PU
Tel: +44 (0)1842 750050
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