



Department
for Environment,
Food & Rural Affairs

Habitats Regulations General Implementation Report for the Reporting Period 2019 to 2024 England

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

January 2026

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Executive Summary

Introduction

This is the first report published in England pursuant to the requirements of Regulation 9A of the Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitats Regulations”) which succeeds the reporting obligation previously required under Articles 17 and 12 of the Habitats and Wild Birds Directives respectively. It covers the terrestrial environment in England and the marine environment out to 12 nautical miles.

The report covers the period between 2019 and 2024. It evaluates how conservation measures undertaken during this period have supported the objectives outlined in the Habitats Regulations to conserve and restore biodiversity by preserving, maintaining, or restoring natural habitats and species, including wild birds.

Overview of the Current Status and Trend of Habitats and Species of importance in England

This report evaluates the conservation status of 71 habitat types and 74 species listed within the Annexes of the Habitats Directive and occurring in England, and 221 English bird species which are either listed on Annex I of the Wild Birds Directive and/or are regularly occurring breeding or migratory bird species. Population status assessments for bird species have been undertaken at a UK scale as trend information was only available at that level. Assessments of habitat types and terrestrial, freshwater, and plant species (hereafter referred to as “non-bird” species) have been conducted at an England level.

The assessment of habitat types found 3% to be in favourable conservation status (FCS). FCS can be described as the situation in which a habitat or species is “thriving throughout its natural range and is expected to continue to thrive into the future” (Mousley and others, 2023; Hanna, 2021; JNCC, 2018). 48% of habitats are in an unfavourable and deteriorating condition. Amongst the non-bird species, 30% were in favourable conservation status.

Direct assessments of FCS were not undertaken for birds, but of the 221 birds relevant to England that are included in the assessment, 117 are either Red-listed under Birds of Conservation Concern (BoCC) or threatened with extinction under the GB IUCN Red List. Therefore, at least 53% of birds in England are not in FCS. An assessment of bird population trends shows 44% of populations are declining and 48% stable or increasing over the long term (25-30 years depending on species group). However, only 30% of populations are declining, whereas 51% are stable or increasing over the short-term (10-23 years depending on species group), the remainder of populations have unknown trends.

A direct comparison with previous assessments is not possible as they were made on a UK scale and this report is based on England. However, it can be noted that the results from the current report are similar to those derived at a UK level in previous reporting rounds.

UK Article 17 Report Publication	Reporting Period	Number and % of UK Habitats in Favourable Conservation Status	Number and % of non-bird UK species in Favourable Conservation Status
2007	2001 - 2006	4 (5%)	23 (26%)
2013	2007 - 2012	2 (3%)	36 (29%)
2019	2013 - 2018	6 (8%)	33 (35%)

Table 1. Percentage of Annex I habitats and Annex II species achieving FCS in the UK in previous Article 17 reports. In 2019 there is a small improvement in status for the UK for habitats (rising from 3% to 8%) and species (rising from 29% to 35%). The results of the current report show 3% of habitats and 30% of non-bird species are in a favourable conservation status in England.

Agricultural-related activities, such as intensive grazing and those leading to water pollution, are the main pressures on habitats and non-bird species. It is the second highest pressure amongst bird populations. Climate change is the biggest current and future pressure for bird populations and the second biggest pressure for non-bird species. Disease has also become more prominent as a pressure on bird populations due to outbreaks of Highly Pathogenic Avian Influenza and Trichomonosis. Climate change is the most frequently identified pressure in marine and coastal habitats, affecting 100% of habitats.

Measures to address agricultural-related pressures are the most frequently reported group of conservation measures across habitats and non-birds. These measures were delivered through key initiatives such as agri-environment schemes. Development is the most frequently identified pressure in bird populations. Measures to address this are through the application of the Government's National Planning Policy Framework, and the EIA and Habitats Regulations Assessment processes, to development plans and projects.

Main Achievements through implementation of Conservation Measures

- 1. Improved coherence and protection of marine Special Areas of Conservation and Special Protection Areas within the National Site Network.** Within the reporting period, Solent and Dorset Coast was designated as a Special Protection Area and three existing SPAs were extended. England introduced 12 new byelaws to further the conservation objectives of 55 inshore SACs. In 2023, England designated its first inshore Highly Protected Marine Area - Allonby Bay - alongside two offshore sites introducing a whole-ecosystem approach to managing these Marine Protected Areas.
- 2. Improved management of Special Areas of Conservation within the National Site Network.** England has continued to address key pressures affecting sites within the network. In 2020, Shared Nitrogen Action Plans were launched to tackle air pollution. Five pilot Special Areas of Conservation were selected to build an evidence base, identify possible solutions and establish local partnerships. Following the introduction of the Environment Act 2021, Protected Site Strategies (PSS) were developed to tackle the underlying causes of habitat degradation and address multiple pressures such as water pollution, air quality, climate pressures, and recreational land use. From 2021, Natural England piloted five PSS projects, informing a broader rollout planned for 2025 which will integrate Shared Nitrogen Action Plans to support coordinated, landscape-scale nature recovery.
- 3. Improved co-operation between authorities, nature conservationists and other groups.** A range of habitat and species recovery initiatives - such as LIFE Programme and the Species Recovery Programme Capital Grant Scheme - have fostered partnerships across sectors. In 2020, Defra and Natural England launched the Nature Recovery Network, including funding twelve collaborative projects across 319,480 ha (of which over 70,000 ha was designated as SAC or SPA) to drive coordinated action for nature recovery. Under the Environment Act 2021, 48 local authorities were appointed as 'the responsible authority' to lead Local Nature Recovery Strategies, with the first strategy published in 2024.
- 4. Positive changes in public acceptance towards biodiversity protection.** England continues to monitor public acceptance towards biodiversity protection through the People and Nature Survey, which highlighted public concern for nature was 86.3% in 2024.
- 5. Quantifying the value of the National Site Network to the local economy.** The Office for National Statistics assess the financial and societal value of natural resources to people in the UK. In 2022, the total asset value of ecosystem services in the UK was around £1.8 trillion, an increase of 11% since 2018. An estimated 20 million people gained health benefits from recreation in nature in 2022. In 2024, Natural England published the State of Natural Capital report which consolidates the best available evidence on the condition of England's natural capital, assessing risks to

ecosystems and the benefits they provide. It supports site management within the National Site Network, building on the Natural Capital Evidence Handbook (2021c), which guides the integration of natural capital into decision-making. In 2019 Natural England published a natural capital account of National Nature Reserves which placed the monetary value of quantifiable benefits from NNRs to be in excess of £36 million per year with a natural capital asset value in excess of £1.8 billion (Sunderland and others, 2019). NNRs often overlap with SACs and SPAs.

- 6. Actions to recover habitats and species.** Concluding in 2021, the Back from the Brink programme delivered 561 actions benefiting 188 species. The Action for Birds in England partnership between Natural England and the Royal Society for the Protection of Birds (RSPB) has directly targeted nearly 50 bird species since 2005. By 2022, over 70% of projects under this programme had led to species population recovery or had diagnosed the causes of declines. The Species Recovery Programme and its latest Capital Grant scheme has achieved notable successes, including the reintroduction of the Lady's Slipper Orchid in the wild in 2024.
- 7. Research and survey work to better inform conservation efforts.** Following the 2015 Natural Capital Indicators Report, the Natural Capital and Ecosystem Assessment is the UK Government's largest environmental research and development programme. It aims to systematically improve the evidence base to ensure that nature recovery and site management decisions are informed by the best available data. The Action for Birds in England programme has funded diagnostic research on key bird species. Additional research during this reporting period has focused on national bird monitoring, the UK Red List, and understanding ecological drivers of population change. These studies also evaluated the effectiveness of Agri-environment schemes.
- 8. Increased availability of information for authorities, nature conservationists and other groups to utilise.** In 2021, Defra, the Welsh Government, Natural England and Natural Resources Wales jointly developed and published new public-facing guidance for public authorities on how to undertake a Habitats Regulations assessment to protect sites within the National Site Network, and on how to deliver their ongoing duty to help protect, conserve and restore those sites. Natural England continued to publish and maintain spatial data and site-specific information and it completed its programme of improved advice on the conservation objectives for all SACs and SPAs. Defra's Science Search enables users to track outcomes of research funded by Defra, supporting transparency and knowledge sharing across sectors.

Table of Abbreviations

Phrase	Acronym
Action for Birds in England	AfBiE
African-Eurasian Waterbird Agreement	AEWA
Agri-Environment Schemes	AES
Bat Conservation Trust	BCT
Birds of Conservation Concern	BoCC
Botanical Society of Britain and Ireland	BSBI
Diffuse Water Pollution Plans	DWPPs
District Level Licencing Scheme	DLL
Environmental Improvement Plan 2023	EIP23
Environmental Land Management Schemes	ELMS
European Union	EU
Favourable Conservation Status	FCS
Favourable Reference Values	FRV
Global Biodiversity Framework	GBF
Great Crested Newts	GCN
Hectare	ha
Highly Pathogenic Avian Influenza	HPAI
Highly Protected Marine Areas	HPMA

Imperative Reasons of Overriding Public Interest	IROPI
Improvement Programme for England's Natura 2000 Sites	IPENS
Inshore Fisheries and Conservation Authorities	IFCA
International Union for Conservation of Nature	IUCN
Joint Nature Conservation Committee	JNCC
Marine Conservation Zone	MCZ
Marine Management Organisation	MMO
Marine Protected Area	MPA
Memorandum of Agreement	MoA
National Nature Reserves	NNRs
National Site Network	NSN
Natural Capital and Ecosystem Assessment	NCEA
Nature for Climate Peatland Grant Scheme	NCPGS
Office of Environmental Protection	OEP
Protected Site Strategies	PSS
River Basin Management Plans	RBMPs
Shared Nitrogen Action Plans	SNAPs
Site Improvement Plans	SIPs
Sites of Special Scientific Interest	SSSIs
Special Area of Conservation	SAC

Special Protection Area	SPA
Species Conservation Strategies	SCS
Species Recovery Curve	SRC
Species Recovery Programme	SRP
Suitable Alternative Natural Greenspace	SANG
The Conservation of Habitats and Species Regulations 2017	Habitats Regulations
The Conservation of Offshore Marine Habitats and Species Regulations 2017	The Offshore Habitats Regulations
The Department for Environment, Food & Rural Affairs	Defra
The English Seabird Conservation and Recovery Pathway	ESCaRP
The Monitor of Engagement with the Natural Environment Survey	MENE
The National Planning Policy Framework	NPPF
The People and Nature Surveys	PaNS
The Water Environment (Water Framework Directive) (England & Wales) Regulations 2017	The WFD Regulations
UK Statutory Nature Conservation Bodies	SNCBs
United Kingdom	UK

1 Introduction

Background to the Legislation

Every six years, the appropriate authority (in England, this is the Department for Environment Food and Rural Affairs (Defra) Secretary of State) must produce a report on the ongoing implementation of the measures set out in the Conservation of Habitats and Species Regulations 2017 as amended (“the Habitats Regulations”).

This report should demonstrate how England is fulfilling the objectives set out in Article (Article) 2 of the Habitats Directive and Articles 2 and 3 of the new Wild Birds Directive, which aim to conserve biodiversity by preserving, maintaining, or restoring natural habitats and species, including wild birds. The Habitats Directive specifically requires maintaining or restoring specified habitats and species of pan-European importance at a Favourable Conservation Status (FCS). Article 2 of The Wild Birds Directive mandates maintaining populations of all naturally occurring bird species and ensuring sufficient habitat diversity and area for them.

The outputs of selected assessments will continue to be used by JNCC to support reporting on international commitments under the Bern Convention (JNCC, 2025a).

Legislative changes during the reporting period

In 2019, the Habitats Regulations were amended to reflect the UK’s departure from the EU Regulations (Defra, 2021a). These amendments came into force on 31 December 2020. These changes included the establishment of a National Site Network (NSN) in the UK, which replaced the EU’s Natura 2000 network and comprises existing UK Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) and new SACs and SPAs designated under the regulations. The amendments also reassigned responsibilities previously held by the European Commission, such as providing opinions on imperative reasons of overriding public interest (IROPI) where a project affects a priority habitat or species, to the relevant UK authorities, ensuring continued protection and management of these sites under domestic governance.

In addition to amendments made to the Habitats Regulations, a variety of new legal and strategic levers came into effect during this reporting period that can support the achievement of the objectives of the Habitats Regulations. These levers include:

- The Environment Act (2021) - thirteen legally binding targets have been set for England under the Environment Act 2021, covering the areas of: biodiversity; air quality; water; resource efficiency and waste reduction; tree and woodland cover; and Marine Protected Areas (MPAs). S.22(1) of the Environment Act also led to the

establishment of the Office of Environmental Protection (OEP) to oversee compliance with environmental law, including the Habitats Regulations.

- The Environmental Improvement Plan 2023 (EIP23) - the first review for the 25 Year Environment Plan that sets out the plan to deliver its vision and reinforce commitments to restore habitats and halt biodiversity loss. EIP23 directly supports the Habitats Regulations through actions such as the commitment to protect 30% of land and sea for nature (Defra, 2023b).
- Joint Fisheries Statement (JFS) includes policies aimed at protecting marine habitats and species, benefitting sites designated under the Habitat Regulations. The JFS is informed by the fisheries objectives set out in the Fisheries Act 2020.
- Environment Land Management (ELM) Scheme - In 2021, Defra introduced the ELM scheme as a replacement for the EU's Common Agricultural Policy. The scheme provides financial support to farmers who take steps to improve the environment through sustainable land management. The scheme is delivered through three key components: Sustainable Farming Incentive (SFI), Countryside Stewardship (CS), and Landscape Recovery.
- While this report does not include an evaluation of progress against these additional policy targets, relevant updates and assessments can be found on the gov.uk website.

Purpose of the General Implementation Report

The Habitats Regulations general implementation report is the first England-level report since leaving the EU and reflects the transition to country-level reporting. It covers the onshore region and marine environment out to 12 nautical miles. It reports on the progress made during the 2019 to 2024 reporting period in delivering the measures required to achieve the objectives set out in Article 2 of the Habitats Directive and Articles 2 and 3 of the new Wild Birds Directive. These objectives include the maintenance and restoration of natural habitats and species of wild fauna and flora at FCS.

This report does not represent a comprehensive overview of all conservation efforts in England. Many of England's actions to protect habitats and species extend beyond the scope of the reporting requirements. A wide range of non-governmental organisations, conservation charities, academic institutions, landowners, and local communities play a vital role in delivering conservation outcomes across the country. Their contributions complement statutory efforts and are essential to achieving long-term biodiversity goals.

The results of the current report represent an assessment using data from 2019 to 2024 of the implementation of these regulations.

Overview of Each Section

An overview of each section of the report is provided below.

- **Current Status and Trend of Habitats and Species within England.** This section assesses the impact of conservation measures on the status of habitats and species listed in Annexes I, II, IV, and V of the Habitats Directive, and bird species under the Wild Birds Directive.
- **General measures taken** section discusses a range of measures taken including policy and legislative measures, freshwater and marine measures and those related to sites in the national site network.
- **The Measures relating to species** section presents information on legal safeguards for species, including licensing frameworks, to ensure activities align with the conservation duties set out in the Habitats Regulations as a contribution to FCS.
- The **Reintroduction of species outlined in Annex IV of the Habitats Directive** section highlights conservation actions aimed at restoring species including those outlined in Annex IV of the Habitats Directive - supporting England to fulfil its obligations under the Habitats Regulations and restore species to FCS.

2 Current Status and Trends of Habitats and Species within England

Overview of Methodology for Habitats and Non-Bird Species Assessments

Under regulation 9A of the Habitats Regulations the appropriate authority must include in the report an evaluation of the impact of conservation measures on the conservation status of habitat types and species listed in Annexes I and II and the main results of surveillance of Annex I, II, IV and V.

- **Annex I** lists natural habitat types of community interest whose conservation requires the designation of special areas of conservation.
- **Annex II** lists animal and plant species of community interest whose conservation requires the designation of special areas of conservation.
- **Annex IV** lists animal and plant species of community interest that require strict protection.
- **Annex V** lists plant and animal species of community interest whose taking in the wild and exploitation may be subject to management measures.

For each feature listed on the annexes that is present within England, Defra commissioned Natural England to undertake an assessment of its conservation status. A total of 71 habitat types extending out to 12 nm from the shore were assessed and 74 terrestrial, freshwater, and plant species (hereafter referred to as “non-bird” species). Marine mammals and turtles were assessed at a UK scale.

The assessments are undertaken at England scale and are based on the overall coverage of features, not just where they are present within the NSN. The key parameters assessed are:

- Range
- Population (Species) or Area (Habitats)
- Habitat for the Species (Species) or Structure and Functions (Habitats)
- Future Prospects

The assessment of each parameter required the best available data from the 2019 to 2024 reporting period to be sourced, collated and assessed by Natural England’s habitat and species specialists. A detailed description of the approach taken to complete the feature

assessments for this reporting round will be published by JNCC. Key elements are described here.

Favourable Conservation Status

The concept of Favourable Conservation Status (FCS) has a foundation in international wildlife conservation. Achievement of FCS for a range of species and natural habitat types is the aim of the Habitats Regulations.

The UK Statutory Nature Conservation Bodies (SNCBs) have developed a common view on FCS, which is articulated here: [Favourable Conservation Status: UK Statutory Nature Conservation Bodies Common Statement | JNCC Resource Hub](#).

Previous reporting rounds have used UK level Favourable Reference Values to determine conservation status. Regulation 9A requires an evaluation of the impact of conservation measures on conservation status at a country level. Natural England through its Defining Favourable Conservation Status (dFCS) project is developing a suite of definitions for England and these have been used in this reporting round where appropriate. Further information on the dFCS project and links to Definitions can be found here: [Natural England Access to Evidence - Defining Favourable Conservation Status](#).

Distribution and Range of Habitats and Non-Bird Species

Distribution data for each feature were collated by Natural England, with evidence sourced from a range of providers and systems. These included Natural England's Priority Habitat Inventory and Designated Sites View systems, the National Biodiversity Network Atlas and a range of datasets shared by experts, learned societies and environmental Non-Governmental Organisation partners. Data were used to produce distribution maps showing the presence of features.

Habitats and Non-Bird Species Feature Assessments and Summaries

Feature Assessments were undertaken at an England level using proformas and guidance supplied by JNCC. These were a development of the proformas used in previous reporting rounds with some additional data requirements tailored to support reporting on the Bern Convention. The assessments for habitats considered the full extent of the habitat, inside and out of the NSN. For further information on how these assessments were conducted, refer to the approach document published by JNCC.

A summary of the key findings has been produced for each habitat and species feature including high level descriptions of each feature, its conservation status, the main pressures impacting on conservation status and the key measures. These summaries are collated in Annex One (a separate document).

Some brief details of records of species listed on the annexes that are considered to occur as vagrants or casual records during the reporting period are found in Appendix A (Annex Five).

Overview of Methodology for Bird Species

An assessment has been made of 269 birds that are regularly occurring breeding or migratory species in the UK. These assessments are presented in a spreadsheet in Annex Two (separately attached). The spreadsheet contains four main worksheets, which are:

- Population Status
- Assessment of Pressures
- Conservation Measures
- Species Action Plans, Strategies and Working Groups

Of the 269 UK species, 28 are non-native bird species and 221 are native bird species that are present in England. The conclusions for the 221 English species are summarised in section 2.5. In addition, the results for a selection of bird guilds have been summarised and are presented in Annex Three (separate document).

Assessing Bird Population Status

Each country reports on population status and trends at the UK scale. The JNCC investigated the feasibility of producing country-scale reports on population status but found that robust trends could not be produced at a country-scale for all wild bird species. A pilot assessment was conducted for common snipe (Martay and others, 2023). It found that even at a UK scale, it would be challenging to provide contemporary estimates of population and short- and long-term trends in population and distribution due to increasingly out of date data sources. These challenges would be magnified at a country scale. In conclusion, JNCC recommended that population status assessments at UK scale would be preferred over separate status reports for each country.

Population status parameters are set out in table 38 of [the Approach document](#). The approach for this reporting round is to derive the same metrics of population size, trends in abundance and changes in distribution as were reported in the Eleventh Article 12 UK Birds Directive Report (JNCC, 2019b).b).

Maps of change in distribution are only provided for [breeding seabirds](#), based on the latest seabird census (Burnell and others, 2023). There has not been a new Atlas of breeding and wintering birds in the reporting period and so our understanding of the distribution of birds other than seabirds relies on the Bird Atlas 2007-11 (Balmer and others, 2013). As this was reported on in the Eleventh Article 12 Report (JNCC, 2019b), it is not repeated here. (JNCC, 2019b), it is not repeated here.

Assessment of Bird Conservation Status and Extinction Risk

The objective of the Wild Birds Directive is described in Article 2. It requires that measures are taken to maintain or restore the populations of birds to a level that corresponds to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements. Article 2 does not explicitly reference the term FCS which is applied to the habitat types and non-bird species explicitly specified on Annexes I and II of the Habitats Directive. Equivalent favourable reference values (FRV) have not been defined for birds. Instead, an approach assessing the overall status at a UK scale using two metrics - Birds of Conservation Concern status (BoCC) and International Union for Conservation of Nature (IUCN) Red-List status - has been taken. These are new metrics that were not previously reported on in the Eleventh UK Article 12 Report, 2019. Species that are Red-listed under BoCC or assessed as Regionally Extinct, Critically Endangered, Endangered, or Vulnerable under IUCN, cannot be considered to be at FCS.

Birds of Conservation Concern (BoCC)

The UK BoCC assessment uses standardised criteria to allocate species to Red, Amber or Green lists depending on their level of conservation concern. The quantitative criteria assess historical declines, recent trends in population and range, population size, localisation and international importance of each species, as well as global and European threat status. There have been five BoCC assessments since 1996. In this report we compare the outputs from the 4th (Eaton and others, 2015) and 5th BoCC assessments (Stanbury and others, 2021 and 2024).

International Union for Conservation of Nature (IUCN) Red-List for Birds

The IUCN Red List assessment process uses well-established, internationally recognised, and standardised criteria to assess extinction risk. It is informed by population size, range size, species rarity, and rate of decline (measured by ten years or three generations, whichever is the longer). In contrast to the BoCC assessments, which are purely retrospective, IUCN assessments project trends forwards in time. IUCN Red List assessments are used to assess the global status of species, but can also be applied at regional, national or local scales to assess the risk of extinction at that scale.

British bird populations have been assessed using the IUCN Red List criteria. This report compares the two assessments that have been undertaken GB IUCN 1 (Stanbury and others, 2017) and GB IUCN 2 (Stanbury and others, 2021, updated for seabirds in Stanbury and others, 2024).

Assessment of Pressures on Bird Species

Whilst population trends are reported at a UK level only, an assessment of pressures has been made at the country level. Therefore, for each species regularly occurring in England, an assessment of the main pressures acting on the population has been made.

Pressures were assigned using the categories set out in current EU guidance, to ensure that the findings are comparable to the habitats and non-bird species assessments. For each pressure, a timing category was assigned: either in the past but suspended due to measures; ongoing; ongoing and in the future; or only in the future (i.e. threats).

Conservation Measures for Bird Species

Implementation of conservation measures is reported at the individual country level. This allows devolved policy to be appropriately reflected.

For each population the most important measures were chosen from the list provided by the EU for 2025 reporting. A general assessment was also made of whether the measures are being fully, partially, or not yet implemented.

Bird Species Action Plans, Strategies and Working Groups

Reporting on measures taken for each species/population also included details of co-ordinated measures on birds. For each population, information was collated on Species Action Plans (SAP), Strategies or Working Groups that are operating in England. Some are also operating at a UK scale and may be part of an international response (e.g. an International Single-Species Action Plan under the African-Eurasian Waterbird Agreement (AEWA)).

Proportion of Bird Species Populations that are within the UK SPA Network

Statistics relating to occurrence of qualifying species in the UK SPA Network have been drawn from Phase 1 of the third UK SPA network review (Stroud and others, 2016). The population within the SPA Network is reported in the Population Status worksheet in Annex Two. This information comprises population assessments from the 2000s, typically from the latter part of the decade. For example, for non-breeding waterbirds, WeBS data from the five-year period 2005/06 – 2009/10 were used. Also reported is the ‘short-term trend of population size in the SPA network’, which is derived from a simple comparison of SPA suite totals in the 1990s (Stroud and others, 2001) and from the 2000s (Stroud and others, 2016). It makes no allowance for inflation of suite totals that may have occurred as a consequence of additional classifications that may have occurred since 2001.

Assessment of Hunting Pressure on Legal Quarry Bird Species

The UK’s Eleventh Article 12 report reported estimates of UK hunting bags from Aebischer (2019). A recent assessment of the sufficiency of such data for accurately estimating the scale and sustainability of the harvest of quarry species of waterbirds in the UK was commissioned by Defra (Madden, Ellis and Cameron, 2025). This work concluded that the information the UK has on hunting bags is “partial, limited and probably biased”. On that basis, Defra reported to the AEWA in its December 2024 report on harvest that “we are not able to submit a UK harvest data report for the period 2019 to 2023, as we do not now consider that an accurate estimate is available”.

Overview of Habitat Assessments

This section provides a high-level summary of the findings drawn from individual assessments carried out by Natural England's habitat specialists. The information presented offers a concise overview of key themes across conservation status and trend, pressures, and conservation measures across all habitat types assessed.

For a more detailed breakdown of the habitats assessed, the assessments and supporting evidence, please refer to the approach document, individual technical assessments and Annex One of this report. Annex One contains more detail about the conservation status and trend, pressures, and conservation measures in place for individual habitats.

Overall Conservation Status and Trend of Annex I Habitats

The assessment of the overall conservation status was based on the four parameters outlined in Section 2.1 (range, area, structure and function and future prospects). A general evaluation matrix was used to determine the overall conservation status, which could be classified as:

- **Favourable:** All four parameter conclusions are favourable, or three are favourable and one is unknown.
- **Unfavourable-Inadequate:** One or more parameter conclusions are unfavourable-inadequate, but none are unfavourable-bad.
- **Unfavourable-Bad:** One or more parameter conclusions are assessed as unfavourable-bad.
- **Unknown:** Either all parameter conclusions are unknown, or two or more are unknown alongside one or more favourable assessments.

The overall trend in conservation status was determined by analysing short-term trends for all parameters **except** future prospects. The classification was based on the following criteria:

- **Improving:** All short-term trends were increasing, or a combination of increasing and stable.
- **Stable:** Most trends were increasing, stable, or unknown. One parameter could be declining, but the overall trend was still considered stable if the decline was moderate (less than 1% per year).
- **Deteriorating:** One or more parameters showed a declining trend. Even if one parameter was increasing, the overall trend was considered deteriorating if another showed a decline greater than 1% per year.
- **Unknown:** Assigned when two or more parameter trends were unknown.

Outlined above is a brief summary of each evaluation matrix. The approach document provides a detailed description of each matrix and the methodology used to determine status and trend.

Conservation Status and Trend Conclusions

Figure 1a presents the current conservation status and trends of all Annex I habitat types in England (including marine and coastal habitats). Out of the 71 habitat types assessed, only 3% were found to be in FCS.

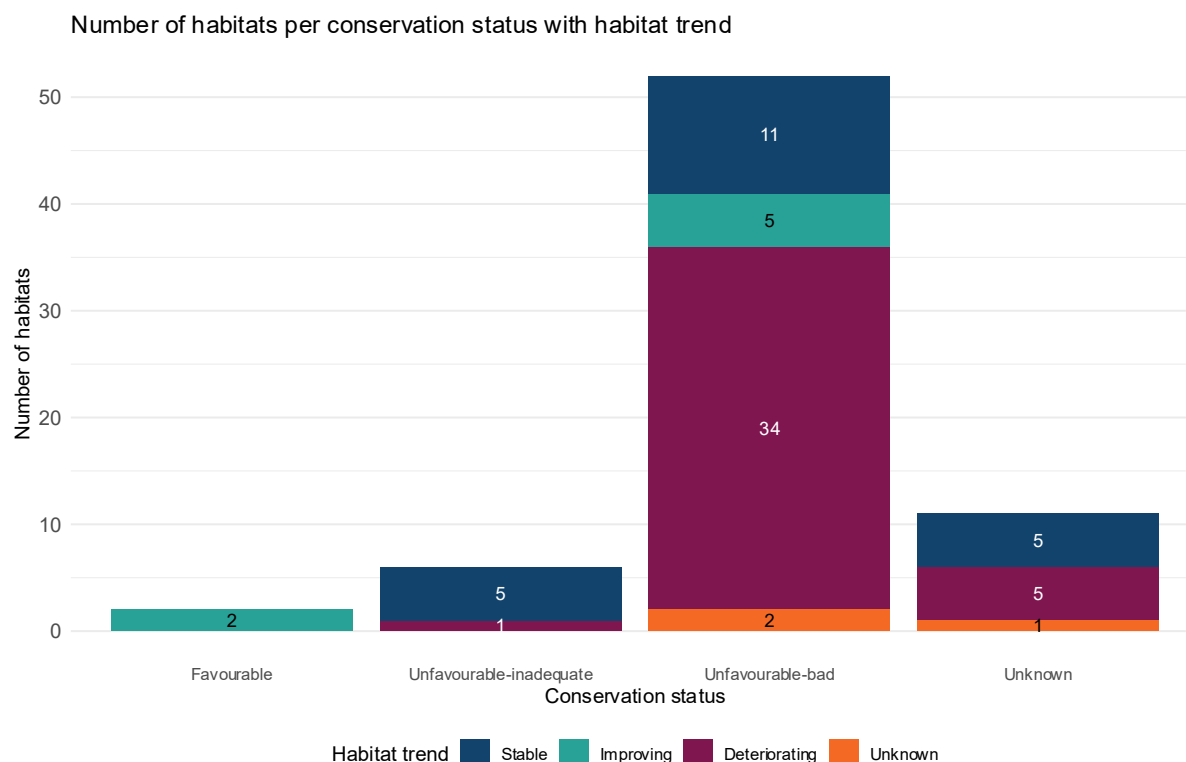


Figure 1a. The conservation status and trend of Annex I habitats Most Annex I habitats in England are in unfavourable-bad conservation status and deteriorating. The number of habitats in each category are; Favourable (2), Unfavourable-bad (52), Unfavourable-inadequate (6), Unknown (11).

The majority of habitats (82%) are reported as having an unfavourable conservation status, either 'unfavourable-inadequate' (6) or 'unfavourable-bad' (52). Of these, 40 habitats (48%) are in an 'unfavourable-deteriorating' condition.

Overview of pressures

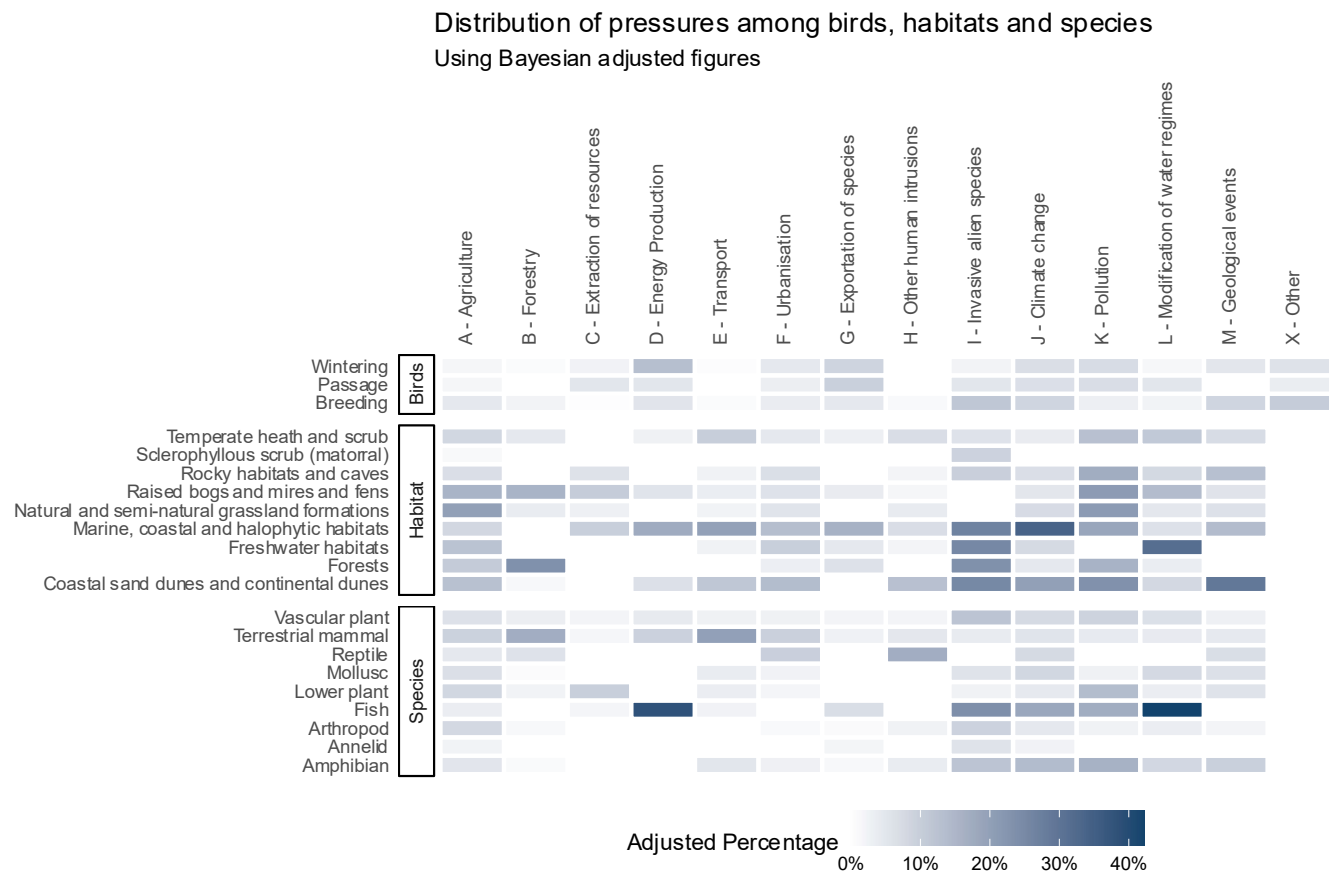


Figure 1b. Pressures identified in feature assessments are displayed in a heatmap. Data are aggregated by feature type in three groups: birds, habitats and species. Further discussion of pressures is included in this chapter.

Overview of measures

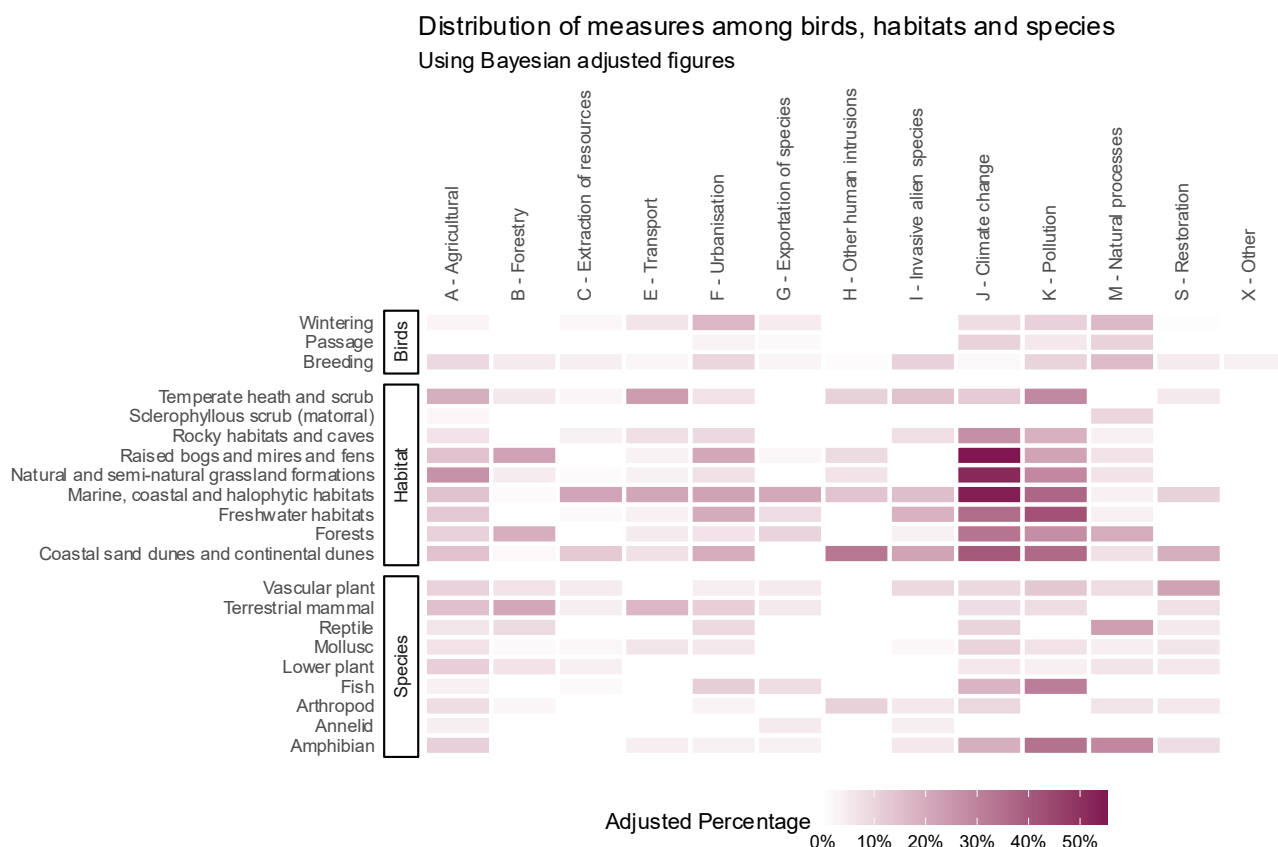


Figure 1c. Measures identified in feature assessments are displayed in a heatmap. Data are aggregated by feature type in three groups: birds, habitats and species. Further discussion of pressures is included in this chapter.

Annex I Habitat Pressures

The pressures identified throughout each individual assessment derive from a standardised list of pressures used across each country involved with Habitats Regulations reporting. These pressures are grouped into 14 categories, as listed in Table 1 alongside the types of pressures included in each category. For more detailed information on pressure categories, refer to the [Approach document](#).

Table 1. Standardised Categories for Pressures

Pressure Categories	Types of pressure included in each category
Agriculture related practices	Includes land conversion, over- and under-grazing, agricultural management practices, and associated pollution.

Pressure Categories	Types of pressure included in each category
Forestry related practices	Includes land conversion, forestry management practices such as removal of dead wood and old trees, burning, and associated pollution.
Extraction of resources (minerals, peat, non-renewable energy resources)	Includes extraction of peat, salt, minerals; dumping, and pollution arising from extraction activities.
Energy production processes and related infrastructure development	Includes different types of energy production including wind, solar, hydropower, and their infrastructure. Also includes associated pollution caused by energy production activities.
Development and operation of transport systems	Includes infrastructure relating to roads, paths, shipping lanes. Also includes transport activities generating air, marine, noise, and light pollution.
Development, construction and use of residential, commercial, industrial and recreational infrastructure and areas	Includes urbanisation, industrialisation, recreation and its associated pollution.
Extraction and cultivation of biological living resources (other than agriculture and forestry)	Includes hunting, fishing, modification of marine aquaculture, and associated pollution.
Military action, public safety measures, and other human intrusions	Includes military operations on land, freshwater and marine environments, vandalism, and disturbance.
Alien and problematic species	Includes non-native species, diseases, and pests.
Climate change	Includes temperature changes, changes of habitat location and size, soil degradation, decline in related species.

Pressure Categories	Types of pressure included in each category
Mixed Source Pollution	Includes mixed source pollution to surface and ground water, mixed source marine water pollution, and atmospheric N-deposition.
Human-induced changes in water regimes	Includes abstractions and modification of water flow.
Geological events, natural processes and catastrophes	Includes storms, floods, natural wildfires and earthquakes.
Unknown pressures, no pressures or pressures from outside the UK	Selected when pressures are unknown or there is no information on pressures.

Overview of pressures impacting Annex I habitats

Pressures can impact a habitat's potential to reach FCS. Figure 2 shows the percentage of habitats by number affected by each pressure category. The pressure categories that impact the greatest number of habitats are Agricultural (89%), Mixed Source Pollution (83%), and Residential/industrial development (80%). Pressures do not operate in isolation. They may interact in the way they impact on habitat extent, composition and quality. For instance, pressure from invasive non-native species could be exacerbated by climate change. More detail relating to pressures may be found in the individual summaries in [Annex One](#).

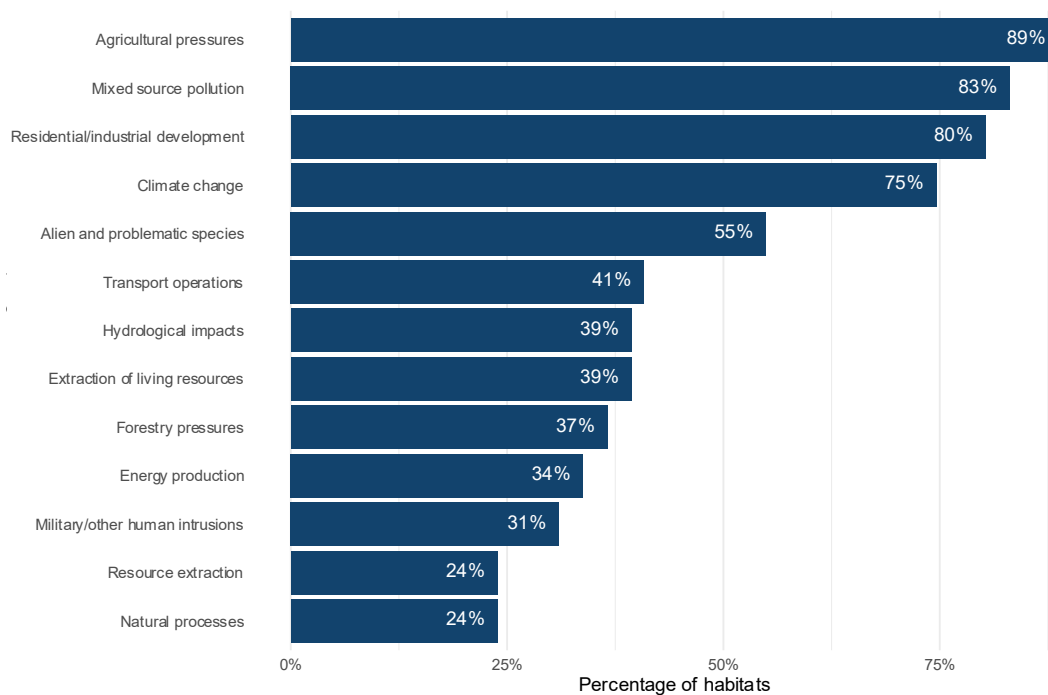


Figure 2. Percentage of Annex I habitats affected by each pressure category (all habitats). Agricultural pressures, mixed source pollution and residential/industrial development are the pressures affecting the greatest number of habitats.

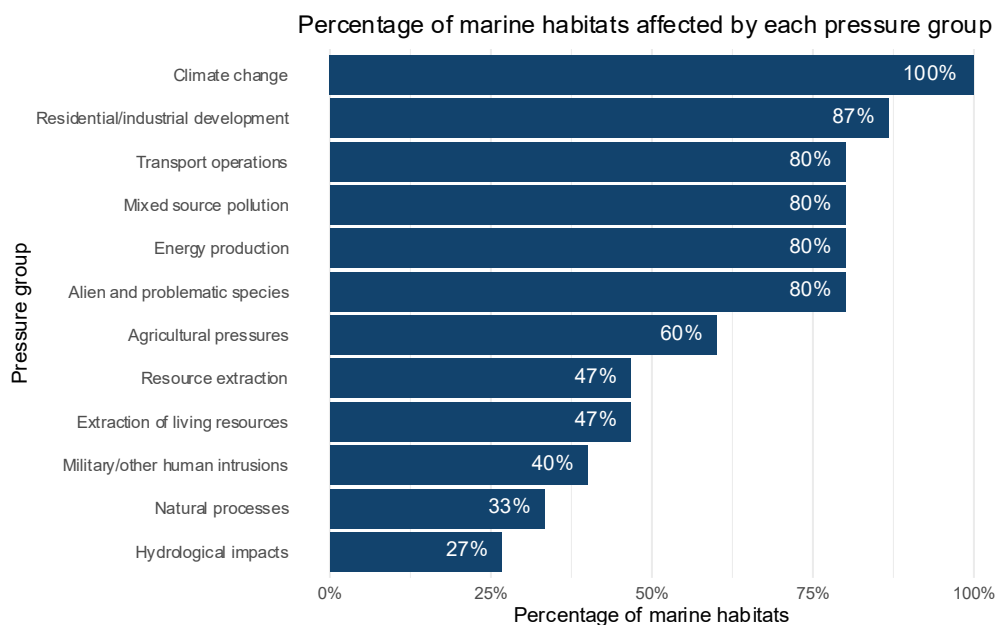


Figure 3. Percentage of Annex I habitats affected by each pressure category (marine and coastal habitats only). Climate change affects all marine and coastal habitats. Industrial development is the next most frequently identified pressure affecting 87% of habitats. This is followed by transport operations, mixed source pollution, energy production and alien and problematic species all identified across 80% of marine and coastal habitats.

Agriculture-related pressures on habitats

In England, the utilised agricultural area accounts for 68% of the total land area (Defra, 2025e). Agriculture can impact habitats in many ways, but particularly through changes to land-use, over- or under-grazing by livestock, and pollution which can drive change in habitat quality and impact the species found within these habitats. Appendix B (Annex Five) contains a breakdown of the number of habitats affected by each agricultural pressure.

Whilst grazing is a key conservation measure for maintaining and restoring many habitats, overgrazing by livestock is impacting 46% of habitats, with 18 habitat types experiencing it as a high pressure (characterised as having high importance, direct or immediate influence, and/or affecting a large area of the habitat). Overgrazing can lead to loss of characteristic species, soil erosion and nutrient runoff, which can in turn impact water quality (Donovan and Monaghan, 2021). In contrast, under-grazing or absence of grazing can result in loss of extent and quality in some habitats as competitive species are favoured, promoting succession to scrub or woodland (Natural England, 2015b).

Pollution of surface or ground waters caused by agricultural activities was identified as impacting 36% of habitats. It is ranked a high pressure amongst 14 water-dependent habitats including raised bogs, fens, rivers, lakes and some types of grassland, heathland and woodland. This pressure is particularly severe in lowland England. Nutrient pollution from agriculture results in shifts in competitive balance between species which leads to changes in both species composition and ecosystem function. Very often the nutrient pressures from agriculture act alongside other pressures, e.g. drainage, grazing pressures and climate change (warming, drought, extreme rainfall), sometimes with multiplying effects (Wentworth and Peck, 2022). Agricultural activities generating air pollution impacted 26% of habitats.

Mixed source pollution pressures on habitats

Appendix C (Annex Five) contains a breakdown of the number of habitats affected by each type of mixed source pollution. Mixed source air pollution is a pressure affecting 48% of habitats, and atmospheric nitrogen deposition affects 41% of habitats.

Air pollution impacts both habitats and species, leading to a loss of biodiversity and ecosystem function. The atmospheric pollutants with greatest biodiversity impacts in the UK are ammonia and nitrogen oxides. These gases are dispersed in the air and deposited on the ground as nitrogen deposition both locally to the source, and over longer distances (APIS, 2025). Ammonia and nitrogen oxides are directly toxic to plants, and ammonia is toxic to mosses and lichens even at very low concentrations. Excess nitrogen deposition leads to changes in plant community structure as the nutrient enrichment enables some plants to outcompete others, leading to reduced diversity (Caporn and others, 2016).

Ammonia is the main contributor to nitrogen deposition in the UK and agriculture accounts for the majority of the UK's ammonia emissions (Defra, 2025c).

Habitats are assigned critical loads for “nutrient nitrogen”, and exceedance of the critical load is an indication that an ecosystem is at risk from potential harmful effects in the long-term. Most Protected Sites in the UK are currently exceeding the critical loads for nitrogen for their notified features. 98% of nitrogen-sensitive SACs exceed the nitrogen critical load for at least one feature (Rowe and others, 2024).

Residential and industrial development pressures on habitats

Appendix D (Annex Five) contains a breakdown of each pressure within the residential/industrial pressure category. Within this category, sports, tourism, and leisure activities were the most frequently identified pressure, impacting 41% of habitat types. Outdoor sports and recreation can lead to trampling and erosion of habitats (European Environment Agency, 2020).

Modification of coastlines, estuaries, and coastal conditions for the protection of urban and industrial infrastructure is identified as a pressure on 22% of habitats. This includes activities such as the construction of sea defences and coastal protection infrastructure, aimed at reducing flooding, which can lead to habitat loss and/or deterioration in habitat quality. Such developments have been a major driver of change in several habitats, including Atlantic salt meadows, estuaries, and shingle. The building of infrastructure in coastal areas - both on and adjacent to these habitats - frequently results in habitat modification (i.e. loss and damage) and can contribute to pollution (e.g. through wastewater discharge), further impacting the ecological integrity of these areas. A detailed breakdown of each sub-category within the residential/industrial pressure group is provided in Appendix D.

Conservation measures in habitats

The conservation measures identified through each habitat assessment derive from a standardised list used for Habitats Regulations reporting. These measures are broadly in line with the main pressures noted in Table 1 and often relate to reducing the associated pressure. Further detail of each conservation measure category can be found in the Approach document. Additional information relating to measures taken are detailed in Section 3 of this report, and in the individual summaries in [Annex One](#).

Overview of conservation measures for habitats

The habitat feature assessments concluded that all (100%) Annex I habitats require conservation measures to either maintain or restore each habitat to FCS. 60% of these habitats have measures underway whilst the remaining 30% have measures identified but

not yet taken. For a proportion of these habitats, conservation measures have been partially implemented across the range.

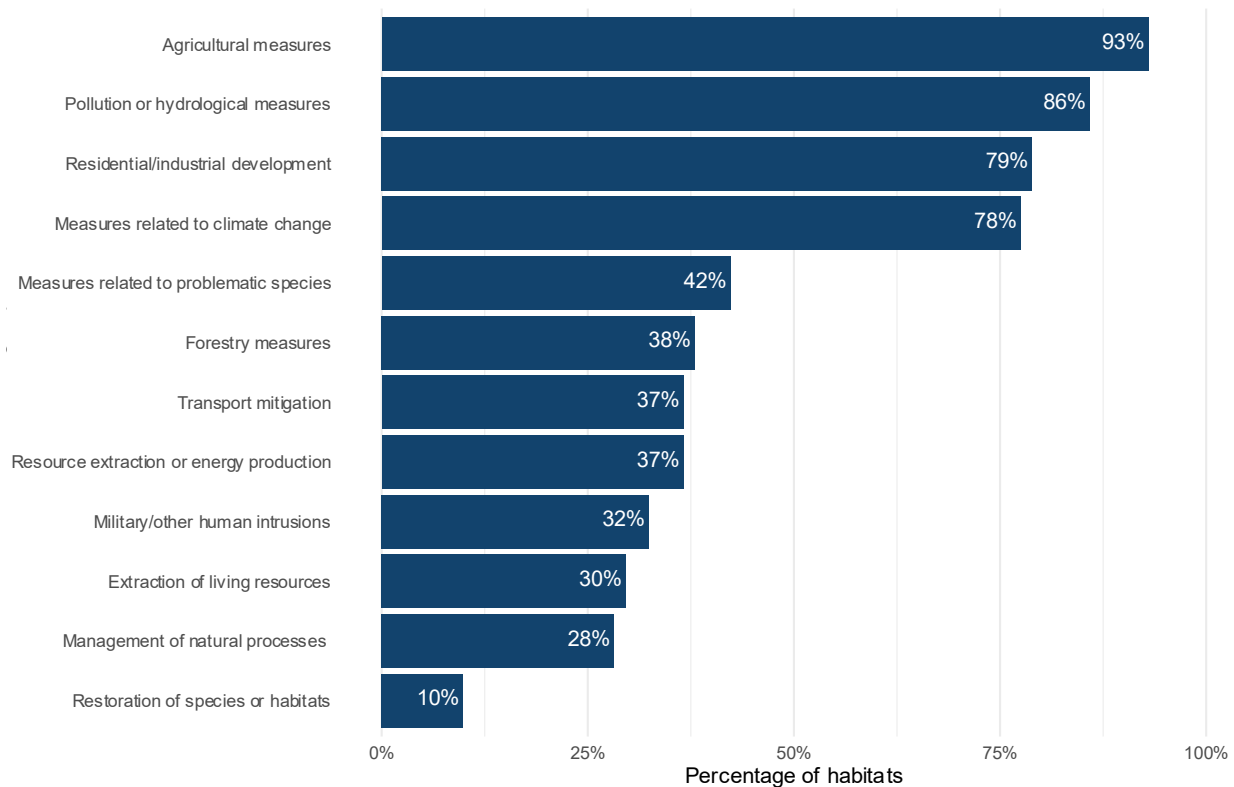


Figure 4. Percentage of Habitats Associated with each Conservation Measure Group. The majority of habitats (93% by number) require agricultural measures, and 86% of habitats require measures to address pollution or hydrological impacts.

Conservation measures associated with agricultural practices were the most frequently identified across 93% of habitats, as shown in Figure 4. This is followed by pollution or hydrological measures (86%) to address mixed source pollution or hydrological pressures, and residential/industrial measures (79%) to address urbanisation pressures.

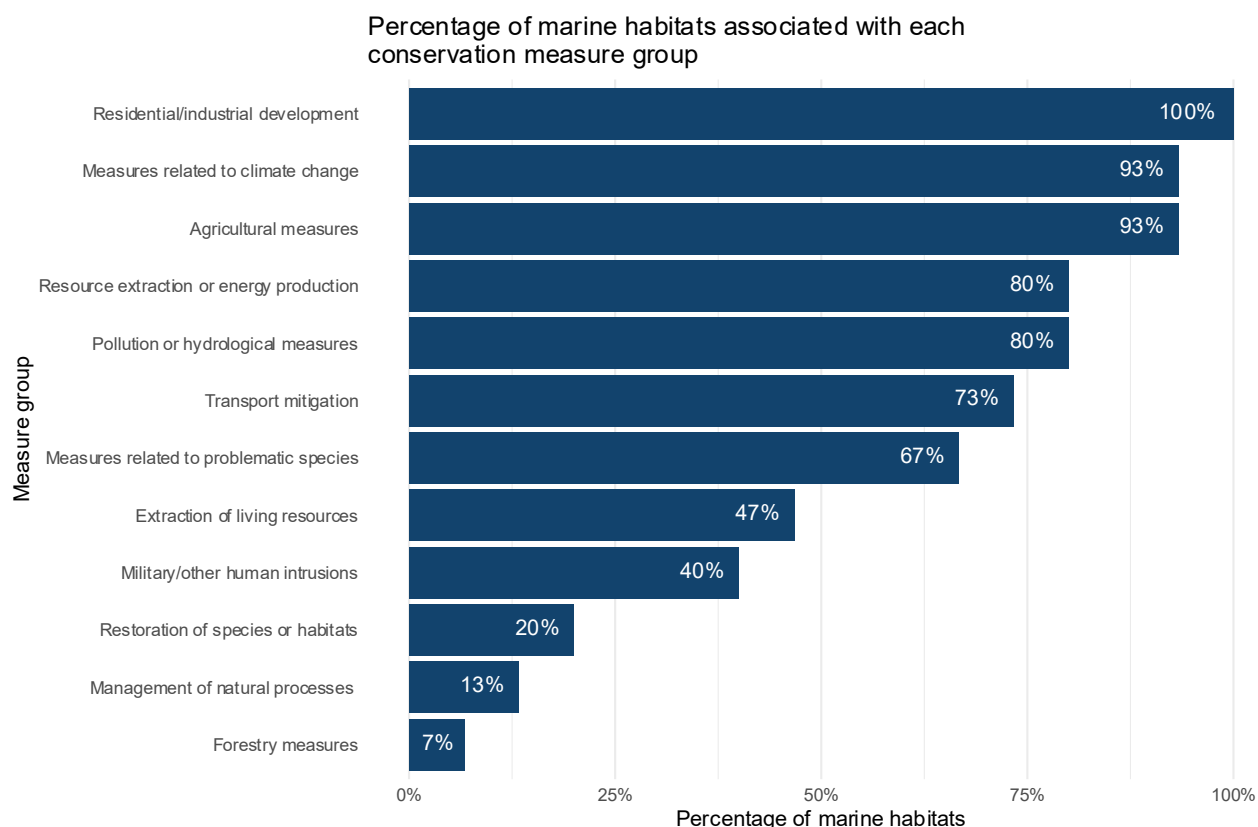


Figure 5; Conservation measures associated with marine and coastal habitats only. Measures relating to industrial development were identified for all marine and coastal habitats. Measures relating to climate change and agriculture were the next most frequently identified measures, which are necessary for 93% of marine and coastal habitats.

Conservation measures addressing agricultural-related pressures on habitats

Agriculture was identified as the key pressure on habitats, but also the most important category of conservation measures relevant across all Annex I habitats. Nature friendly farming practices are identified as the main conservation measures for maintaining and restoring habitats to FCS. Conservation measures include changes to grazing regimes (identified for 49% of habitats), reducing pollution to surface or ground waters (41% of habitats), and managing agricultural drainage and water abstraction (28% of habitats).

In England, many of these conservation measures are delivered through Agri-Environment Schemes (AES) which have operated throughout this reporting period. Through AES, payments are made to land managers to implement environmentally beneficial management and to demonstrate good environmental practice on their land. AES are generally split into two groups:

- **Entry-level schemes** - encourage large numbers of land managers to implement simple and effective environmental management their land.

- **Higher-level or targeted schemes** - typically focus on areas of high environmental/biodiversity value or potential. Management tends to be aimed at conserving wildlife; maintaining and enhancing landscape quality and character; protecting the historic environment and natural resources; and promoting public access and understanding of the countryside.

Annex Four of this report provides further details on AES and its evidence programme, including a summary of some of the research projects that have been evaluated.

Conservation measures addressing pollution or hydrological impacts affecting habitats

As shown in Figure 4, 86% of habitats require measures to address pollution or hydrological impacts. 48 habitats require measures to reduce the impact of mixed source pollution. The other two measures in this category relate to restoration of habitats impacted by multi-purpose hydrological changes (20 habitats) and reducing the impact of multi-purpose hydrological changes (17 habitats).

Within this reporting period, these conservation measures were achieved through Protected Sites Strategies, Shared Nitrogen Action Plans (SNAPs), River Basin Management Plans, River Restoration Theme Plans, Diffuse Water Pollution Plans, Nutrient Mitigation Schemes, Catchment Sensitive Farming, and the LIFE WADER project (for further information on these measures, see Section 3).

Conservation measures addressing the impact of residential/industrial developments on habitats

Measures are required to reduce the impact of outdoor sports, leisure and recreational activities on 34 habitats. There are 25 habitats that require measures mitigate changes to hydrological and coastal systems because of construction and development. Measures are required to restore 20 habitat types affected by infrastructure and other activities.

England has a series of legislative measures to mitigate the impacts of development including the introduction of mandatory Biodiversity Net Gain and the Revised National Planning Policy Framework 2024 (for more detail, see Section 3). These measures ensure that damage to habitats both inside and out of the NSN is avoided, or that appropriate mitigation or compensation is undertaken.

Overview of Non-Bird Species Assessments

This section offers an overview of the conservation status and trend, pressures, and conservation measures across all species assessed. Species assessments followed the

same evaluation matrix as habitats, applying it to both overall conservation status and overall trend.

For more detail, please refer to the individual technical assessments at Annex One, which contain the conservation status and trend, pressures, and conservation measures in place for individual species.

Overall conservation status and trends of non-bird species

Figure 6 summarises the conservation status and trends of 74 non-bird species in England. Of these species, 30% (22 species) were assessed as being in FCS, with either improving (5 species) or stable (17 species) trends. Twenty-three species were identified as Unfavourable-bad status, twenty-two as Unfavourable-inadequate and seven Unknown.

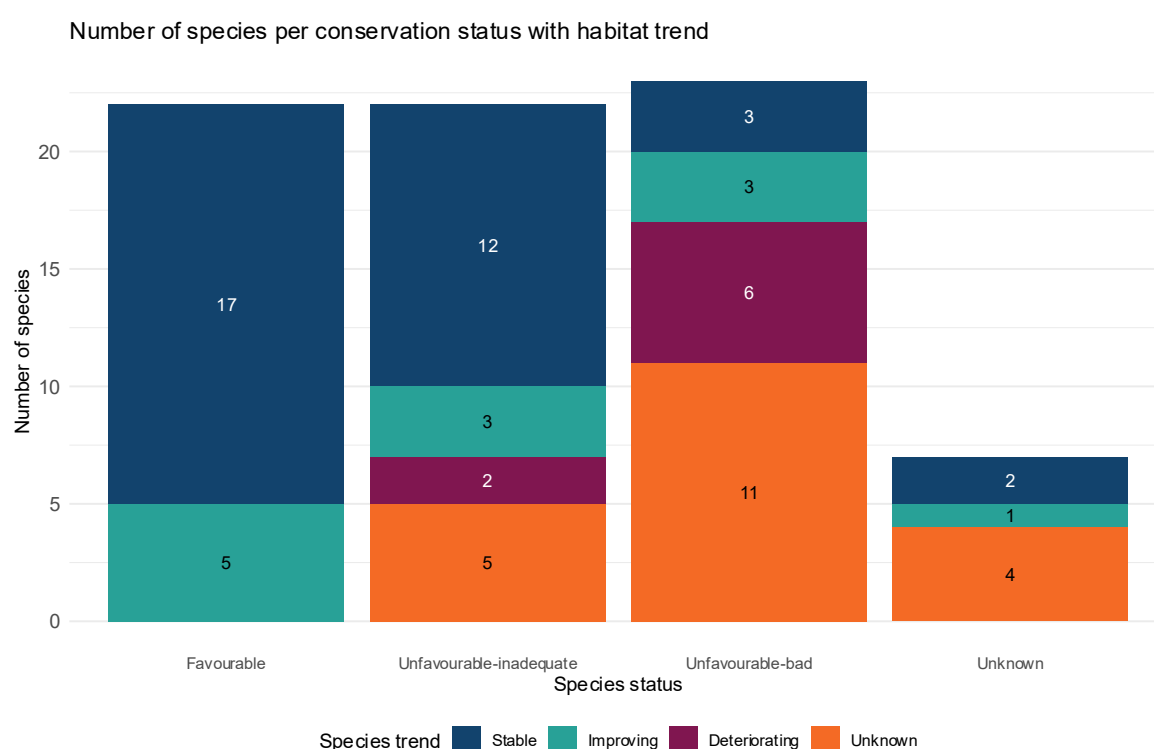


Figure 6. Number of Species per Conservation Status with Trend. This figure includes all assessed species in Annex II, IV, and V of the Habitats Directive. 23 species were assessed as in Unfavourable-bad condition, 22 species were in Unfavourable-inadequate condition, 22 species were in Favourable condition and 7 Unknown.

61% of non-bird species were assessed as having an unfavourable status; either unfavourable-inadequate or unfavourable-bad. Within the unfavourable group, the majority of species had either a stable or an unknown trend. 11% of all assessed species were in an unfavourable-deteriorating condition, 20% were unfavourable-stable, and 22% had an unfavourable status with unknown trends.

It should be noted that marine mammals are excluded from this analysis. Trend assessments were undertaken at UK scale. Individual summaries were produced for marine mammals in English waters, where pressures and measures are identified. These can be found in Annex One.

Non-bird species pressures

Figure 7 shows the pressures affecting species listed on Annex II, IV and V of the Habitats Directive. Of the 74 species, 72 have identified pressures impacting them. The two species without identified pressures are butcher's broom and jersey tiger moth. Of the 72 species, the top three pressures affecting the greatest number of species are agricultural related practices (86%), Climate change (64%), and forestry pressures (44%).

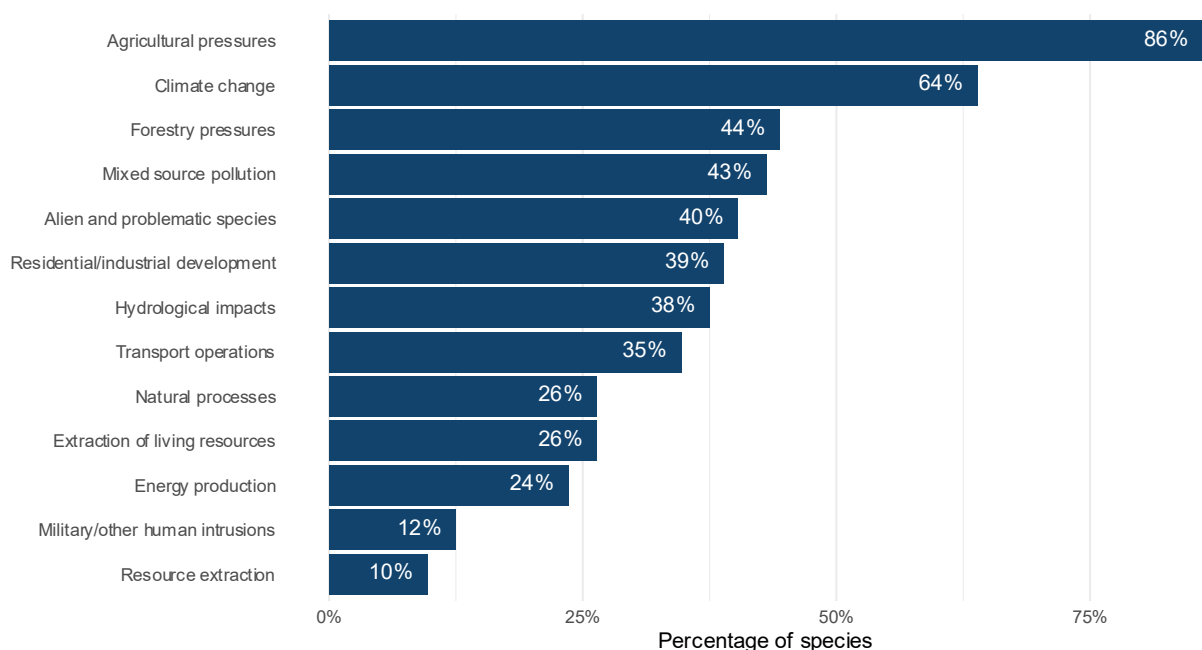


Figure 7. Percentage of non-bird species affected by each pressure category.

Agricultural pressures affect the highest percentage of species, with climate change coming second, affecting nearly two thirds of species.

Agricultural-related pressures affecting non-bird species

Among agriculture-related pressures, farming activities generating pollution to waters was the most frequently cited, representing a high pressure for 24% of species. As previously noted, environmental pressures rarely act in isolation, and many of the pressures identified across different categories overlap. Diffuse agricultural pollution has increased the input of fine sediment, phosphate and nitrate in rivers leading to eutrophication (Natural England, 2015a) with associated effects such as increased algal production in spawning areas and smothering of spawning gravels (Wentworth, 2014). These lead to deoxygenation of water habitats and the release of a variety of chemicals from farming (and wider urbanisation

and industrialisation) further exacerbates the pressures facing fish species (Morote-Sánchez and others, 2025).

Other pressures within the agricultural pressure group include the removal of small-scale landscape features for land parcel consolidation, such as hedgerows, stone walls, ponds and solitary trees. This pressure was reported for 26% of species, although only 11% ranked it as a high pressure. Inappropriate land consolidation is a recognised driver of biodiversity decline (Clough, Kirchweger and Kantelhardt, 2020). Among the assessed species, this pressure notably affects terrestrial mammals, particularly bat species, and amphibians (such as the great crested newt and common frog), which depend on these features. Appendix E (Annex Five) contains a further breakdown of each sub-category within the agricultural-related pressure group.

Climate change pressures on non-bird species

Within the climate change pressure category, changes in precipitation regimes impacts 29% of species, followed by other climate-related alterations in abiotic conditions (27%), and temperature fluctuations, including extreme temperatures, which impacts 21% of assessed species.

Climate change is increasingly recognised as a major driver of biodiversity loss, with impacts observed across aquatic, terrestrial, and amphibian species. Altered precipitation patterns and rising temperatures can impact stream flow and oxygen levels within water environments (Dallison and others, 2022), degrading breeding habitats for aquatic invertebrates and fish such as vendace and schelly. For bats, climate-induced shifts in seasonal cues may disrupt hibernation and foraging, though evidence remains limited. Amphibians, like the pool frog and the great crested newt, face risks from milder winters, hotter summers, and drying breeding ponds, which may reduce survival and population of ponds. Additionally, climate change may intensify disease risks and interact with other pressures such as nutrient enrichment and habitat fragmentation (Natural England, 2020a). Vulnerable habitats- including wetlands, coastal zones, heathlands, and montane areas - require targeted restoration and management to build resilience. Appendix F (Annex Five) contains a further breakdown of each sub-category within the climate change pressure group.

Forestry pressures on non-bird species

Within the forestry pressure group, conversion between different types of forest cover and logging without replanting or allowing natural regrowth were identified for the highest proportion of species (27% and 25%, respectively), though these were generally ranked as medium pressures. In contrast, the removal of dead and dying trees, identified for fewer species (14%), was consistently ranked as a high pressure for all species impacted. Clear-

cutting and tree removal was the third most frequently reported pressure, identified for 19% of species.

These pressures are particularly significant for species reliant on woodland habitats for shelter, breeding, and foraging, particularly bat species (Hendel and others, 2024). For example, the Bechstein's bat is vulnerable due to its dependence on ancient deciduous woodland and dead trees for roosting, as well as its sensitivity to habitat fragmentation and prey reduction from agricultural intensification. Habitat fragmentation resulting from land management changes can impact species as well as forestry and agricultural practices that simplify or remove key woodland and wetland habitats, reducing insect prey availability (Haddad, 2015). Appendix G (Annex Five) contains a further breakdown of each sub-category within the forestry pressure group.

Conservation measures for non-bird species

Conservation measures were identified for 68 species listed under Annexes II, IV, and V. The difference between this number and the total number of assessed species reflects the assessment requirements: only Annex II species were required (by the Habitat Regulations) to include conservation measures, while it was optional for Annex IV and V species (unless they were also listed under Annex II).

As shown in Figure 8, agricultural measures are associated with 81% of species followed by residential/industrial development (56%) and forestry measures (44%).

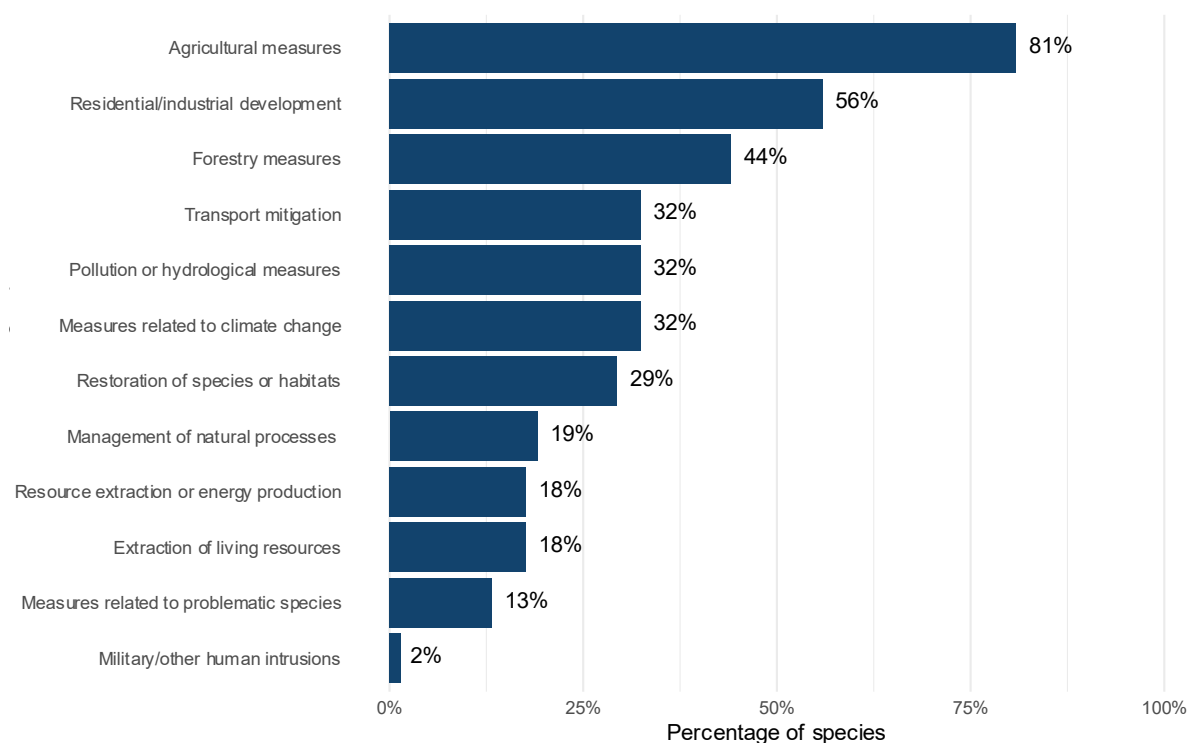


Figure 8. Percentage of Non-bird Species Associated with Each Conservation Measure Group. Agricultural measures are required for 81% of species assessed, whilst measures to address the impacts of residential/industrial developments are required for 56% of species assessed.

Conservation measures to address agricultural pressures on non-bird species

Among agricultural-related activities, the most frequently reported measure was the reduction of diffuse pollution to surface and groundwater, particularly in relation to fish species. Additionally, preventing the conversion of natural habitats into agricultural land was commonly identified, especially for terrestrial mammals such as bats. The restoration of small landscape features - such as hedgerows, stone walls, and similar elements - was identified frequently, notably for terrestrial mammal species.

During this reporting period, England has implemented several mechanisms to address these conservation needs. These include AES, Species Conservation Strategies (Section 5), Protected Sites Strategies, Diffuse Water Pollution Plans, and River Restoration Plans (Section 3).

Conservation measures addressing residential/industrial development pressures on non-bird species

Although the sixth most identified pressure, measures addressing the impacts of urbanisation were identified as key conservation measures across multiple species and were also relevant to habitats. Within this category, the most frequently reported actions included managing the effects of land conversion, restoring habitats in urbanised areas, and regulating water abstraction to minimise negative impacts on habitats and species.

England has a range of legislative tools to support these conservation efforts. These include the introduction of mandatory Biodiversity Net Gain and the Revised National Planning Policy Framework 2024 (see Section 3), which aim to mitigate habitat pressures and losses and thereby support species conservation. Additional mechanisms for species conservation are in place through statutory licensing regimes, some of which operate at a more strategic level. A case study describing how district-level licensing has been introduced to improve the conservation status of the great crested newt can be found in Section 5 of the report.

Conservation measures addressing forestry pressures on non-bird species

Within this category, the most frequently identified sub-measures included the management of reforestation and forest regeneration, adapting and modifying forest management and exploitation practices, and preventing the conversion of (semi-)natural habitats into forests, as well as the transformation of (semi-)natural forests into intensive forest plantations.

Delivery of these measures is primarily achieved through targeted mechanisms focused on habitat conservation. These include encouragement for woodland planting under the Nature for Climate Fund Programme (England Woodland Creation Offer), the introduction of the Landscape Recovery Scheme, the broader Environmental Land Management Schemes (Section 3), and Protected Sites Strategies - such as the case study on sustainable deer management in the Sussex woods (see Annex Four, Section 2.3). For species-specific conservation, several Species Recovery Programmes and Back from the Brink projects (Section 5) were active during this reporting period. Monitoring initiatives such as the Natural Capital and Ecosystem Assessment and the National Forest Inventory provide valuable data on the condition of forests and woodlands, helping to inform conservation assessments and future action (Section 4).

Implementation of conservation measures for Annex II species

Annex II species are those for which SACs should be designated to ensure their protection. Reporting on the implementation of conservation measures for Annex II species is mandatory as part of the Habitats Regulations. Of the 40 Annex II species present in England, all but one species - Jersey tiger moth - required conservation measures. The Jersey tiger moth (S6199) has been rapidly expanding its range and population in southern UK over the past 30 years, with no significant threats or pressures identified.

Of the 39 species requiring measures, 92% had measures implemented, while the remaining 8% had measures identified but not yet undertaken. The main purpose of these measures is to maintain the current range, population, and/or habitat for the species followed by restoring the habitat of the species. Most of these measures are being implemented both within and outside of the NSN. However, three species have measures taking place exclusively outside of the NSN. For example, efforts to conserve Fisher's estuarine moth (S4035) have included planting its larval floodplant, Hog's Fennel, at Elmley in Kent and Moverons in Essex, which are located outside the National Site Network.

Of the species with measures in place, 34 are expected to show results across the next two reporting cycles (2025 to 2036) or beyond. Two species - Fisher's estuarine moth and marsh fritillary (S1065) - were expected to show outcomes within this reporting round. Fisher's estuarine moth has been assessed as having a favourable and improving conservation status, whereas marsh fritillary is assessed as unknown, primarily because it was not possible to access comprehensive distribution data, including within reintroduction project areas, for this reporting round.

Annex One of this report contains individual summaries of each feature, including where possible more detail about the conservation measures in place for individual species. The summaries also contain information about their conservation status, trend, and pressures.

Annex V Species

Annex V species are those that may be taken in the wild or exploited, but measures should be put in place, where necessary, to ensure that this does not affect their conservation status. Of the 21 Annex V species relevant to England, 8 species are known to be taken in the wild or exploited. Figure 9 compares the conservation status of taken/exploited Annex V species with those that are not. Among the exploited group, four species - barbel, grayling, polecat, and river lamprey - are at FCS. In contrast, only two of the non-exploited species assessed are at FCS, and nine species are in Unfavourable condition.

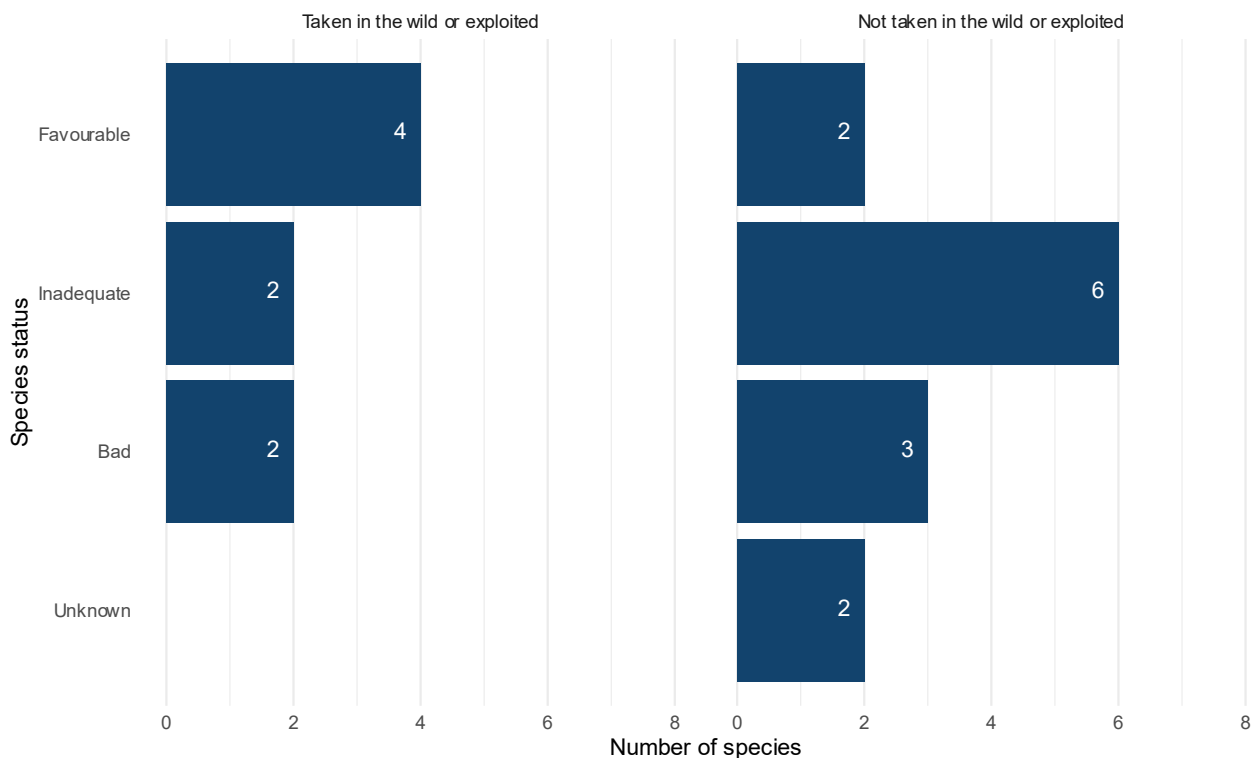


Figure 9. Number of Annex V Species Split by Taken/Exploited Status and Conservation Status. Of the eight species that are exploited, half are in FCS and half are in Unfavourable condition. Of the species that are not exploited, only two are in Favourable condition and nine are Unfavourable.

For those taken/exploited species not in FCS, conservation measures are identified for all except the *Cladonia* subgenus of lichens (though measures are not necessary as harvesting is not thought to be a significant pressure). There has been significant effort to reduce impacts on bog mosses (*Sphagnum* species) from the exploitation of peatlands for horticultural purposes and restore raised bogs that have been subject to peat extraction (Duff, 2023).

Overview of Bird Species Assessments

Conservation status and trends in bird populations

Overall, there are 117 bird species relevant to England (53% of those assessed) that are either on the Red List of BoCC and/or threatened with extinction (GB IUCN 2). These species populations can be considered as not attaining FCS. It is not possible to determine whether the remaining 47% are achieving FCS as favourable reference values have not been developed for most bird species.

Bird population trends

UK population trend information on bird species can be found in the Reg 9A Birds spreadsheet at Annex Two. These data were supplied by the British Trust for Ornithology (BTO) under contract to the JNCC. As set out in the [Approach document](#), the short-term trend equates to a 10-year period for most species. But for some breeding seabirds, a 23-year period is the shortest available. The long-term trend equates to a period of 25-30 years, depending on data availability for each species group.

Figure 10 shows the trends in different species populations (i.e. breeding and wintering populations are counted separately). Although the trends are calculated at the UK-scale, only the 281 native species populations relevant to England are summarised here.

44% of species populations assessed are declining and 48% are stable or increasing over the long term. Birds seem to be faring better in the short-term as 30% are declining, whereas 51% are stable or increasing. Although, there are more species where the short-term trend is unknown.

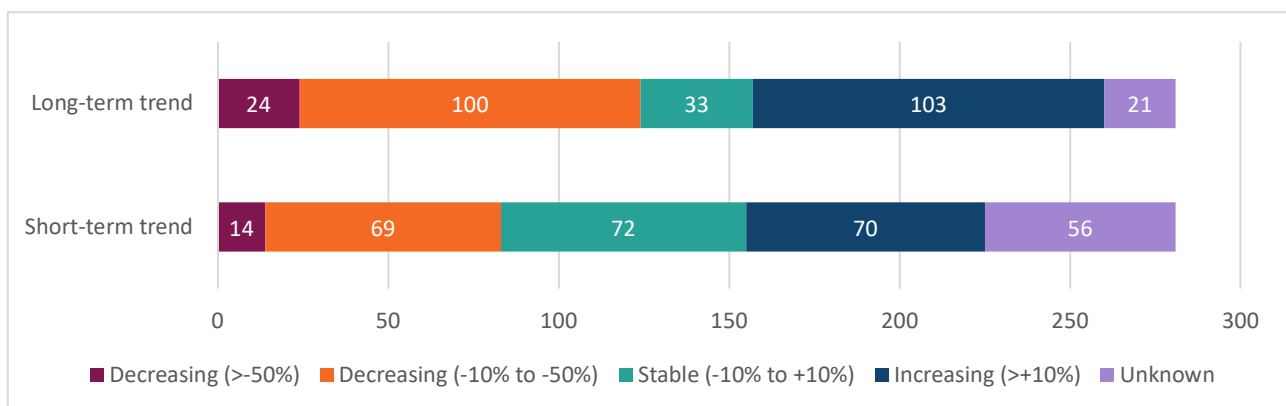


Figure 10. Number of Bird Species Populations Showing Different Long- and Short-term Trends. Breeding and non-breeding bird populations are counted separately. Over the long-term, 48% of species are stable or increasing; and over the short-term, 51% are stable or increasing.

Seabird range change

Change in distribution of birds is measured through periodic censuses. There is no new range change data available for terrestrial birds as the last Bird Atlas was published in 2013. However, maps of change in breeding seabird distribution have been produced by JNCC and can be found on [the JNCC website](#). These show the change in occupancy of 10km squares between the latest two seabird censuses: Seabird 2000 (fieldwork undertaken 1998-2002) and Seabirds Count (2015-2022).

Most cliff-nesting species have shown little change in the number of occupied 10km squares. Gannets and black guillemots are still only found at one site each in England: Bempton Cliffs and St Bees Head, respectively. Guillemots, razorbills and shags showed little net change in occupancy, though shags have decreased in numbers over the long term. In contrast, kittiwakes have been lost from many sites in the southwest and on the south coast of England.

At the beginning of the 20th century, fulmars were restricted to the very north of Scotland. Since then, they have expanded throughout the UK. However, the number of 10km squares occupied by fulmars decreased by 24% between Seabird 2000 and Seabirds Count. The change in distribution could potentially be driven by food availability. The expansion was perhaps aided by increases in fishery discards, and contraction due to the ban on discards and/or other fisheries pressures (Harris and others, 2024).

Burrow nesters are highly susceptible to mammalian predators and have responded to conservation efforts to remove rats from islands. Manx shearwaters have increased in the number of 10km squares occupied on the Scilly Isles. And storm petrels have returned to Lundy following rat eradication. Puffins are more widespread and have shown little net change in number of 10km squares occupied.

Terns nesting on soft coasts have shown a variety of trends in range. There has been no net change in number of 10km squares occupied by common terns, Sandwich terns and Arctic terns. There have been losses of small outlier sites occupied by roseate terns, but an increase in numbers at the remaining colony on Coquet Island. There has been a loss of sites occupied by little terns, particularly in Essex and Suffolk. But concentrated conservation efforts have improved the productivity of little terns in England. This should lead to population increases in the future.

The most significant changes in range have been shown by those seabirds that are able to make use of inland sites. Mediterranean gulls usually breed alongside black-headed gulls and both have expanded into inland sites since Seabird 2000. Cormorants and common terns have shifted away from coastal sites to make use of inland water bodies. Cormorants have taken advantage of alternative food sources. Common terns have responded well to provision of tern rafts for nesting.

Natural-nesting herring and lesser black-backed gulls have also moved from coastal to inland sites. A further shift for these species has been into urban environments.

Differences in method for censusing urban areas mean that it is not possible to directly compare distribution of urban-nesting gulls between Seabird 2000 and Seabirds Count. However, it is clear that urban nesting has become much more important for both herring and lesser black-backed gulls.

Birds of Conservation Concern (BoCC) status

The outcomes of the latest BoCC assessments are included in the Regulation 9A Birds spreadsheet at Annex Two. BoCC assessments summarise a range of trend, range, population size, and international importance criteria and are carried out at the UK-scale. There are now 64 English bird species on the Red list, 92 on the Amber list and 66 on the Green list (Stanbury and others, 2021 and 2024).

Despite some conservation successes, the overall status of birds declined in the six years between BoCC 4 and BoCC 5. One species went from Green to Red listing (greenfinch due to declines caused by the disease Trichomonosis), and 19 species went from either Green to Amber or Amber to Red. But only 12 species improved in status (either Red to Amber or Amber to Green) (Eaton and others, 2015; Stanbury and others, 2021 and 2024).

Those species moving onto the Red or Amber lists due to population declines include birds of farmland, wetlands, urban areas and coasts, indicating that the pressures on bird species continue to be many and varied. These are explored further in the guild summaries at Annex Three.

The species improving in status include the pied flycatcher, grey wagtail and shag, which have all moved from Red to Amber due to improving population trends. Conservation efforts, including re-introduction to England, mean that the white-tailed eagle has moved from the Red to Amber list.

IUCN Red-List status of bird populations

In contrast to BoCC, which uses a range of criteria and is retrospective, IUCN assessments project trends forwards to evaluate extinction risk. The categories of 'critically endangered', 'endangered' and 'vulnerable' together describe species that are threatened with extinction. The second assessment of GB bird extinction risk (GB IUCN2) was published in 2021 and updated for seabirds in 2024 (Stanbury and others, 2021 and 2024).

Of the 256 species populations (i.e. counting breeding and non-breeding populations separately) assessed in GB IUCN2 that are relevant to England, 113 (44%) are threatened with extinction from Great Britain.

The overall extinction risk of bird species in GB has increased since the first assessment (GB IUCN1) by Stanbury and others (2017). Between GB IUCN1 and GB IUCN2, 16% of species populations increased in extinction risk, and 14% improved, there was no change for the remainder. Some of the species increasing in extinction risk did so dramatically. Eight species increased in extinction risk by 3 or 4 steps, all moving from Least Concern to either Endangered or Critically Endangered. Five of these were either seabirds or chaffinch, all affected by diseases, as explored further below.

Pressures on bird populations

The Reg 9A Birds spreadsheet at Annex Two contains an assessment of the pressures acting on 221 bird species in England. These species make up 286 species populations, where breeding and non-breeding populations are counted separately. The pressure assessments are summarised in charts at Appendix H and I (Annex Five).

As shown in Figure 11, there are 85 species populations (30%) that do not currently have any pressures acting on them. Some of these species are nevertheless threatened with extinction according to the GB IUCN 2 assessment (see Appendix I in Annex Five). They are threatened because they have a very small or restricted population, and as such are inherently vulnerable. However, this group includes recent colonists such as cattle egret and spoonbill, which are increasing in population size. Their expansion suggests there are no current pressures acting on the populations.

Climate change pressures on bird species

Climate change related pressures are currently affecting 85 species populations and could potentially affect a further 93 in the future. The pressures include:

- Wintering range shifts or 'short-stopping' in non-breeding waterbirds like Bewick's swan and dunlin. Warmer temperatures are leading these species to spend their winters closer to their northerly breeding grounds.
- Sea level rise is causing the loss of high tide roosts for wintering waders and putting pressure on seabirds that nest on soft coasts, like little terns and black-headed gulls.
- Increased storminess can affect the foraging ability of seabirds, wash out nests, and cause wrecks, for example of guillemots, in the winter.
- Rising sea temperatures are affecting the stratification of the water column, which affects plankton communities, which in turn affects forage fish such as sandeels, and the seabirds that feed on them, such as kittiwakes.
- Afro-Palearctic migrants, such as nightingales and cuckoos, are affected by climate impacts on their African wintering grounds (as well as habitat changes).

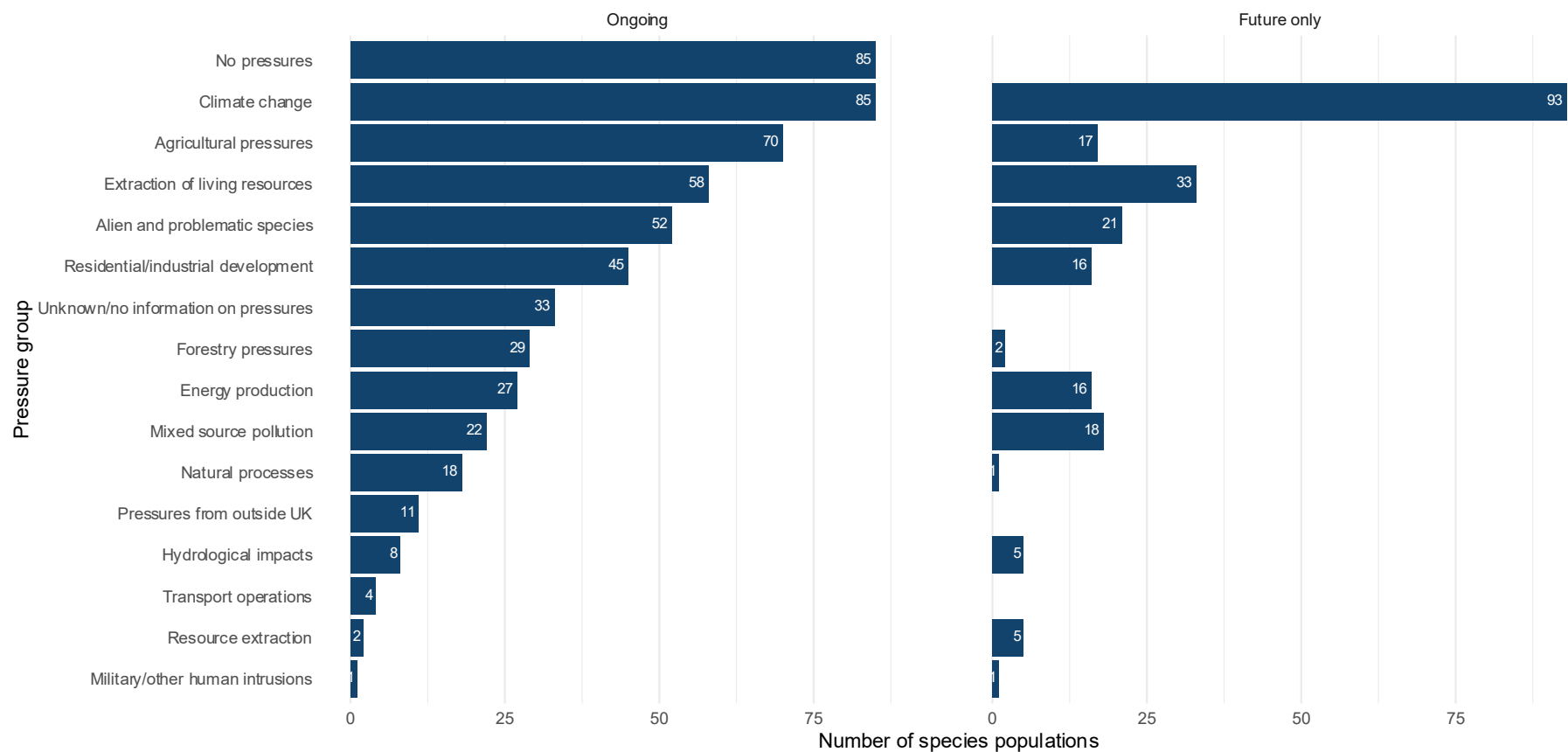


Figure 11. Number of bird species populations affected by each pressure category, either currently (ongoing pressures) or that may be affected in the future. Breeding and non-breeding bird populations are counted separately. Climate change currently affects the greatest number of bird populations and is also the biggest threat in the future.

Agricultural pressures on birds

Agricultural pressures currently affect 70 species populations (24%) and are a threat to a further 17. Farmland birds are the group that are declining the fastest, as assessed by the England Wild Bird Indicator, largely due to agricultural pressures (see also the guild assessment in Annex Three). However, other groups are also directly or indirectly affected by agricultural activities. Breeding waders use farmed habitats in the lowlands and upland in-bye land, and are impacted by drainage, grazing regimes and cropping practices. In the winter, waterbirds that use agricultural land can be impacted by the same issues.

Pressures on birds related to the extraction of living resources

The 'Extraction of living resources' includes pressures related to fisheries, hunting and illegal killing. Marine fisheries and shellfisheries impact the food availability of 14 species. Incidental bycatch in fishing gear potentially affects 16 species. The level of bycatch mortality was estimated to be more than 1% of total adult annual mortality for seven of the ten seabirds investigated by Miles and others (2020), with modelling suggesting population-level impacts for three (cormorant, fulmar and great northern diver). Hunting or wildfowling potentially affects seven species, although for three (quail, roseate tern and turtle dove) the pressure occurs outside the UK. Four species, including pintail and pochard, can be poisoned by lead ammunition when they ingest it. Finally, this pressure group includes illegal killing, which affects species such as the hen harrier.

Alien and problematic species affecting bird populations

Invasive alien and problematic native species (including disease) affect many birds through direct mortality, predation or habitat impacts. Disease is an issue that has come to the fore in this reporting round. Highly Pathogenic Avian Influenza (HPAI) has emerged in the last three years as an unprecedented and rapidly escalating threat to wild bird populations in the UK and globally. Many species that have been hit hard by HPAI are long-lived, slow-breeding species, such as gannets, terns and large raptors, which may be slow to recover. However, there is uncertainty around population responses. For example, barnacle geese numbers have largely recovered from a 30% decline driven by HPAI, due to subsequent high breeding productivity.

The other avian disease that has emerged in recent years is Trichomonosis, a disease caused by a protozoan parasite. This has caused steep declines in both greenfinch and chaffinch populations and is an additional pressure on the already declining turtle dove.

Ground nesting birds are highly susceptible to mammalian or avian predators. Diverse groups such as breeding waders, seabirds, farmland birds and upland birds are all impacted by nest or chick predation. They tend to rely on either camouflage or colonial habits to limit impacts. However, habitat degradation, disturbance and increases in predator numbers exacerbate effects.

Native and non-native species can also have indirect effects. This is particularly evident for woodland birds. Deer browsing is implicated in declines of seven species, including nightingale and willow warbler, because it reduces the scrub understorey that these birds rely on for nesting.

Residential and industrial development pressures on bird species

Residential and industrial development currently affects 45 species populations and is a future threat to a further 16. Some of these species are affected directly by developments, which lead to habitat loss. However, the biggest impact is through recreational disturbance, which currently affects 38 species. These include non-breeding waterbirds in coastal areas, and breeding heathland birds, seabirds, waders and upland birds.

Conservation measures for bird species

Habitats Regulations 9A requires that this report contains information on the provisions mentioned in Article 12 of the Wild Birds Directive, which includes reporting on conservation measures taken for birds. As such, conservation measures were identified for bird populations relevant to England, and are set out in the Measures worksheet in Annex Two. There are 29 native species (14% of those assessed) that do not need any conservation measures. These are species that have no pressures identified and increasing populations. There is a suite of species that have no pressures identified but do have associated conservation measures. Some of these species are benefitting from positive measures to encourage their expansion, such as wetland management measures for new colonists like great white egret. Others have precautionary measures, or measures to protect existing populations represented within the NSN.

For those bird populations requiring conservation action, the measures required and/or being undertaken are summarised in Figure 12.

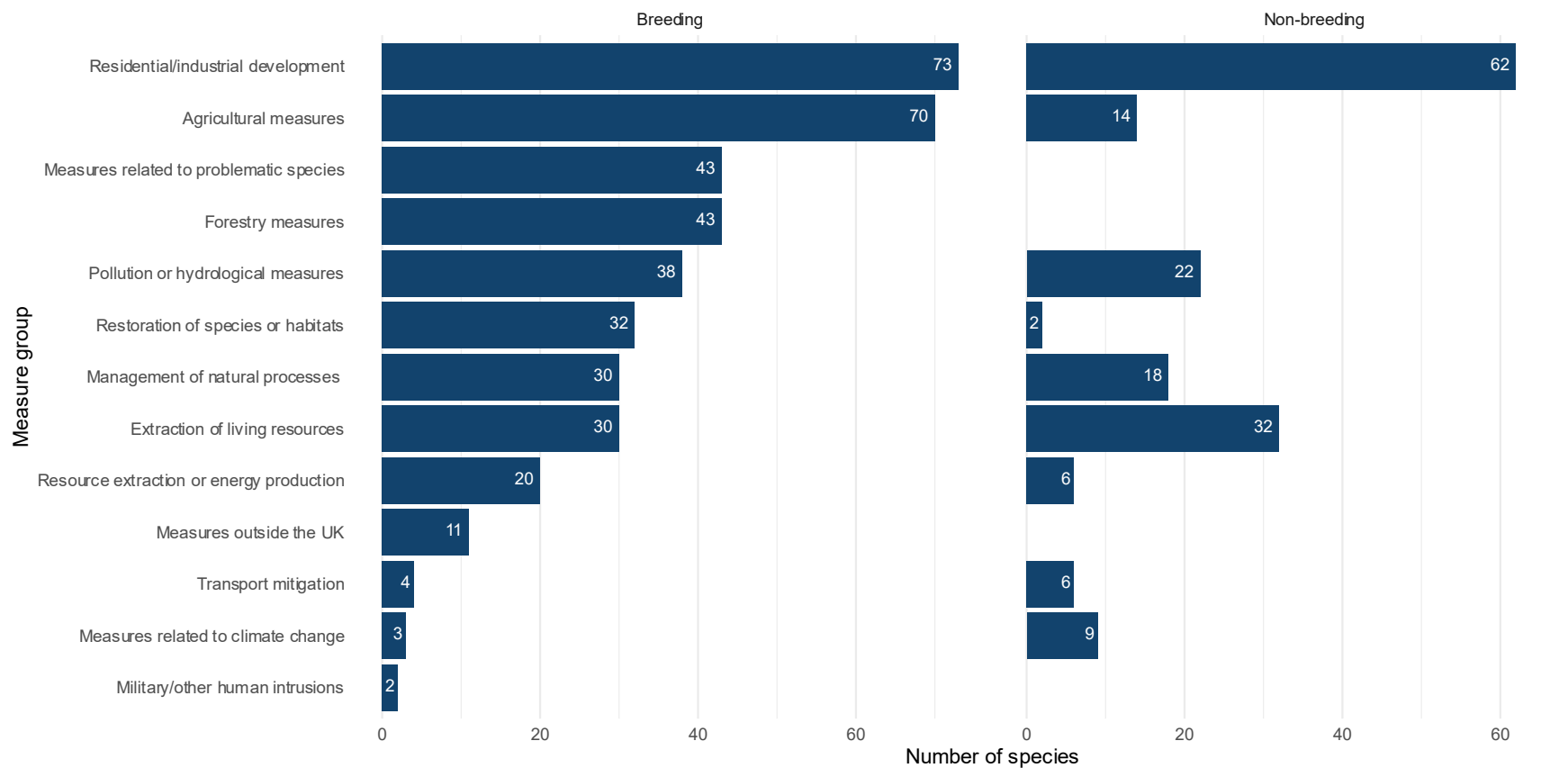


Figure 12. Number of bird species populations associated with each measure group. Residential and industrial development measures were identified most frequently for both breeding and non-breeding birds.

Residential, commercial or industrial development measures for birds

As shown in Figure 10, there are 135 bird species (64%) for which action is being taken to mitigate the impacts of residential or industrial developments. The Habitats Regulations Assessment (HRA) process that informs decision-making on new plans and projects is the major method for assessing and mitigating the potential impacts of development pressures around SPAs (see Section 4.5.9.2 for details). This has been very successful to date, as evidenced by the fact that direct development pressure has only been identified as impacting the national populations of seven species (see Pressures worksheet, Annex Two).

The HRA process has also driven the introduction of measures to mitigate the risks of increased recreational disturbance arising from new housing. Strategic approaches to mitigation have successfully been applied in many heathland and coastal areas, where developers financially contribute to access management measures to alleviate recreational pressure (see Section 4.5.12 for more detail). New projects have been instigated in the reporting period at Poole Harbour and the Essex Coast. There are also many longer-running projects such as at Thames Basin Heaths, the Solent and North Kent. These projects are showing encouraging results in mitigation of additional pressure from new housing; however, background levels of pressure remain significant.

The Third SPA Review (Grady and others, 2025) identified that the coverage of SPA network is insufficient to meet the requirements of Article 4 of the Wild Birds Directive for certain species. For these birds, the measure MF01: Managing the impacts of converting land for construction and development of infrastructure (i.e. the measure relating to the assessment of plans or projects under the Habitats Regulations) has been assessed as only partially implemented. Further details on the SPA Review can be found in Section 4.5.8.

Agricultural measures for birds

Agriculture-related measures benefit 84 species populations. These are principally measures delivered through agri-environment schemes, which is one of the main mechanisms for species recovery outside Special Protection Areas and Special Areas of Conservation.

The RSPB and Natural England have collaborated on research investigating the effectiveness of agri-environment measures. The research demonstrated that targeted schemes can improve populations of farmland birds on arable and pastoral farms where they are applied (Sharps and others, 2023). However, the populations of many birds that use farmland are still declining. In England, the farmland bird indicator has declined by 64% between 1970 and 2024 (Defra, 2025d).

Simulations undertaken by the RSPB (Burns and others, 2024) suggest that for 50% confidence in farmland bird indicator improvement, around half of landholdings in lowland

England would need to be implementing targeted bird-friendly agri-environment measures (Higher Level Scheme options) and half of the remaining landholdings would need to be implementing bird-friendly Entry-Level Scheme options.

The area of land in targeted agri-environment agreements has increased in recent years and in 2022, they covered 2.3 million hectares (Defra, 2025f). This includes all targeted measures, not just bird-friendly ones. It equates to 26% of the 8.8 million hectares of utilisable agricultural area in England (Defra, 2025e). More recent statistics are available for the combined area of land in both targeted and entry-level agri-environment schemes, which is estimated to be around 5.6 million hectares, equivalent to 64% of the utilisable agricultural area of England (Defra, 2025b). It is, therefore, clear that whilst agri-environment measures are being widely implemented, the scale of targeted bird-friendly measures is currently significantly below the level necessary to be confident of improving the population status of farmland birds in England, as identified by Burns and others (2024).

Extraction of living resource measures for birds

A range of measures to mitigate potential impacts from fisheries, hunting and illegal persecution are necessary for a total of 62 species populations. There are 13 seabird species, including terns, auks and gannet (detail on the species can be found in Annex Two) that require action to manage fisheries with the aim of ensuring there are sustainable forage fish stocks. Important action has been taken to improve the marine ecosystem by permanently closing English waters of the North Sea to fishing sandeels. This will benefit species such as puffins and kittiwakes that rely on sandeels for food. Nevertheless, further work is recommended in the English Seabird Conservation and Recovery Pathway (ESCaRP) Natural England, 2024c): to develop a forage fish policy (or similar mechanism) to implement an ecosystem approach to fisheries management decisions that consider the importance of prey for seabirds. Fisheries can also directly affect seabirds through incidental bycatch. Measures are required to address this issue for 13 species. In 2022 the Bycatch Mitigation Initiative was published, setting out high level objectives and suggested actions outlining how the UK will achieve its ambitions to minimise and, where possible, eliminate the bycatch of sensitive marine species (see also Annex Four to this report). The ESCaRP also sets out recommendations regarding monitoring and mitigation for reducing the impacts of fisheries bycatch on seabirds.

Certain waterbirds are on Schedule 2 of the Wildlife and Countryside Act 1981, which means they can be hunted outside the closed season. During the reporting period, Greenland white-fronted goose was removed from Schedule 2 in England. There are additional measures available to ensure that wildfowling is sustainable on SPAs such as the statutory SSSI consents regime, voluntary codes of practice (BASC, n.d.), and, though rarely triggered, suspension of shooting in periods of prolonged severe weather (JNCC, 2025b). The statutory suspension of wildfowling is triggered after 13 days of freezing

conditions recorded at over half England's weather stations, and is therefore rarely enacted, though a period of [voluntary restraint](#) is triggered after seven days of freezing conditions.

Measures are being taken nationally and locally to reduce illegal persecution of 18 species, which include birds of prey, fish-eating birds, waterbirds and gulls. Much of this work centres around partnership working to improve monitoring, investigation, and enforcement. Natural England chairs Bird of Prey Working Groups covering Northern and Southern Counties. These groups provide the opportunity for information sharing between Natural England, the Police, and the National Wildlife Crime Unit (NWCU), and are improving the investigations into suspected persecution.

In April 2024, the Harrier Task Force was launched, which is led by the NWCU. It is made up of a wide range of partners including Natural England, environmental NGOs, landowner representative bodies, and national parks. NWCU analysts have mapped Hen harrier crime hotspots, where they have focused enforcement efforts to proactively reduce persecution. A further aim of the Harrier Task Force is to trial and use innovative technology to improve the collection of evidence. For example, Natural England funded a trial of a drone fitted with a satellite tag tracker to aid police searches for missing birds/satellite tags, and the NWCU now have access to a detection dog, trained to search for harriers and/or satellite tags.

Pollution or hydrological measures for birds

Work to restore the hydrology of wetland habitats has been identified as a measure benefitting 45 species. For example, the Somerset Coast, Levels and Moors Nature Recovery Project are working in partnership to restore wetland habitats at a landscape scale by improving management of water levels (Somerset Local Nature Partnership, 2023). This is bringing benefits to newly colonising species such as great white egrets and restoring wet grassland habitat for breeding waders.

Action is also being taken to reduce water quality impacts on wetland habitats. Much work has been done to reduce point source pollution from sewage treatment works. This has largely been driven by requirements under the Habitats Regulations to review consents. Work is ongoing to tackle diffuse pollution, including a program of Diffuse Water Pollution Plans, Nutrient Mitigation Schemes and work to deliver strategic solutions through the adoption of nutrient neutrality approaches (see section 4.5.22 and 4.5.26 of this report for more information).

Habitat management measures for birds

Work is underway to manage, restore or create habitat for 60 bird species, with many more that also use those habitats indirectly benefiting. Reedbed creation has been instrumental in the recovery of bittern, whilst also benefiting species such as water rail and

bearded tit. Coastal restoration, including managed realignment, at places like Wallasea Island in Essex, benefits both breeding and wintering waterbirds. Creation or restoration of shingle habitat, for example through the LIFE on the Edge project provides nesting space for terns and wading birds. Management of lowland heathland and upland moorland is necessary to ensure that those habitats support their characteristic bird assemblages.

Conclusions regarding conservation measures for birds

General measures, such as site protection, habitat management and creation, and regulatory measures restricting damaging practices are the cornerstone of species conservation. They are the most cost effective and efficient, and they generally provide benefits across multiple species. They also often deliver wider ecosystem services such as pollution reduction or flood management.

There are a significant number of species whose ecological needs are not fully addressed by a general approach. This might be because they are very rare or because they have very exacting or complex requirements that are not routinely met by generic approaches to habitat management. These species are typically classed as threatened, requiring tailored species management approaches. Initiatives such as the Species Recovery Programme - (see Section 5) have a critical role in improving the conservation status of these species.

Action is being taken to reduce many of the pressures acting on birds and implement appropriate measures to improve conservation status. Despite this, many populations continue to decline. This can be partially attributed to inherent time lags after interventions, before species recovery is observed. In addition, some of the drivers of decline are beyond the control of the UK, for example, climate change and impacts outside the UK on migratory species.

Experience from past bird recovery programmes shows that, in order to stem or reverse declines evidence-based measures must affect a high enough proportion of a declining species' population (Eaton and others, 2024). It is critical to take an integrated approach to species recovery, addressing all the drivers of decline where possible. This improves resilience to universal pressures such as climate change. For example, there has been a concerted, England-wide effort over the last 11 years to recover the breeding little tern population. By addressing a suite of pressures through conservation measures to restore or create new habitat, minimise predation and reduce disturbance pressures at all major colonies breeding success has improved and national population has stabilised. (Wilson and others, 2025).

The National Site Network

Assessments of trends within the national site were undertaken for Annex I and Annex II species. Out of 71 Annex I habitats the area for was stable for 38, 19 were increasing, 6 decreasing and 8 unknown.

Similarly for Annex 2 species within the national site network out of 38 species 16 were stable, 5 increasing, 5 decreasing, 3 uncertain and 9 unknown. These assessments were undertaken using expert opinion. It should be noted that a stable assessment does not infer favourable condition.

Conclusions of assessments

Outcomes from the implementation of measures referred to in Article 6.1 are presented in the Annex I, IV and V UK species reports, and the Annex II UK habitat reports under Regulation 9A of the Habitats Regulations. Further detail on measures taken can be found in the following two sections.

The majority of habitats and species in England are not achieving a favourable conservation status. The implementation of measures must be undertaken at a landscape scale to achieve FCS and England's goals for nature recovery.

3 General measures taken

Policy and legislation related measures

The Environment Act 2021

The Environment Act (2021) introduced a range of new tools including Protected Site Strategies (PSS), Species Conservation Strategies (SCS) and targets to deliver favourable condition in the MPA network providing support to the coherence of the NSN and habitats and species within and outside of those sites (further information on these initiatives can be found below). Additionally, the Act mandates regular Environmental Improvement Plans and empowers the OEP to scrutinise government progress, ensuring delivery is monitored and accountable.

The Environmental Improvement Plan 2023

The EIP23 was the first review of the 25 Year Environment Plan published in 2018. EIP23 acts as a statutory driver to improve the conditions of terrestrial, freshwater, and marine SSSI in England.

The Environment Act 2021 requires annual reporting on the EIP and the first report was released in 2024 (Defra, 2024b). Key activities reported on include Environmental Land Management Schemes (ELMS) which fund land management practices that directly benefit biodiversity, water quality, and habitat connectivity (Defra, 2023c). The initiative supports the coherence of the NSN within England by funding actions to connect, buffer, maintain and enhance habitats across farmed and other landscapes and providing management to support species within and outside of the NSN.

The Landscape Recovery initiative is one of three ELM schemes to operate within this reporting period. The scheme offers farmers and land managers the opportunity to co-design bespoke agreements that provide long-term and landscape-scale, positive environmental outcomes. Projects that receive Implementation Agreements will contribute to achieving the commitments set out in the EIP23 and legally binding targets under the Environment Act 2021. Round one was launched in 2022, providing funding for 22 projects or a two-year development phase (Defra, 2023e). These projects are now submitting their delivery plans for assurance where their suitability for a 20-year+ implementation agreement, is assessed. In the second round of Landscape Recovery programme, 34 projects received development phase funding. This round of Landscape Recovery is expected to involve over 700 farmers and land managers working with the communities to support over 200,000 ha of land across England (Defra, 2023f). Around 30 projects across both rounds that entered the Project Development Phase (PDP) incorporated SAC or SPA land at the start of the PDP.

Local Nature Recovery Strategies

LNRS are a statutory measure introduced by the Environment Act 2021. They involve the creation of a new England-wide system of spatial strategies to support the restoration and recovery of nature. Each LNRS will identify and map existing areas of particular importance for biodiversity, which will include the NSN. By mapping potential nature-rich areas, LNRS target specific locations and opportunities where prioritised action could be taken for nature recovery (Defra, 2023g). This includes identifying potential action for habitats and species that may enhance or otherwise underpin the NSN as well as the application of nature-based solutions to deliver wider environmental outcomes, such as reducing pressures on water bodies.

As of June 2023, 48 local authorities were appointed as the ‘responsible authority’ to lead the preparation of LNRS’s in their area (Defra, 2023g). The first completed strategy was published in late 2024 (Stonehouse, 2024). A key principle of the LNRS process is collaboration, involving local communities and stakeholders in the production of the strategies. This ensures that the outputs are based as far as possible on a local consensus about the priority places and measures needed for nature recovery.

The Nature Recovery Network

In the previous UK General Implementation Report (2013 to 2018) (JNCC, 2019a and 2019b), England identified Nature Improvement Areas as a measure contributing to the coherence of the NSN. Going forward, the report stated that the 25 Year Environment Plan (now replaced by the EIP23) would provide for a national Nature Recovery Network (Defra, 2024d). The network would drive the creation, expansion, enhancement and improved connectivity of sites designated for nature conservation and other wildlife-rich places in a way that is consistent with Sir John Lawton’s vision for nature recovery, set out in his government review of wildlife sites, ‘Making Space for Nature’ (Defra, 2010).

Twelve Nature Recovery Projects were launched across the country between 2021 and 2023, covering over 319,480 ha (Prime Minister’s Office, 2021; Defra, Natural England and Pow, 2022a; Defra, Natural England and Harrison, 2023). Supported by £7.4m dedicated government funding over the three-year period (2021/22 to 2024/25), these locally led collaborative projects encompass multiple protected sites across England. (Defra, Natural England and Harrison, 2023), including over 70,000ha designated as SAC or SPA.

Biodiversity Net Gain

Biodiversity net gain (BNG) represents a new way of creating and improving natural habitats. BNG makes sure a development has a measurably positive impact overall (‘net gain’) on biodiversity, compared to what was there before development.

In England, BNG is now mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). Developers must deliver a BNG of at least 10%. This means a development will result in more or better-quality natural habitat than there was before development. BNG can be delivered either fully or in part via on-site habitat, off-site habitat, or as a last resort, through the purchase of statutory biodiversity credits. BNG encourages the retention and enhancement of habitats onsite (habitat that previously may have been cleared) with a growing market for biodiversity units where developers need to go off-site. At the time of writing, BNG has led to c. 4,000 ha of new habitat being proposed for creation or enhancement offsite (Defra, 2024e). All off-site habitat and significant on-site habitat must be legally secured for a minimum of 30 years.

Revised National Planning Policy Framework 2024

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied in practice. The NPPF is clear that local plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with the other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site. There were no changes to this policy from 2019-2024 (MHCLG, 2024).

Special Protection Area Network Review

Periodic reviews of the UK's SPA network have proved an effective means of identifying priorities for site-based conservation, as well as identifying other associated and complementary conservation measures that may be needed beyond site boundaries. The Third Network Review of the UK's SPAs (the 'Third Review') is being undertaken in three phases.

Phase 1 of the Third Review was published in 2016 and advised governments that 87 UK SPA species suites (where SPAs are classified for breeding and non-breeding populations of the same species, these are counted as two 'species suites') were insufficient to meet the requirements of Article 4 of the Wild Birds Directive (Stroud and others, 2016).

General measures relating to Special Areas of Conservation and Special Protection Areas within England

Before leaving the EU, the UK's SACs and SPAs formed part of the EU's Natura 2000 network. Amendments to the Habitats Regulations in 2019 saw the creation of a new NSN on land and at sea, including both the inshore and offshore marine areas in the UK.

The NSN comprises:

- Existing SACs and SPAs.
- New SACs and SPAs designated under the Habitats Regulations and Offshore Habitat Regulations.

Maintaining a coherent network of internationally important nature sites within the UK is still required to fulfil the commitment made by Government to maintain environmental protections following EU Exit and to continue to meet the UK's international nature conservation obligations, for example, those made under the Bern, Ramsar and OSPAR Conventions.

New Management Objectives for the NSN are outlined in Regulation 16A of the Habitats Regulations. The UK Government and devolved administrations (in Wales, Northern Ireland and Scotland) must co-operate to manage, and where necessary, adapt the network, so far as it consists of European sites, so that it contributes towards meeting the network management objectives.

The Network Management Objectives are to:

- Maintain at or, where appropriate, restore to FCS those habitats listed in Annex I of the Habitats Directive and the species listed in Annex II of the same Directive whose natural range includes any part of the UK territory, so far as is proportionate.
- Contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds listed on Annex I of the Wild Birds Directive and regularly occurring migratory birds which occur naturally in the UK's territory, and
- For both of these categories of birds, within their area of distribution, contribute to securing compliance with the Article 2 of the Wild Birds Directive for the purposes of the regulation 9(1) duty.

The appropriate authorities must also have regard to the requirements of Regulation 16A(5) which include;

- Importance of protected sites for meeting the objective to maintain or restore to FCS.
- in the case of migratory species, the importance of their breeding, moulting and wintering areas and staging points along their migration routes;
- Importance of protected sites for the coherence of the NSN.
- Threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

As shown in Table 2, there are a total of 256 SACs (11 of which are cross-boundary with Scotland or Wales) and 88 SPAs (4 of which are cross-boundary with Scotland or Wales).

Table 2. Number and Area of Special Areas of Conservation and Special Protection Areas. To note: where two sites overlap, the area is only counted once. This is why the totals are less than the sum of their components. Areas are calculated up to England's administrative boundary and out to 12nm. Data on SAC and SPA boundaries can be found on Natural England's Open Data Geoportal.

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	SAC	SPA	Total
Number of sites	256	88	344
Area landward of mean high water (ha)	536,989	483,130	646,989
Area seaward of mean high water (ha)	1,486,779	1,399,597	2,264,714
Total area (ha)	2,023,768	1,882,728	2,911,703

Figure 13 below shows the distribution of these SACs and SPAs across England. Where there are cross border sites, including across the 12nm boundary, the map shows the extent of all the SAC and/or SPA. The map does not show fully offshore SACs and SPAs.

During the reporting period, the following SPAs in England have been either newly classified or extended:

- **Teesmouth and Cleveland Coast SPA:** extension to include additional habitat and features (breeding avocet and common tern, and non-breeding ruff);
- **Solent and Dorset Coast SPA:** new site for foraging common, little and Sandwich terns in the breeding season;
- **Solway Firth SPA:** marine extension to the previously named Upper Solway Flats and Marshes SPA (cross-border site with Scotland);
- **Isles of Scilly SPA:** marine extension with breeding shag and breeding great black-backed gull added as features.

Natural England's [Designated Sites View](#) tool provides full details of SACs and SPAs, their conservation objectives and supplementary advice, and Improvement Programme for England's Natura 2000 Sites (IPENS) Site Improvement Plans (SIPs) for each of the sites within the NSN.

[The Multi-Agency Geographic Information for the Countryside \(MAGIC\) website](#), which has been operational since 2002, also provides spatial data on rural, urban, coastal, and marine environments across England. MAGIC's partners include Defra, Environment Agency, Historic England, Forestry Commission, Natural England, and Marine Management Organisation.

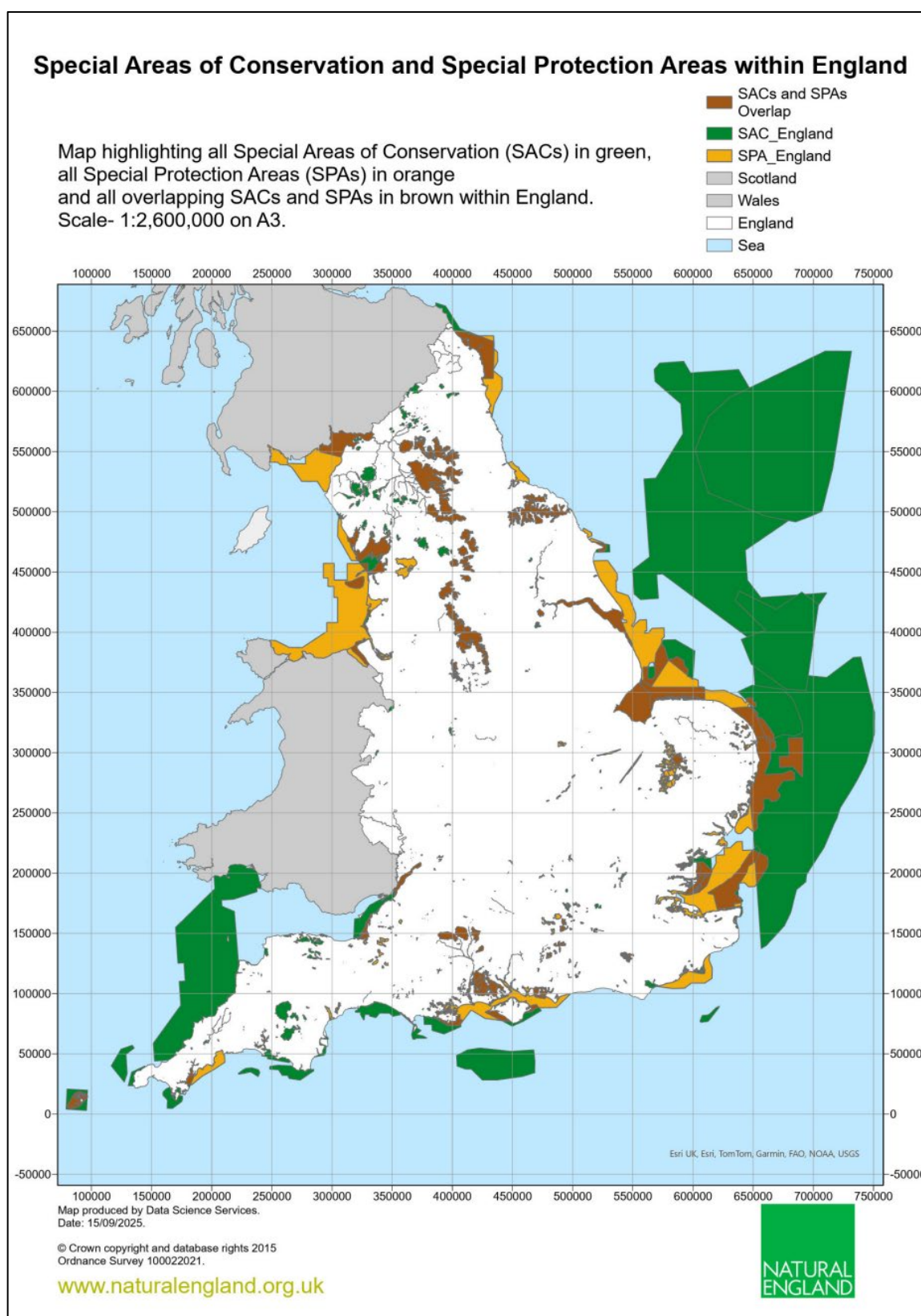


Figure 13. Map showing the distribution of Special Areas of Conservation and Special Protection Areas across England.

Conservation Measures and Management Plans for National Site Network Sites

Site Improvement Plans were developed for each European site as part of the Improvement Plan for England's Natura 2000 sites (Natural England and Environment Agency, 2012). These plans identify.

- The risks and issues that are impacting on and/or threatening the condition of the site.
- Which actions and conservation measures could be used to address them.
- How much it will cost and where the money could come from.

Site Improvement Plans are available for 253 SACs and 85 SPAs on designated sites view. Sites with SIPs have conservation measures identified, though implementation can be considered partial. Site Improvement Plans were published in 2014/5. It is recommended that a review of actions in SIPs is undertaken and updates made where required. The EIP23 includes an interim target for 50% of SSSIs to have actions on track to achieve favourable condition by 2028. (Defra, 2023b). Where actions on SSSIs are the same measures as required for SACs and SPAs these data should be used to update conservation measures.

Data on progress towards the EIP23 actions on track target is publicly available on Natural England's Designated Sites View system: <https://designatedsites.naturalengland.org.uk/>.

Conservation measures are recorded for 209 terrestrial SACs and 38 terrestrial SPAs in the Conservation Advice section of Natural England's Designated Sites System.

Management Plans are available for National Nature Reserves, where these overlap with a SAC or SPA they cover the relevant features.

Habitats Regulations Assessments

Where a plan or project is likely to have a significant effect on a site within the NSN and is not directly connected with or necessary to the sites' management, Part 6 of the Habitats Regulations requires competent authorities, before undertaking or authorising such a plan or project to assess the implications for the site in view of its conservation objectives. The Habitats Regulations Assessment (HRA) helps a decision-maker ensure that new plans and projects go ahead in ways that are compatible with a site's conservation objectives and is a key tool that supports the achievement of the objectives set out in the Regulations (Defra and others, 2023).

Where a plan or project is likely to have a significant effect on the site, and is not directly connected with or necessary to its management, competent authorities may only authorise or undertake such plans or projects after having ascertained by undertaking an appropriate assessment that there would be no adverse effect on the integrity of a site (Defra and others, 2021). If an adverse effect on the integrity of the site cannot be ruled out, the competent authority may still agree to the plan or project provided it is satisfied that there are no alternative solutions and that the plan or project must be carried out for imperative reasons of overriding public interest (IROPI). Where a derogation is relied upon the appropriate authority must secure that compensatory measures are taken to ensure the overall ecological coherence of the NSN.

A table outlining the plans and projects resulting in derogations due to IROPI during this reporting period can be found in Appendix J (Annex Five). Additionally, the Environment Agency publishes progress reports on the Habitat Compensation and Restoration Programmes (HCRPs), which are designed to offset habitat loss caused by Flood and Coastal Erosion Risk Management (FCERM) activities in England. The most recent report was published in January 2023 (Environment Agency, 2023).

The duty to secure compensatory measures is described above. In discharging that duty the appropriate authority will have reviewed and accepted that the proposed compensatory measures are supported by evidence that they will ensure that the overall coherence of the national site network is protected. Assessing the efficacy of these measures in practice requires data on whether they have been delivered as planned and whether they have achieved the expected outcomes. These data are currently unavailable across the lifetime of the measures.

Supporting the Implementation of the Habitats Regulations Assessment Process

In 2021, Defra, the Welsh Government, Natural England and Natural Resources Wales jointly developed and [published new public-facing guidance](#) to help further the implementation of the Habitats Regulations and to expedite decision-making by public authorities. This guidance aims to help public authorities fulfil their ongoing general duty under regulation 9 of the Habitats Regulations to proactively take action that helps protect, conserve and restore sites within the NSN (Defra and others, 2021). Actions can include using their powers, and working in partnership with others, to establish the conservation and restoration measures needed to achieve SAC and SPA conservation objectives and to take steps to prevent the deterioration and significant disturbance of the designated habitats and species of those sites.

This guidance sought to update and consolidate existing guidance where needed to be better suited to UK circumstances following EU Exit, filling key existing gaps and replacing out-of-date guidance. It aimed to improve the operation of the HRA procedure and to provide stakeholders with greater awareness and clarity about how to comply with it both effectively and efficiently (Defra and others, 2021).

Improved Advice on Conservation Objectives

During the reporting period Natural England continued to improve its advice as to the Conservation Objectives for all sites in the national site network by publishing Supplementary Advice (SACOs). These improvements derive from the recommendation made in Government's implementation review of the Habitats and Wild Birds Directives in 2012 that Natural England should provide further information and advice to enable the application and achievement of the objectives. This advice is available via designated sites view [Site Search](#).

The Conservation Objectives are those referred to in the site assessment provisions of the Habitats Regulations and specifically in regulation 37 for marine sites. They provide a framework to inform the measures necessary to conserve or restore a NSN site and/or to prevent the deterioration or significant disturbance of its designated features. Detailed information regarding pressures on marine features can be found in the Advice on Operations section. The advice on objectives should inform any 'Habitats Regulations Assessments' (which may include an appropriate assessment) by competent authorities.

SACOs describe the attributes which are ecological characteristics of the designated species and habitats within a European site. The listed attributes are considered to be those that best describe the site's ecological integrity and which, if safeguarded, will enable achievement of the Conservation Objectives. Each attribute has a target which is either quantified or qualitative depending on the available evidence.

LIFE Programme Projects Operating between 2019 and 2024

The LIFE Programme is the EU's dedicated funding mechanism to protecting the environment and promoting climate action. Since 1992, 271 projects have been funded in the UK, totalling €728 million. €349.5 million was allocated to conservation initiatives under the Nature and Biodiversity sub-programme (CINEA, 2022). This funding supports efforts aligned with the implementation of the Habitats Directive and the Birds Directive by aiming to protect species and habitats listed in the annexes.

Appendix L (Annex Five) lists the 15 Nature and Biodiversity LIFE programmes that operated between 2019 and 2024. These programmes predominantly focused on restoring the condition of a range of habitats including moors, rivers, and peatlands, however, some programmes benefited species such as the twaite shad (S1103). Eight projects concluded within the reporting period and demonstrated notable achievements in habitat restoration, species recovery, and climate resilience.

- The [MoorLife 2020](#) (2015 to 2022) project exceeded its targets by stabilising 54.5 ha of bare peat, installing over 16,000 mini-dams to rewet blanket bog, and protected the integrity of 9,500 ha of active blanket bog (H7130) (Moors for the Future Partnership, 2022).

- [Unlocking the Severn](#) (2016 to 2022) - the case study below outlines the achievements for this project (Unlocking the Severn, 2022).
- The [Marches Mosses BogLIFE](#) (2016 to 2022) project putting 665 ha of degraded raised bog (H7120) on the trajectory to active raised bog (H7110), safeguarding 1.1 million tonnes of carbon and tested forest-to-bog and pasture-to-bog restoration techniques (Marches Mosses BogLIFE, 2023).
- The [LIFE Blackwit UK](#) (2016 to 2023) project aimed to increase both the breeding population and distribution of black-tailed godwits at key sites across the East Anglian Fens. By managing 1,100 hectares of habitat, the project successfully increased the number of breeding pairs and improved the targeted habitat (RSPB, 2024).
- [Bringing the Bure to LIFE](#) (2017 to 2023) improved the condition of Hoveton Great Broad and Hudson's Bay. Key achievements include the removal of 54,000m³ of sediment from the natural eutrophic lakes (H3150) and re-used dredged sediment to create 3.7 ha of new calcareous fen habitat (H7210) (Natural England, 2023a).
- The [Pennine PeatLIFE](#) (2017 to 2023) project restored over 1,700 ha of blanket bog (H7130), and revegetated 154 ha of bare peat (North Pennines National Landscape, 2023).
- [The Biosecurity for LIFE project](#) (2018 to 2023) - the case study below outlines the achievements for this project.
- The [LIFE Recreation ReMEDIES](#) (2019 to 2024) project tackled marine habitat degradation by planting 8 ha of seagrass (H1110), installing 17 advanced mooring systems, and establishing three voluntary no anchor zones. The following two case studies demonstrates the notable achievements of the final two projects to conclude in this reporting period (LIFE Recreation ReMEDIES, 2024).

LIFE Recreation ReMEDIES: Case Study 1: Unlocking the Severn: Conservation and Restoration of Twaite Shad in the Severn Estuary Special Area of Conservation

Unlocking the Severn was an ambitious LIFE project that began in 2016 and focused on restoring two rivers to support the recovery of the twaite shad (S1103) population. The project aims to achieve favourable condition in the Severn Estuary, the most important site in the UK for the species making a significant contribution to favourable conservation status. The project was led by the Canal & River Trust in partnership with the Environment Agency, Severn Rivers Trust and Natural England.

Historically, the twaite shad migrated far up the River Severn but the construction of weirs along the river impacted the fish's ability to migrate. Unlocking the Severn constructed four

major fish passes along the River Severn and modified two weirs on the River Teme, leading to 158 miles being reconnected, providing an alternative route for the fish to navigate. [Scientific monitoring](#) of shad migration has shown that the fish successfully navigated through all four fish passes. Analysis of environmental DNA (eDNA) shows the Twaite shad have accessed key breeding habitats for the first time in 180 years (Canal & River Trust, 2022).

While full population recovery may take time, the project delivered the only feasible solution to support the species' return to favourable conservation status.

LIFE Recreation ReMEDIES: Case Study 2: Biosecurity for LIFE: Safeguarding the UK's globally important seabird island SPAs from invasive alien species

The Biosecurity for LIFE project was a UK-wide collaboration between island communities, businesses, landowners, conservation bodies like RSPB, and statutory bodies such as Natural England and Defra. Coordinated by RSPB, the aim of the project was to ensure adequate protection of the UK's 42 seabird island SPAs from invasive mammals as well as establishing 'rapid response hubs' to manage incursions of invasive species. In England, the SPA sites included were the Farne Islands, Coquet Island, and the Isles of Scilly. The project also supported Lundy SSSI which isn't a SPA but does meet the qualifying thresholds.

This project contributed to the implementation of the Wild Birds Directive as it established safeguarding mechanisms to protect UK's seabird population. It also demonstrates measures being taken to minimise the impact of invasive species on native birds, in line with EU Regulation 1143/2014 on invasive alien species.

The LIFE programme concluded in July 2023, and the project achieved biosecurity plans for 41 of the island SPAs with biosecurity surveillance measures implemented for 65 out of the 73 islands. Additional funding was secured for the project which allowed for continuation throughout the reporting period. (RSPB, 2023).

Case Study: Dynamic Dunescapes

[Dynamic Dunescapes](#) (2019-2025) is a partnership project restoring sand dunes across England and Wales for the benefit of wildlife, people and communities, funded by the National Lottery Heritage Fund and the EU LIFE Programme alongside partner and in-kind contributions. The project focused on nine key dune areas which include 38 individual dune sites, covering up to 7,000 hectares. It has delivered conservation work at scale, for example over 325 hectares of sand dune rejuvenation has taken place through activities such as scrub clearance, scraping and the creation of notches to expose sand and allow natural sand movement through the dune system. In addition, there has been a further 122 hectares of invasive species removal, and grazing has been established across a further 605 hectares, helping to improve the condition of sand dune habitats into the future. In

addition, the project has undertaken engagement work that has both supported the conservation work as well as made a wider contribution to tackling inequalities.

Measures to address recreational disturbance

NE has worked with partners and stakeholders to develop a variety of strategic solutions to mitigate the impacts of recreational activity on protected sites in different parts of the country. Where this mitigation advice is adopted by decision-making authorities and project proposers to inform their Habitats Regulations assessments, it can enable development to proceed where protected sites are at risk by ensuring that it does not add to existing recreational impacts. This type of strategic solution includes:

- The delivery of strategic, large-scale mitigation which can be more effective and support better environmental outcomes than could be achieved on a case-by-case basis.
- A pooled pot of money to spend on priority measures detailed in the Mitigation Strategy.
- Delivery of Suitable Alternative Natural Greenspace (SANG) providing multiple benefits to people and nature.
- Site Access Management and Monitoring measures (SAMM) to ensure that visitor management of the protected site can accommodate the increase in visits associated with new development.

These techniques have been developed in partnership across a number of sites, including the Thames Basin Heaths SPA. A review of the evidence leading to SANGs and SAMM was commissioned by Natural England in Beveridge and others (2024).

Management of Non-Native Bird Species

The presence and proliferation of non-native bird species (those that do not naturally occur in the UK) in England requires management to ensure ecological integrity of local wild flora and fauna both within and outside of the NSN. While some species have become naturalised across the UK, such as the Mandarin duck, others remain rare or potentially invasive.

The Rare Breeding Birds Panel has been systematically monitoring non-native breeding birds since 1996, focusing on species with fewer than 300 breeding pairs annually. The most recent publication demonstrates that between 2015 and 2020, 22 rare non-native bird species were reported across the UK, with 18 confirmed as having bred in at least one year (Eaton and RBBP, 2023). Annex Two contains population trend data for 28 non-native birds within this reporting round.

It is generally prohibited under the Wildlife and Countryside Act to release non-native species unless this is authorised by a licence. Between 2019 and 2024, England made substantial progress in how it manages two non-native bird species - common pheasant and red-legged partridge - which are released into the wild in very large numbers for recreational shooting and which have the potential to impact SACs and SPAs.

In 2021, schedule 9 of the Wildlife and Countryside Act was temporarily updated to include common pheasant and red-legged partridge, prohibiting the release of these birds within a SAC and/or SPA and within 500 metres of their boundaries. At the same time, Defra introduced an interim licencing regime as an appropriate step to avoid potential deterioration of the natural habitats and the habitats of species on European sites and the significant disturbance of the species for which the sites have been designated. This interim licensing regime was based around a general licence covering releases on both SACs and SPAs.

A post implementation review (Defra, 2024f) was undertaken and published by Defra in 2024 to review and report on the effectiveness of the interim licencing regime and to what extent its objectives have been met. Of the 88 SPAs and 256 terrestrial SACs, 31 SPAs and 37 SACs had been subject to the release of gamebirds under licence. The review concluded that the licencing regime should remain in place until Defra can conclude that either unregulated gamebird release will not have a significant effect on the conservation objectives of a SAC or SPA, or until a satisfactory alternative long-term mechanism is in place to meet the legal obligations in the Habitats Regulations. The inclusion of these two species in Schedule 9 was subsequently made permanent by the Wildlife and Countryside Act 1981 Variation of Schedule 9) (England) (No. 2) (Amendment) Order 2024. It remains an offence for anyone to release these two species of bird within a SAC or SPA and/or its 500-metre buffer zone, except under Licence (Defra, 2024f).

Measures taken in the marine environment (to 12nm)

The Marine Protected Area Network

Marine SACs and SPAs form a part of the well-established Marine Protected Area (MPA) Network alongside other types of MPAs such as Marine Conservation Zones (MCZs) and Highly Protected Marine Areas (HPMAs). The English MPA network consists of 181 MPAs, which covers approximately 40% of England's seas by area.

In December 2024, Defra published a report on the state of the MPA Network as of that date to meet the requirements of section 124 of the Marine and Coastal Access Act 2009 (Defra, 2024c). This update report covered progress made in establishing a MPA network between 2019 and 2024. Progress includes the creation or extension of marine SPAs (already mentioned in Section 3.1), introduction of new byelaws, introduction of HPMAs, and the introduction of a statutory target under the Environment Act 2021 to get at least

70% of designated features in MPAs to favourable condition by 2042, with the remainder in recovering condition (Defra, 2024c). As of 2024 it is estimated that 44% of English MPA designated features are in favourable condition (Defra, 2024c).

Introduction of New Byelaws

In 2022, the Marine Management Organisation (MMO) introduced new byelaws to protect four offshore MPAs (stage one) including Dogger Bank MPA and Inner Dowsing, Race Bank and North Ridge MPA, both designated SACs (Patrick, 2023). These byelaws prevent damaging fishing activity and will contribute to maintaining and/or restoring key Annex I habitats to favourable conservation status.

In March 2024, the MMO implemented further byelaws aimed at safeguarding important marine habitats and species across an additional 13 offshore MPAs in English waters (stage two). Among these, five are SACs, two of which are partially within 12 nm of the shore (Haisborough Hammond Winterton and Lands End and Cape Bank). The remaining sites are designated as Marine Conservation Zones (MMO, 2023). The new management measures prohibit the use of bottom towed fishing gear in an area almost 4,000 square kilometres in total off the English coast and the byelaw increases the total area protected by MMO byelaws to almost 18,000 square kilometres (MMO and Defra, 2024). Between 2019 and 2024, the Inshore Fisheries and Conservation Authorities (IFCAs) have implemented a total of 12 byelaws to support the conservation objectives of 55 inshore SACs. Calls for evidence for stage three were held in 2023 and 2024.

Introduction of Allonby Bay Highly Protected Marine Area

HPMAs are areas of the sea that allow the protection and recovery of marine ecosystems. They take a 'whole ecosystem approach' rather than focus on a specific feature. These areas did not exist in the previous reporting period and the first three sites were designated under the Marine and Coastal Access Act (2009) in 2023 including Allonby Bay HPMa which partially overlaps with Solway Firth SPA (Defra, 2023d). The site was chosen due to its extensive habitats attracting a wide range of bird species such as curlew, oystercatcher, guillemots and gannets.

HPMAs offer important opportunities to enhance the resilience of marine biodiversity and contribute to the broader network of MPAs, supporting the overarching goals of the Habitats Regulations through complementary conservation efforts.

Closure of sandeel fisheries in the English waters of the North Sea

Sandeels are forage fish targeted by industrial fisheries primarily to produce fishmeal and fish oil, which are used in salmon farming and livestock feed. Sandeels play a key role in the North Sea marine food web, serving as a key prey for a wide range of species, including marine mammals such as harbour porpoise, seabirds such as black-legged

kittiwake and Atlantic puffin, and other commercially important fish, such as cod and whiting.

In March 2024, the UK government introduced a closure of the industrial sandeel fishery in English waters of the North Sea following public consultation. The scientific advice underpinning the closure was led by Natural England and used an ecosystem approach to explore the relative importance of sandeels in the structure and function of the North Sea marine food web. This measure was introduced to enhance the resilience of the North Sea marine ecosystem in relation to the UK's objectives for Good Environmental Status (Defra, 2023i).

Offshore Wind Environmental Improvement Package (OWEIP)

The Energy Act 2023 provides powers to, by regulations, make provision for the establishment, operation and management of a Marine Recovery Fund (MRF), and about the taking or securing of environmental compensatory measures, and the assessment of environmental effects in relation to offshore wind. To date, three strategic measures have been approved for use by the MRF - strategic MPA designation (see below), offshore Artificial Nest Structures (ANS) for kittiwake and predator management for a range of SPA seabirds. Work continues to scope and develop further potential strategic measures.

Strategic MPA Designation for Seabed Benthic Habitat Loss

Finding compensation for impacts to marine SAC features such as '1110 Sandbanks that are slightly covered by sea water all the time' and '1170 Reefs' has proved challenging for developers. There are currently no ecologically effective options that developers can deliver themselves to compensate for their unavoidable impacts on seabed habitats within Special Areas of Conservation (and Marine Conservation Zones).

Natural England and JNCC have identified a 'long list' of sites of potential compensatory MPAs which satisfy ecological site identification and selection principles in English waters that would be suitable to compensate for the impacts of offshore wind development and Defra will then apply policy, social and economic principles (where appropriate) to facilitate a transparent, participatory and evidence-led approach throughout the site selection process, with an aim to publicly consult in the future. Any compensatory MPAs designated would also require management measures to ensure the protection of designated features.

Planning Offshore Wind Strategic Environmental Impact Decisions (POSEIDON)

Protecting seabird SPAs where features such as kittiwake and gannet have large foraging ranges is complex, as the location of important areas offshore are poorly understood. Often important seabird aggregations are only identified once sites are earmarked for development. It is therefore critical that the early phases of offshore renewables planning

are informed by up-to-date, high-quality data that allows for effective identification of the most appropriate sites for development.

Since 2022, Natural England has led the Planning Offshore Wind Strategic Environmental Impact Decisions (POSEIDON) project. Funded by The Crown Estate, POSEIDON will establish a robust evidence base made accessible through new mapping tools to support the expansion of low impact offshore wind development alongside thriving marine nature. Among other receptors, this will include multi-species seabird sensitivity mapping, based on a combination of historic data, newly commissioned surveys and state-of-the-art modelling. This information will help decision-makers and developers avoid areas that are likely to be important for SPA species from several colonies, reducing the potential for adverse effects.

Strategic Seabird Compensation Approaches

As well as providing project-specific advice to developers, Natural England has commissioned contracts to explore the most appropriate approaches to compensating for impacts on SPA seabirds, including multi-species reviews (Natural England, 2022a) and investigation of innovative approaches (Natural England, 2024e). Further information on ESCaRP can be found in Section 5 of this report.

Measures taken in the freshwater environment

Nutrient Neutrality/Nutrient Mitigation Scheme

Nutrient pollution is a problem for freshwater habitats and estuaries which provide a vital home to birds, fish, and insects. Increased levels of nutrient pollution (nitrogen and/or phosphorus) from housing, transport, industry and farming, nitrogen and phosphorus, disrupts natural processes and can devastate wildlife.

Natural England has provided strategic mitigation advice to minimise the impacts of nutrient pollution on NSN sites in different parts of the country. Where this advice is adopted by decision-making authorities and project proposers to inform their Habitats Regulations assessments, it can enable those developments to avoid an increase in nutrients and proceed quickly.

The scheme works to identify, evidence, and deliver mitigation solutions in Nutrient Neutrality (NN) catchments. The mitigation solutions are worked out into Nitrogen and Phosphorus reductions, which are then sold as credits to developers. A credit is equal to 1kg of Total Phosphorus or 1kg of Total Nitrogen.

The aim of the Nutrient Neutrality approach is to protect vulnerable protected sites from further environmental decline due to additional nutrient pollution generated by new residential development. It is a temporary measure to help the planning process until the

condition of these sites affected by this pressure can be improved through other means. Toolkits and guidance can be found here [Using the nutrient neutrality calculators - GOV.UK](#).

River Basin Management Plans

The Water Environment (Water Framework Directive) (England & Wales) Regulations 2017 (“The WFD Regulations”) are implemented primarily through River Basin Management Plans (RBMPs). These plans, which are reviewed every 6 years, are central to achieving the environmental objectives of the WFD, including preventing deterioration and achieving good ecological and chemical status of all water bodies (Environment Agency, 2022). All freshwater SACs and SPA’s sit within one of the 7 River Basin Districts, managed by the Environment Agency in England, or one of the 2 that are cross-border with Wales, managed jointly with Natural Resources Wales.

RBMPs support the implementation of the Habitats Regulations, particularly through the management and SACs and SPAs where the conservation of habitats and species depend on the condition of the water environment. For these water-dependent habitats and species, maintaining both the quality and quantity of water supply is critical. WFD is the primary environmental legislation used to protect and enhance waterbodies outside of the designated site network, including many tributaries and other connected waterbodies and as such is supportive to all freshwater SACs and SPAs.

RBMPs help meet the surface water and groundwater environmental standards required by the WFD Regulations, which in some cases may be sufficient to support the conservation objectives of SACs and SPAs. However, where conservation targets are more stringent than the WFD standard, these stricter targets must also be met. RBMPs may include site-specific measures for SACs and SPAs. Additionally, many measures in the RBMP programme of measures - such as those improving water quality and flow - indirectly support the Habitat Regulations by enhancing the overall health of the water environment.

River Restoration Plans

The River Restoration Theme Plan, developed under the Improvement Programme for England’s Natura 2000 Sites (IPENS), forms part of a strategic national effort led by Natural England and the Environment Agency to restore rivers designated as Sites of Special Scientific Interest (SSSIs) and SACs. Strategic long-term whole-river restoration plans address the key physical modification pressures that compromise river habitat function, quality and/or freshwater species and ecological function.

Of 19 SACs with physical modification identified as a pressure, 15 had strategic river restoration plans completed between 2009 and 2015 and two further rivers have had plans developed between 2019 and 2023. Implementation has started and continues on 13 of these rivers but progress remains variable. Most of the plans are due for review to ensure

that the high-level restoration options and priorities for delivery remain current and to identify wider catchment restoration necessary to restore the physical condition of the SAC rivers. The 3 Cumbria SSSI River plans were reviewed in 2024 and an optioneering study was also undertaken for the River Derwent in 2024 (Matthews, 2024).

Case Study: River Mease and River Avon Restoration Plans

The River Mease is designated as a SAC for Spined Loach (S6963) and Bullhead (S6965). Under the River Mease SSSI/SAC Restoration Plan, the Trent Rivers Trust has delivered 15.2 km of river restoration in the wider River Mease catchment with 11.91 km occurring within the River Mease SAC between 2019 and 2024. An associated 22.09 ha of floodplain habitat improvements has also occurred. This restoration, funded by Environment Agency River Restoration Funding and the River Mease Developer Contribution Scheme, has included 4 landscape scale projects that have each restored over 1.4 km of river length. There is more detail on some of these schemes on the [River Mease website](#).

The Hampshire Avon is designated for its river habitat (H3260) which also supports several species listed on the annexes. Approximately 7.5 km of river length and more than 2.5 ha of riverside habitat have been restored under the River Avon SSSI/SAC Restoration Plan by partners including the Wiltshire Wildlife Trust and Wessex Rivers Trust between 2019 and 2024. This includes the creation of a river park providing a wildlife corridor through the centre of Salisbury delivered by the Environment Agency, working with Wiltshire Council, Salisbury City Council and partners. More information about [this project can be found here](#). A further 2.5 km of river and 8.5 ha of floodplain habitats has been restored in the wider catchment.

Diffuse Water Pollution Plans

Since 2010, Diffuse Water Pollution Plans (DWPPs) have been the agreed mechanism between Natural England and the Environment Agency to address diffuse pollution and water quality issues on protected sites. The need for a DWPP will typically have been recorded for a protected site where water quality pressures such as pollution from agriculture, non-point sources have been identified during a site assessment (Natural England, 2015a). There are currently approximately 200 SSSIs with a DWPP mechanism recorded against them, of which a proportion overlap with one or more SACs and/or SPAs. Those sites that have recorded progress with DWPPs within the reporting period have been listed in Appendix K (Annex Five).

Case study: Wybunbury Moss Diffuse Water Pollution Plan

Wybunbury Moss is a very species-rich basin mire in Cheshire that features a unique transition from base-rich fen to an ombrotrophic bog that floats on top of 14 metres of water and sloppy peat. It is one of four sites comprising the West Midlands Mosses SAC that is designated for Transition Mires and Quaking Bog (H7140). The site had been in unfavourable condition for many years, largely as a result of water-borne nutrient

enrichment from agriculture. Monitoring of groundwater had identified nitrate concentrations many times in excess of published thresholds for the wetland types present.

A DWPP was written for the site that identified various sources of pollution and recommended changes in land use within the catchment. The plan then informed various activities, including the threat of regulation, that ultimately led to land use change from intensive arable cropping to unfertilised permanent grassland, thereby removing one of the major sources of nutrient enrichment to the site.

Monitoring has shown a rapid and significant decrease in nitrate concentrations in the site following the change; however, concentrations are still higher than the target (Farr and others, 2019). Alongside this change, Natural England has been restoring natural hydrological functioning across the site, largely by blocking drains and channels that have been dug in the site over the last 200 years. As a result of addressing these multiple pressures, the conditions necessary for recovery are being restored and encouragingly the typical - and some rare - species of Transition mire and quaking bog, including slender sedge and white beak-sedge, are starting to respond positively (Natural England, 2025f).



Transition mire and quaking bog at Wybunbury Moss, Cheshire

© I. Diack, Natural England

Catchment Sensitive Farming

To drive change at farm level that will support delivery of the objectives of the WFD and provide benefits to freshwater and wetland sites within and beyond the NSN, Natural England has led the delivery of the Catchment Sensitive Farming (CSF) programme, in partnership with Defra, the Environment Agency and the Forestry Commission. This aims to drive change at farm level to support delivery of the WFD objectives and provide benefits to freshwater and wetland sites including those in the NSN. CSF provides advice to farmers and land managers, encouraging them to take voluntary action to reduce diffuse pollution from agriculture and advising on schemes and grants that can support them (Natural England and Defra, 2025). 39% of farmed areas in England are managed by CSF-engaged farmers, of which 92% agreed their CSF Adviser had a good understanding of issues relating to water pollution (238 farmers surveyed between December 2023 to January 2024). The Environment Agency have also undertaken a programme of evaluation to demonstrate the benefits that the delivery of advice and measures have realised (further information can be found here: [Natural England Access to Evidence - Catchment Sensitive Farming Publications and Case Studies](#)).

Additional measures

Protected Site Strategies

Introduced in the Environment Act 2021, Natural England has the authority to prepare and publish a PSS for the purpose of convening stakeholder collaboration to improve the conservation and management of protected sites (including those within the NSN) and/or managing the impact of development and other related plans, projects or other activities affecting them (Cotterell, 2022).

PSS can help to address the root causes of pressures on and off Protected Sites and help address wider nature recovery across landscapes. The key pressures that PSS aim to address include water pollution, water availability, air pollution, climate and development related pressures, fragmentation, and recreational land use - all of which degrade habitats. This initiative will support the government's EIP23 SSSI target and the objectives of the Habitats Regulations where applicable.

Following a piloting phase during 2021-2024 the programme will be expanded to restore and improve site condition over the next few years, including areas where air pollution is a significant pressure by integrating existing Shared Nitrogen Action Plans (SNAPs) projects into the PSS framework.

Case Study: Challenges in Tracing Agricultural Nutrient Pollution in the White Peak's Limestone Hydrology

The White Peak region in Derbyshire presents a challenge for nutrient pollution management due to its complex limestone (karst) hydrology. The Peak District Dales SAC falls wholly within the White Peak, and amongst the many dry habitats present, groundwater-dependent alkaline fens (H7230) are also found. These rare and threatened systems are dependent on constant flows of very low-nutrient base-rich water, as is the River Wye, which supports populations of bullhead (S6965), white-clawed crayfish (S1092) and brook lamprey (S1096). The eutrophication of the groundwater supply across the country is a significant pressure on the health of these features. In 2023, Natural England commissioned a hydrological review to support PSS, focusing on how agricultural practices affect the nutrient status of freshwater habitats in the White Peak and the Peak District Dales SAC.

Case Study: The Clun - Facilitating Investment in Natural Clun Habitats research project

The Facilitating Investment in Natural Clun Habitats (FINCH) project, part of Natural England's Protected Site Strategies (PSS) pilot programme, was delivered by the Wilder Marches programme in collaboration with 3Keel. Operating in the ecologically significant Clun catchment, which includes the River Clun SAC, designated for Freshwater Pearl Mussel (S1029), FINCH explored how green finance can support landscape-scale nature recovery. The project addressed key environmental challenges such as water quality degradation from diffuse agricultural pollution, nutrient pollution, the decline of the freshwater pearl mussel (S1029), and habitat fragmentation.

FINCH promoted land-use changes that restored and reconnected habitats, including converting degraded grasslands, expanding woodlands and hedgerows, and restoring wetlands.

Reducing Atmospheric Nitrogen Deposition to Improve the Condition of Special Areas of Conservation

Through the IPENS programme, 96% of SIPs identified at least one issue to address, with air pollution being the most reported, affecting 51 of the 69 Annex I habitats in England (Natural England, 2015c). Atmospheric nitrogen deposition has been recognised as a widespread pressure contributing to species loss and degradation of ecosystem function(s) across the NSN. In response, the SNAPs programme was launched in 2020.

The programme commenced as a pilot on five SACs (Breckland, Branton Burrows, Epping Forest, Fenn's, Whixall and Bettisfield Mosses ('Fenn's & Whixall'), and Sefton Coast). The pilot focused on building an evidence base, identifying solutions, and establishing local partnerships. In the same year, the SNAPs programme formally became part of PSS and a delivery programme is under development. Atmospheric nitrogen pollution continues to be identified as a main pressure impacting favourable conservation status in Annex I habitats. As the evidence base develops, it is clear that the scale of this issue is large. Research efforts are now focusing on developing solutions.

Case Study: Working Towards a Formalised Protected Site Strategy and Vision for Breckland, Norfolk & Suffolk

At the Breckland SAC, the SNAPs pilot is evolving into a PSS by integrating key mechanisms, mitigation strategies, and reduction measures at both local and landscape scales to drive meaningful, positive change. There are a variety of SNAPs projects being carried forward into the PSS including partnership building, farm engagements, and enhanced air quality monitoring on site.

Following on from the SNAP pilot, the main objective still remains, which is to develop and deliver a high-level strategy, delivery plan and key mechanisms to address and reduce ammonia, nitrogen oxides and nitrogen deposition below their critical level and load thresholds. This will remove pressures impacting Breckland's protected sites, the wider environment and human health. Breckland has high levels of nitrogen deposition which poses a severe threat and significant pressure for the scarce and locally distinct species and semi-natural habitats of Breckland. Key emission sources across the area include agriculture - particularly pigs and poultry, Ministry of Defence bases, military training and aircraft sites, urban areas and transport. The strategy also focuses (where applicable) on addressing water pollution, recreational disturbances, and climate change, amongst other pressures which may be identified through preliminary scoping and research to inform the main focus of the PSS as a whole.

The Breckland PSS aims to cover Breckland SAC (7541.674 ha), [those SSSI's underpinned by Breckland SAC](#), Breckland Forest SSSI, Breckland Farmland SSSI, Breckland SPA and Norfolk Valley Fens SAC. This should benefit various habitats including European dry heath (H4030), inland dunes (H2330), alkaline fen (H7230) and calcareous grassland (H6210). The Breckland PSS should also benefit various species including bird species (including nightjar (A224.b) and woodlark (A246.b), amphibians (including pool frog (S6981) and great crested newts (S1166), mammals including barbastelle bat (S1308), and plant species such as the spiked thyme-leaved sandwort, rue-leaved saxifrage and red-tipped cudweed.



Grimes Graves, a flint mine dating back to neolithic ages and found within the Breckland SAC © B. Mundy, Natural England

The England Peat Action Plan 2021

The England Peat Action Plan 2021 outlines the long-term vision for the management, protection, and restoration of peatlands within England (Defra, 2021b). As part of the plan, the Nature for Climate Peatland Grant Scheme (NCPGS) was set up in 2021 to reduce greenhouse gas emissions from England's degraded peatlands through large-scale peatland restoration. Natural England is running the scheme, under the Nature for Climate Fund (Natural England and Defra, 2021).

This competitive grant scheme is running from 2021 to 2026 and aims to provide over £50m for peatland restoration in England, set 30,000 ha of degraded peatland on a path to restoration by March 2026, and reduce emissions from peat by 3.7 Mt carbon dioxide equivalents by 2050. The scheme also aims to deliver wider environmental and societal benefits including contributing to the Environment Act targets, ecosystems and biodiversity enhancement, improvement of water quality, provision of natural flood management, and historic environment protection.

A total of 16 Projects secured Discovery Grants, and 23 Projects received Restoration Grants for use across multiple sites. Most of these sites are situated across North England, however there are projects located in Southwest and East of England.

17,175 ha of SSSI land is committed to be restored through Restoration Grants by 2026 of which 87% (15,027 ha) is SAC, and 62% (10,697 ha) is both SAC and SPA. Habitats that will benefit include blanket bog (H7130) and degraded raised bog (H7120).

Case Study: Nature For Climate Peatland Grant Scheme – Dorset Heathlands SAC and SPA

The Dorset Peat Partnership was established under a NCPGS Discovery Grant and in 2023, 17 sites received funding. Fifteen of these are located within the Dorset Heaths SAC and Dorset Heathlands SPA. By the end of the project almost 200 ha of drained valley mire systems will be on a trajectory to recovery over an estimated 25 years.

The principal activity is restoration of the natural hydrological function in the valleys and lower slopes by blocking man-made drainage channels with peat bunds and timber dams. This will allow the re-development of the natural zonation from dry heath (H4030), through wet heath (H4010 and H4020) - this is the core area in the UK for H4020 - down into the valley bottom where acidic mires in which some of the most extensive areas of Depressions on peat of the Rhynchosporion (H7150) in England occur. Two years into the project, sites where restoration works have commenced are already seeing a positive effect. In time, these rejuvenated restored very wet low nutrient habitats should allow recovery of a whole host of characteristic species, including the very rare – but highly typical – species great sundew and brown beak-sedge. Data on peat depth, water table depth, and vegetation is being collected before, during and after the restoration activities, to evidence the on-the-ground impact of the work.



Photo showing the rewetted valley peatland at Agglestone Mire, with funding for restoration works provided through NCPGS to the Dorset Peat Partnership © L. Treneman, Natural England

National Nature Reserves

National Nature Reserves (NNRs) are created to safeguard some of England's most valuable habitats and species, while also serving as key sites for conservation research. Today, there are 224 NNRs across England, covering a total area of 117,000 ha (Natural England, 2025c). Between 2019 and 2024, Natural England undertook 18 designations of new or expanded NNRs, 16 of which overlap with either a SAC, SPA or both¹.

NNR is a designation that requires the owning/managing party to commit, voluntarily, to making nature conservation the primary purpose of their management of the land. The number and types of organisations willing to make this commitment is ever increasing and expanding and now includes private estates and commercial companies alongside local authorities, public bodies and eNGOs. Managing organisations are expected to have a comprehensive management plan for each NNR.

In EIP23, there is a target to declare 25 new or extended NNRs between 2023 and 2028. With the agreement of the Palace, these areas have been named The King's Series - a high-profile initiative designed to drive nature recovery and deliver broad benefits for wildlife. Many of the NNRs in the Series are large, linking up multiple ownerships and will be managed collaboratively by multiple parties. As NNRs are accessible to the public, this effort will also help foster stronger connections between people and biodiversity protection.

Case Study: Purbeck Heaths NNR

Purbeck Heaths NNR was declared in 2020 and was formed by merging and expanding land owned and managed collaboratively by seven different organisations, creating the largest lowland heathland nature reserve in England. Within the overall over 3,300 ha extent of the reserve a single c. 2,000 ha grazing unit has been established, enabling naturalistic grazing and browsing regimes that in turn support a variety of specialist species including heathland birds, all 6 species of native reptiles, rare plants, invertebrates such as the ladybird spider and the heathland specialist Purbeck mason wasp (Natural England 2020d). The NNR overlaps with two SACs, covering a combined area of 1,806.18 hectares, and two SPAs, covering 2,271.95 hectares. These include the Dorset Heath SAC and SPA, as well as the Poole Harbour SPA².

Climate Change Adaptations

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² © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right [2025].

As outlined in [Nature Positive 2030](#), the twin crises of biodiversity loss and climate change are interlinked and this is reflected in the assessments undertaken for Regulation 9A that identify climate change as one of the major pressures on species. Reversing the destruction of nature will be a key element of reducing emissions and reaching net zero as well as enabling us to live with the impacts of climate change (JNCC and others, 2021).

In 2020 Natural England and the RSPB produced the Climate Change Adaptation Manual, a resource to support practical and pragmatic decision-making, by bringing together recent science, experience and case studies (Natural England, 2020a).

Adaptation planning also provides opportunities to ensure the value of good conservation is highlighted in response to the climate crisis. For example, nature recovery, including bigger, better, more joined up protected areas can increase the resilience of the natural environment to cope with climate change. Nature-based solutions can also deliver mitigation and adaptation with measurable benefits for both people and nature.

Case study: Responding to climate change impacts on protected sites

Since April 2023 climate change is assessed as part of condition monitoring on SSSIs by undertaking a Climate Change Risk Assessment (CCRA). A CCRA reviews the current and future climatic impact on site features and how climate impacts interact with other pressures on a site. A level of risk is assigned to features (0-5) and comments are provided on the impact for each climate pressure i.e. temperature; rainfall; sea level rise; extreme events. When climate change is assessed as being a significant pressure (scoring 4-5), this triggers the need for an Adaptive Delivery Plan (ADP). So far, 10-15% of SSSIs for which a condition assessment has been completed since April 2023 have recorded climate change as a significant pressure and thus will require an ADP.

ADPs build on the work that started on the NNR network 10 years ago to develop and refine ways we assess climate change impacts and how adaptation responses are integrated into NNR management plans. This work found that habitats most vulnerable to climate change include those which are freshwater, wetlands, coastal and upland. Work has also been undertaken to consider the responses that go beyond building resilience and considering transformative change using the Resist Accept Direct framework to steer thinking. ADPs will take this learning and understanding in responding to climate change and apply it in a protected site context. Four case studies are currently being developed on SSSIs that represent a range of different ecological contexts that will look to understand how ADPs can be practically applied.

4 Measures relating to species

Protection plays a critical role in species conservation and legal protection can facilitate the necessary conditions for species recovery. The Environment Act 2021 outlined several new legal tools and duties to enhance species conservation including amendments to Species Licensing and the introduction of Species Conservation Strategies and PSS (as mentioned in section 3).

Protection of Species

All species of naturally occurring birds and certain other animals and plants (including those listed on Annex IV that are found in the UK) are legally protected under legislation such as the Wildlife and Countryside Act 1981 and the Habitats Regulations. The Marine Management Organisation (MMO) is responsible for wildlife licensing of activity in English waters, whilst Natural England is responsible for wildlife licensing in other parts of England.

Guidance on applying for a licence can be found here: [Wildlife licences: when you need to apply - GOV.UK](#).

Natural England is responsible for issuing licences that permit certain activities which might otherwise disturb, or harm protected wildlife where it is suitably justified, and the activity will not adversely impact the conservation status of the species (Natural England and Defra, 2023). In 2024 alone, around 4,200 licences were issued under the Habitats Regulations. Natural England releases data each year on the number and type of licences granted, as well as an updated list of licences to control birds. The most recent list of licences to control birds contains data from 2014 to 2024. Within the reporting period, there were 7250 lethal licences issued and a total of 2870 non-lethal licences (Natural England 2024g).

England adopts a proportionate and adaptive licensing regime, where the changing conservation status of species can influence their inclusion or removal from general or class licensing frameworks. For example, in response to growing conflicts between anglers and cormorants, Natural England implemented an adaptive licensing system. Annual shooting quotas are adjusted based on cormorant population trends and ecological data, ensuring sustainable management while maintaining the species' conservation status. Despite increased lethal control over the winter, the non-breeding population remains favourable and is stable (Heydon, Bellini, and Lakin, 2023).

Additionally, the UK has a legal obligation to produce biennial reports assessing the impact licences have on the species populations reported on as part of the Bern Convention. The last report was released in 2023 representing the 2021 to 2022 period.

Assessment at an England scale concluded that there was negligible impact on the reported species due to strict requirements placed on holders of licences (Defra, 2023a).

The MMO are the appropriate authority for issuing species licences in the marine environment. Further information can be found on their website [Understand and apply for marine wildlife licences and report an incident - GOV.UK.](#)

District Level Licensing

Natural England's District Level Licensing Scheme (DLL) is a strategic approach to regulation which assesses and compensates for the impacts of development on populations of great crested newt (GCN) (S1166) at a landscape scale. It differs from traditional mitigation licensing by considering impacts on the conservation status of GCN populations at a regional level rather than preserving those local populations being directly affected by specific development sites in situ. Developers make a payment which is used to create or restore ponds in suitable areas for GCN and fund their maintenance and monitoring for 25 years.

This has enabled 3770 ponds to be created or restored up until the end of the 2024/25 financial year. Six new ponds have been delivered for every occupied pond lost. This considers the risk of pond failure and an ambition to deliver an overall net gain. The 5-year occupancy of DLL compensation ponds from 2020/21 to 2024/25 is 37%. Since the launch of DLL until the end of the 2024/25 financial year, there has been a net gain in the number of ponds estimated to be occupied by GCN (306 ponds) because of actions licensed under DLL.



A Great Crested Newt © Natural England

Curlew 'Headstarting' Project

Globally, the Eurasian curlew is Near Threatened with extinction (BirdLife International, 2017). The UK supports approximate a quarter of the European breeding population, and England alone supports c. 30,000 pairs (half of the UK total) across lowland and upland habitats. Habitat loss, fragmentation and degradation are the ultimate cause of decline, but low breeding productivity is inhibiting population maintenance and recovery.

In England, some curlews nest on military airfields which poses air safety concerns due to the risk of collisions. Historically, this resulted in the eggs being destroyed under a licence to minimise the risk to air safety (Curlew Recovery Project, 2025). In response, the Curlew 'Headstarting' project was developed by Natural England and supported by a range of organisations like the Wildfowl and Wetlands Trust, and the Royal Air Force. The project involves collecting eggs from high-risk sites, incubating, and then rearing the chicks to be released into the wild once they have a good chance of survival. Since curlew are protected under the Wildlife and Countryside Act 1981, taking their eggs or chicks for this purpose requires a licence.

During its first year, the project saved around 200 eggs and has since released over 300 young curlew in Norfolk. Survival rates show promising outcomes, with birds wintering on coastal sites. In 2024, the first three headstarted curlew were found nesting in Breckland. This demonstrates how licencing can be used to support species recovery by enabling legal intervention - such as collecting eggs from vulnerable nests - and boosting population numbers within the wild.



A Eurasian Curlew in Water © A. Drewitt, Natural England

The Bat Advice Service

The Bat Advice Service, run by the BCT on Natural England's behalf, has operated since 2008 (Bat Conservation Trust, 2021). Although the legal basis for the service is the Wildlife and Countryside Act 1981, operation of this service also supports protection of species protected under the Habitats Regulations. The service provides free information and advice from licensed volunteers to help homeowners and those managing places of worship to better understand and appreciate bats. These engagements almost always result in people accepting the presence of bats in their building - less than 1% of roost visits resulted in a licence permitting exclusion of bats from a dwelling house.

Species Conservation Strategies

Species Conservation Strategies (SCS) are a new provision under the Environment Act 2021, which enables Natural England to produce a strategy, in collaboration with stakeholders, to improve the conservation status of any species, including those outlined in the Habitats Regulations. SCS were designed to provide a legal underpinning for strategic approaches to species licensing, building on the proven success of district level licencing for GCNs, although SCS could also be used more holistically (Defra, 2022b).

Since 2022, Natural England has been developing new strategic licensing approaches, including for water vole, common dormouse (S1341) and widespread reptiles. These aim to leverage developer funding to implement landscape scale compensation which will offset the impacts of licensed activities, in order to improve the conservation status of these species. Operational testing of a pilot water vole strategic licence is underway, with developer funding contributing to efforts to eradicate American mink in East Anglia. Removal of the predation pressure from mink should allow water vole populations to re-establish naturally.

The schemes being developed for common dormouse and widespread reptiles will use developer funding to create or restore the habitats required by these species, including woodlands, hedgerows and habitat mosaics. If successful, strategic licences will become important delivery mechanisms within the SCS for these species. The payment required from licence users would include compensation, survey and monitoring and cost recovery elements. The licences could in time be developed further, potentially including simplification through online digital systems and incorporation into Environmental Delivery Plans and the Nature Restoration Fund. A parallel project has used a collaborative approach to explore with stakeholders how the SCS mechanisms could be used in the future.

Back from the Brink

In the previous reporting cycle, Natural England highlighted [Back from the Brink programme](#) as an example of improved cooperation. This landmark conservation initiative was launched in 2017 by the Rethink Nature partnership. It was a collaborative effort, consisting of Natural England and seven specialist conservation charities, and united around 100 organisations across 19 projects (Back from the Brink, 2022c).

Concluding in 2021, the programme delivered 561 positive conservation actions benefiting 188 species (Back from the Brink, 2022a). Over 20 of the non-bird species are subject to assessment under the Habitats Regulations, with 13 showing documented progress along their Species Recovery Curves (SRCs) - a framework used to track conservation impact over time. Among those that made progress were the Barbastelle bat (S1308), Little Whirlpool Ramshorn Snail (S4056), and Marsh fritillary (S1065), while others, such as the Greater horseshoe bat (S1304), showed no change (but crucially did not regress) (Back from the Brink, 2022b).

The SRC model, adapted by Natural England, outlines a nine-step pathway from initial conservation action to full population recovery, offering a structured lens through which to evaluate species outcomes. The programme has since come to an end and alongside its [summary report](#), there are also [individual species summaries](#).

The Species Recovery Programme

The Species Recovery Programme (SRP) initiative has operated for over 30 years. It is primarily funded by Natural England and focuses on protecting and recovering England's most threatened species by taking bespoke, targeted actions to positively affect populations and their habitats (Natural England, 2023d). The programme aims to move target species along their SRCs and ultimately to FCS. Over its 30-year history, Natural England has invested more than £60 million in species-focused projects under the SRP, with significantly more leveraged through matched funding.

The programme demonstrates a long-standing commitment to species conservation by investing sustained effort and resource and maintaining long-term partnerships with other non-government conservation organisations. Between 2022 and 2025, the SRP has benefited over 600 species including 70 bird species (of which 67 are reported on within this Habitats Regulations report, the remaining three are former breeders or vagrants to England) and 595 non-bird species (over 40 are reported on within this Habitats Regulation report). Examples of these species include the endangered Common Swift, the critically endangered Montagu's Harrier, and the critically endangered Lady's Slipper orchid (S1902).

During the reporting period, SRP was delivered through two main mechanisms - Memorandum of Agreement (MoA) and the Capital Grant Scheme. MoAs between Natural England and delivery partners focus on actions to improve the understanding of species and trial recovery techniques. The Capital Grant Scheme is a competitive scheme delivering positive actions across England for threatened species (Natural England, 2023e).

The Species Recovery Programme Capital Grant Scheme

The SRP Capital Grant Scheme (“the Scheme”) offered grants of up to half a million pounds to 63 projects across England, aiming to halt and reverse declines in approximately 150 species. Between 2023 and 2024, the scheme funded 74 different organisations, many working in partnerships, further demonstrating continued co-operation between different nature organisations across England (Natural England, 2023d). Evaluation is a fundamental part of this programme, and lessons learnt will feed into the next iteration of SRP.

Case Study: Back to the Future 2 - Restoring threatened metapopulations on the Lizard Peninsula / The Lizard Rarities Project

Renowned as a designated Protected Landscape (AONB), the Lizard Peninsula also serves as a vital refuge for numerous threatened species. Launched in 2023, this collaborative project set out to create targeted microhabitats to support a wide range of wildlife, whilst ensuring that the quality of the habitat around and between these hotspots was improved.

Over the past two years, Natural England’s NNR team and the National Trust have delivered a suite of habitat improvements. These include the restoration or enhancement of over 40 hectares of habitat through targeted management and controlled burns, the creation or restoration of more than 60 ponds and pools, and the installation of over 4,000 metres of fencing. These interventions have been complemented by ecological surveys of threatened plants, bryophytes, lichens, and invertebrates to monitor impacts.

The project has since concluded and the NNR team continue to work through the management plans. By targeting threatened species like Marsh fritillary (S1065) and *Cladonia* sp. (S1378) via bespoke management whilst applying Lawton’s principle of “bigger, better, more joined up”, the project tackles extinction risk while also expanding and linking quality habitats to boost species abundance.



Prostrate juniper (top left), Marsh fritillary (bottom left), and Field gentian (right) © Natural England

Case Study: Lady's Slipper Orchid Recovery Programme

The Lady's Slipper Orchid (S1902) is listed in Annex II/IV of the Habitats Directive and in Schedule 5 of the Habitats Regulations as a European Protected Species. This Recovery Programme is a collaborative programme between the Yorkshire Wildlife Trust, BSBI, Plantlife, Kew Gardens, and National Trust. Launched in 2023, the project aimed to deliver three objectives for this critically endangered species:

- Propagate Lady's Slipper Orchid seedlings for future reintroductions
- Reintroduce Lady's Slipper Orchids to a minimum of three sites in its former range
- Secure the habitat of the sole remaining wild Lady's Slipper Orchid

The project produced 5,600 seedlings, reintroduced 70 plants to five sites (there were originally two sites, however, three additional sites were identified within the Yorkshire Dales) and delivered active management of the 'wild site' from which stock was taken. This involved cutting and removing vegetation, coppicing and removing hazel as well as securing cages to protect the plants from larger herbivores such as roe deer.

During a visit to Ingleborough NNR in 2024, a Lady's Slipper orchid was spotted growing in a location that did not seem to have been similar to locations chosen for reintroductions. Checking the GPS coordinates proved this to be a wild propagated individual and not one that had been planted through the project. This is the first known wild propagated Lady's Slipper Orchid found in the wild since the rediscovery of the 'wild plant' in 1930, so gives us hope that reintroducing plants will result, with time, in a naturally sustainable population. The presence of a Lady's Slipper Orchid in the wild is demonstratable success

for SRP in general. Surveys will continue at each of the sites to monitor the success of the reintroductions and over time, if successful, the programme will support restoring the species back to favourable conservation status.



A Lady's Slipper Orchid seedling © Yorkshire Wildlife Trust

The Species Recovery Programme for Birds

A trial reintroduction of corncrake has been ongoing since 2003 in Cambridgeshire. Working with a short-lived migratory species of crane has proved challenging but a wealth of experience has been gained, from the captive breeding stage through to post-release monitoring. Adaptive management has addressed those limiting factors identified, including the increased frequency of severe flood events. This is likely to be climate-related, having not previously been an issue at the original release location.

Since 2022, a conservation programme led by Wildwood Trust, has been underway to reintroduce the red-billed chough to Kent, with the goal of releasing 50 birds over five years. Funding from the scheme supported the expansion of aviary facilities and staff to creche rear birds for soft releases. Whilst the first chick produced through the scheme unfortunately failed to thrive the pairing was successful which should indicate positive future prospects.

Captive-reared black-tailed godwit were released in the Fens in 2024 as part of an ongoing Godwit Futures project led by Wildfowl and Wetlands Trust and in partnership with RSPB and Natural England. Godwit eggs were collected from the Fens in 2024 and, following artificial incubation, 29 chicks were released (headstarted) and 20 chicks were retained for a captive breeding programme. The aim, once these captive birds reach

maturity, is to use their offspring to provide the donor stock for future translocation projects. Whilst this initial phase has been completed, it is too early to determine the success of this longer-term objective within this reporting period.

Threatened Species Recovery Actions

Threatened Species Recovery Actions (TSRA) is a species action-planning project (2023 to 2025) led by Natural England and delivered through a diverse partnership of governmental and non-governmental organisations, involving over 80 specialists from across the environmental sector. The project identifies which species are most in need of recovery in England today and the specific actions required to progress their recovery. In so doing, it aims to inform species conservation priorities nationally and guide the development of future recovery projects.

The project evaluated over 1,900 species, spanning terrestrial, freshwater and marine groups. These were drawn from GB Red Lists, specifically those species listed as Critically Endangered, Endangered, Vulnerable, Near Threatened, Regionally Extinct, or Extinct in the Wild, and from the [Section 41 list of species of principal importance in England \(NERC Act, 2006\)](#). Only species considered high priorities for species-focussed measures in England were action planned, determined by expert evaluation against two criteria. This approach aimed to identify the most important next steps to progress species along their recovery curves. In total, over 3,600 actions were authored for 1,384 qualifying taxa.

Species Survival Fund

The Species Survival Fund is a 2-year nature recovery programme, that's investing £25m into 20 projects across England. The programme was designed to make early progress towards the UK government's statutory targets for species abundance and the restoration and creation of wildlife-rich habitats. The new funding will support projects that tackle habitat loss, safeguard our fragile ecosystems, and create and restore nature-rich landscapes full of wildlife-friendly habitats

Recent projects funded under SSF

New Nature

- New Forest National Park Authority received a grant of £1.04m to bring together partners and landowners to restore habitats across 250 hectares of land spanning 25 sites.
- Part of the funding helps to deliver community activities, including great crested newt eDNA training days and litter picks with young people to build the communities awareness of conservation.

Coastal and Wetlands project

- RSPB received a grant of nearly £2.5m to restore landscapes across the Southeast of England. The project is transforming grazing marshes at Vange Wick to create climate-adaptive habitats that retain winter water for longer, whilst supporting species like the lapwing.

Northwest and Southwest temperate rainforest restoration

- The Woodland Trust and Plantlife received an award of nearly £2.7m to protect ancient woodland habitats within England's only Temperate Rainforest Zones, which cover approximately 580 hectares.

Action for Birds in England

The RSPB and Natural England have brought together priority species recovery and research projects into a single, large partnership programme called Action for Birds in England (AfBiE). This has been operating since 2005. The projects involve a broad range of bird conservation activities, including survey and monitoring, diagnostic research, testing of conservation solutions and the development and implementation of recovery management for bird species of conservation concern.

By 2022, nearly 50 bird species had been directly targeted through the AfBiE programme. 30 of these received substantial investment (at least £50,000 per annum for the project duration) in either research, recovery action, or both. Over 70% of recovery and research projects had been either partially or fully successful in achieving their goals including successfully identifying actions required for species recovery. Of the 18 species that received recovery management, six have shown recoveries at a local scale and seven have shown substantial population recoveries in England. Success stories include bittern, roseate tern, red kite and curlew (Eaton and others, 2024).

Success has been notably higher for species with small, range-restricted populations, where conservation actions could influence a significant proportion of population. For example, actions such as targeted nest protection, design and testing fallow plots and research into the best management of remaining natural and semi-natural habitat have enabled the stone curlew population to begin to recover. This has been sufficient for the species to move from the Red to Amber List of Birds of Conservation Concern.

Recent work delivered through AfBiE includes:

- Turtle dove advisers working with landowners in targeted areas to deliver good quality breeding season habitat. See Operation Turtle Dove.

- Twite monitoring and nest protection, plus habitat improvement in the South Pennines.
- Tagging of turtle doves and swifts to discover more about movements
- Beach nesting birds: Research into the effectiveness of signage to reduce recreational disturbance and testing of nest cages to reduce predation
- Habitat assessments for bitterns at key sites, with recommendations for management
- Feasibility study into rat eradication on the Isles of Scilly

Case Study: An assessment of potential Black-tailed Godwit release sites in England

A partnership between WWT and RSPB, the National Single Species Action Plan for the UK Breeding Population of Black-tailed Godwit identifies the subspecies as in decline, alongside other grassland breeding waders in England. This decline is attributed to a combination of pressures, including nest and chick predation, habitat loss, and unfavourable habitat conditions. One of the Action Plan's five main objectives is to support recovery across England's lowland wetland landscapes, through supplementing existing small populations and establishing new populations.

A feasibility assessment was conducted in the last financial year (2024 to 2025) regarding reinforcement of black-tailed godwits in England. The assessment stressed that there is a low probability of independent colonisation of currently unoccupied landscapes that may otherwise prove suitable for breeding. As a result, this project aimed to identify potential receptor sites for godwit translocation and assess the suitability of two existing breeding sites for potential reinforcement. Work is ongoing, including site visits, to identify priority sites that meet the necessary conditions for reintroduction.

English Seabird Conservation and Recovery Pathway

The 2024 English Seabird Conservation and Recovery Pathway (ESCaRP) is a technical report commissioned by Defra to investigate the causes of decline for 36 species of seabird and marine waterbird populations within England and identify potential actions to support their recovery (Natural England, 2024c).

The report identified key threats facing these birds - such as a reduction in food availability from anthropogenic activities, disturbance/displacement due to recreational activities or marine renewables, seabird biosecurity, and key knowledge gaps in relation to ecosystem responses to climate change impacts - and provided 19 evidence-based recommendations across four themes (feeding, breeding, surviving, and knowledge). Development of

ESCaRP recommendations ran from 2020 to 2022 and consisted of extensive cross-sector collaboration. The proposed recommendations and 74 actions accompanying them are designed to bring about seabird recovery. The conservation and recovery actions presented in the ESCaRP support delivery of seabird components of Defra's overarching EIP23.

5 Reintroduction of species outlined in Annex IV of the Habitats Directive

Annex IV of the Habitats Directive lists species of community interest that are in need of strict protection. The Directive also promotes the re-introduction of species listed in Annex IV where they are native to a country and where it has been established that such re-introduction would contribute effectively to re-establish the species at a favourable conservation status of that species.

In previous reporting, successful reintroductions were noted for species such as the pool frog, common dormouse, and large blue butterfly. During this reporting period, further Annex IV reintroductions have taken place as outlined in Table 6.

Table 6 summarises reintroduction efforts for Annex IV(a) species that were previously considered extinct or regionally extinct. It includes both species currently present in England and those not yet re-established, reflecting ongoing efforts to restore biodiversity and meet conservation targets.

Table 6. A summary of reintroduction efforts for Annex IV(a) species that were previously considered extinct or regionally extinct. It includes both species currently present in England and those not yet re-established, reflecting ongoing efforts to restore biodiversity and meet conservation targets.

Common Name	Reintroduction Period	Reintroduction Location	Number of Individuals Reintroduced	Is the reintroduction successful?	Overview of Reintroductions
Lady's-slipper orchid (S1902)	1990s to 2024	Yorkshire	70 in 2024	Yes	Part of long-running research and solution trialling, with lab-based propagation trials, ex-situ growing and planting out of specimens to closely guarded sites. First known natural propagation in the wild in 2024.
Sand lizard (S1261)	2024	Dorset	75	Too early to say	
White-clawed crayfish (S1092)	2024	Gloucestershire, Yorkshire	1642	Too early to say	Two separate projects funded by SRP translocating wild caught animals to online and offline ark sites, alongside habitat enhancements to benefit water quality.
River lamprey (S1099)	2024	River Trent	1200	Too early to say	
Freshwater pearl mussel (S1029)	2020 - present	Cumbria	5500 juveniles	Showing promising signs	Release is occurring in several rivers across the county and results are looking positive from annual monitoring.
Pool frog (S6981)	2024 - present	Banham Zoo	0	Too early to say	Established last year, SRP supported Banham Zoo in the construction of a breeding facility for pool frog. This year, we will complete construction of the facility, to allow facilitation of stock intake, rearing, release and research, working towards preventing extinction and

Common Name	Reintroduction Period	Reintroduction Location	Number of Individuals Reintroduced	Is the reintroduction successful?	Overview of Reintroductions
					enhancing recovery potential for England's only Critically Endangered amphibian.
Eurasian Beaver (S1337)	2015 - present	River Otter, Devon	10+	Yes	A five-year licence was issued by Natural England in 2015 to enable the capture and legal re-release following health and genetic testing, of beavers that had been living wild on the River Otter, Devon. The licence legitimised the presence of the beavers, enabling an authorised trial of a beaver reintroduction. The River Otter Beaver Trial has been a success and was followed by a public consultation in 2021 seeking support for a country scale reintroduction. On 1 October 2022 the legislation changed to protect wild-living beavers in England. Beavers are now listed in Schedule 2 of the Conservation of Habitats and Species Regulations 2017, making it an offence to deliberately capture, injure, kill or disturb beavers, or damage and destroy their breeding sites or resting places without a wildlife management licence from Natural England.

6 Monitoring and Research

Extensive monitoring and research projects have been undertaken during the reporting period relating to habitats and species of European importance. An overview of this work, including case studies and project descriptions can be found in Annex Four of this report.

7 Acknowledgements

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