

# **Habitats Regulations General Implementation Report for the Reporting period 2019–2024 Scotland**

## **Regulation 3ZA of The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)**

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## Scotland

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## Introduction

The present Implementation Report has been produced in accordance with Regulation 3ZA of the Conservation (Natural Habitats &c.) Regulations 1994 (the Habitats Regulations) (as amended). It gives an overview of the implementation of measures taken in Scotland to meet the provisions of the Birds and Habitats Directives, and to achieve the objectives of those Directives during the period 2019-2024.

Those objectives are set out in Article 2 of the Habitats Directive and Articles 2 and 3 of the Birds Directive.

It includes sections describing:

1. The main achievements under the Habitats Regulations;
2. General information sources on the implementation of the Habitats Regulations;
3. European site designation;
4. Conservation measures and management plans for European sites;
5. Measures taken in relation to approval of plans and projects;
6. Measures taken to ensure coherence of the European site network;
7. Reintroduction of species.

Conservation status assessments have also been produced and are available as CSV files for the 51 terrestrial habitats, 9 marine habitats, 42 terrestrial and freshwater species reported on in Scotland, along with the 14 marine mammals and 263 bird populations relevant to Scotland (including species sub-species and relevant breeding and non-breeding populations thereof) reported on at a UK level.

## Background

The term 'European site' is being used to refer to what were previously known as 'Natura sites'. This recognises that Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) protect species and habitats shared across Europe.

The Habitats Regulations ensure that European sites are protected and managed and continue to operate, as they have done since their original designation. This includes reporting on the sites and the network every six years. The sites have also been submitted to the Bern Convention as part of the [Emerald Network](#).

More information on European Sites in Scotland is available on the European sites section of NatureScot's [website](#).

# 1. Main achievements under the Conservation (Natural Habitats, &C.) Regulations 1994, as amended

## 1.1 Changes to the European Site Network

Site code	Site name	Designation	Designation / classification date
UK0030364	East Mingulay	SAC	7/2/2019
UK0012705	Sound of Barra	SAC	20/11/2024
UK9002221	Ythan Estuary, Sands of Forvie and Meikle Loch	SPA	3/12/2020 (site extended)
UK9005012	Solway Firth	SPA	3/12/2020 (site extended and renamed)
UK9020310	Coll and Tiree	SPA	3/12/2020
UK9020311	East Mainland Coast, Shetland	SPA	3/12/2020
UK9020312	Bluemull and Colgrave Sounds	SPA	3/12/2020
UK9020313	Moray Firth	SPA	3/12/2020
UK9020316	Outer Firth of Forth and St Andrews Bay Complex	SPA	3/12/2020
UK9020318	Sound of Gigha	SPA	3/12/2020
UK9020319	West Coast of the Outer Hebrides	SPA	3/12/2020
UK9020331	Seas off Foula	SPA	3/12/2020
UK9020332	Seas off St Kilda	SPA	3/12/2020
UK9020314	North Orkney	SPA	16/02/2022
UK9020321	Scapa Flow	SPA	16/02/2022

The [Phase 1 report](#) for the third SPA network review was published in October 2016. The [Phase 2 report](#) was published in May 2025. No changes have been made to the SPA network in Scotland as a result of the review.

## 1.2 Management of European Sites

There are two types of European Sites. Special Areas of Conservation (SAC) protect one or more special habitats and/or species. These can be terrestrial or marine as listed in Annex I or Annex II of the Habitats Directive. There are 244 SACs in Scotland. Special Protection Areas (SPAs) protect one or more rare, threatened or vulnerable bird species listed in Annex I of the Birds Directive, or certain regularly occurring migratory species. There are 164 SPAs in Scotland.

A major area of activity has been the management of habitats and species listed under the Habitats Directive to improve their conservation status, both within the European site network and the wider countryside:

NatureScot has produced Conservation Advice Packages (CAPs) for terrestrial SACs, that include site conservation objectives, conservation priorities and advice on measures necessary to achieve the conservation objectives. More information about advice documents for European sites in Scotland is available on the [NatureScot website](#).

Conservation Objectives for each SPA are available through [SiteLink](#); Scotland's register of European sites.

The majority of SACs and SPAs are underpinned by the [SSSI designation](#) that includes additional conservation measures, including the regulation of land management operations that could otherwise damage the features of these sites.

NatureScot has produced Conservation and Management Advice documents (CMAs) for all [Marine Protected Areas](#).

The Scottish Biodiversity Strategy to 2045 sets out the ambition for Scotland to be Nature Positive by 2030 and to have restored and regenerated biodiversity across the country by 2045. The current [Delivery Plan](#) which sets out a series of priority actions is available on the Scottish Government publications website.

The Scottish Government has developed a [Scottish Seabird Conservation Action Plan](#) (SSCAP) to address the urgent issue of declining seabird populations with a focus on improving their breeding success, food availability, and survival rates. The plan outlines actions to mitigate threats such as bycatch, habitat loss, invasive mammals, and disease. The plan also aims to have a coordinated approach across Scotland, and where applicable the UK, for strategic delivery of science and evidence to support management actions directly.

European Sites are core areas in the development of Nature Networks that will better connect nature-rich areas, supporting wildlife and natural processes to move and adapt to land use and climate change pressures. NatureScot has developed a framework for Nature Networks in partnership with over 200 individuals from nearly 110 organisations from a broad spectrum of Scotland's sectors and communities. The networks will help build people's connection to nature, providing biodiversity-rich spaces that deliver local benefits, and meet the priorities of local communities for nature. The [Nature Networks Framework](#) is available on the NatureScot website.

## **Marine planning**

Scotland has a two-tier marine planning system. Scotland's first [National Marine Plan](#) was adopted in 2015. As a policy framework for decisions regarding development and use of Scotland's marine area, it includes a statement of Habitats Regulations requirements in amongst the context of broader environmental, social and economic objectives and policies. The plan was subject to Habitats Regulations Appraisal (HRA) prior to adoption. Three regional marine plans have been under development since 2019 but not yet adopted by Ministers – for Shetland, Orkney and Clyde marine regions – drafts include reference to Habitats Regulations, with draft plans also subject to HRA.

### 1.3 Assessing benefits and services provided by European Sites

Several strands of work are contributing to the assessment of the benefits and services provided by the European site network:

[The Scottish Biodiversity Strategy](#) calls for an ecosystem services approach for the conservation of biodiversity. This approach recognises that nature is a system of many functioning parts that work in balance with each other. Nature provides us with many benefits, called ecosystem services, though they're not always obvious to us, such as air, food, water, stable living conditions, beauty and inspiration. This approach applies to protected areas including European Sites and the wider countryside. More information on ecosystem services is available on the [NatureScot website](#).

NatureScot are using a Natural Capital approach to landscape scale planning. A **natural capital approach** is when the full range of benefits that we receive from nature are taken into consideration within the decision-making process. These include ecosystem services.

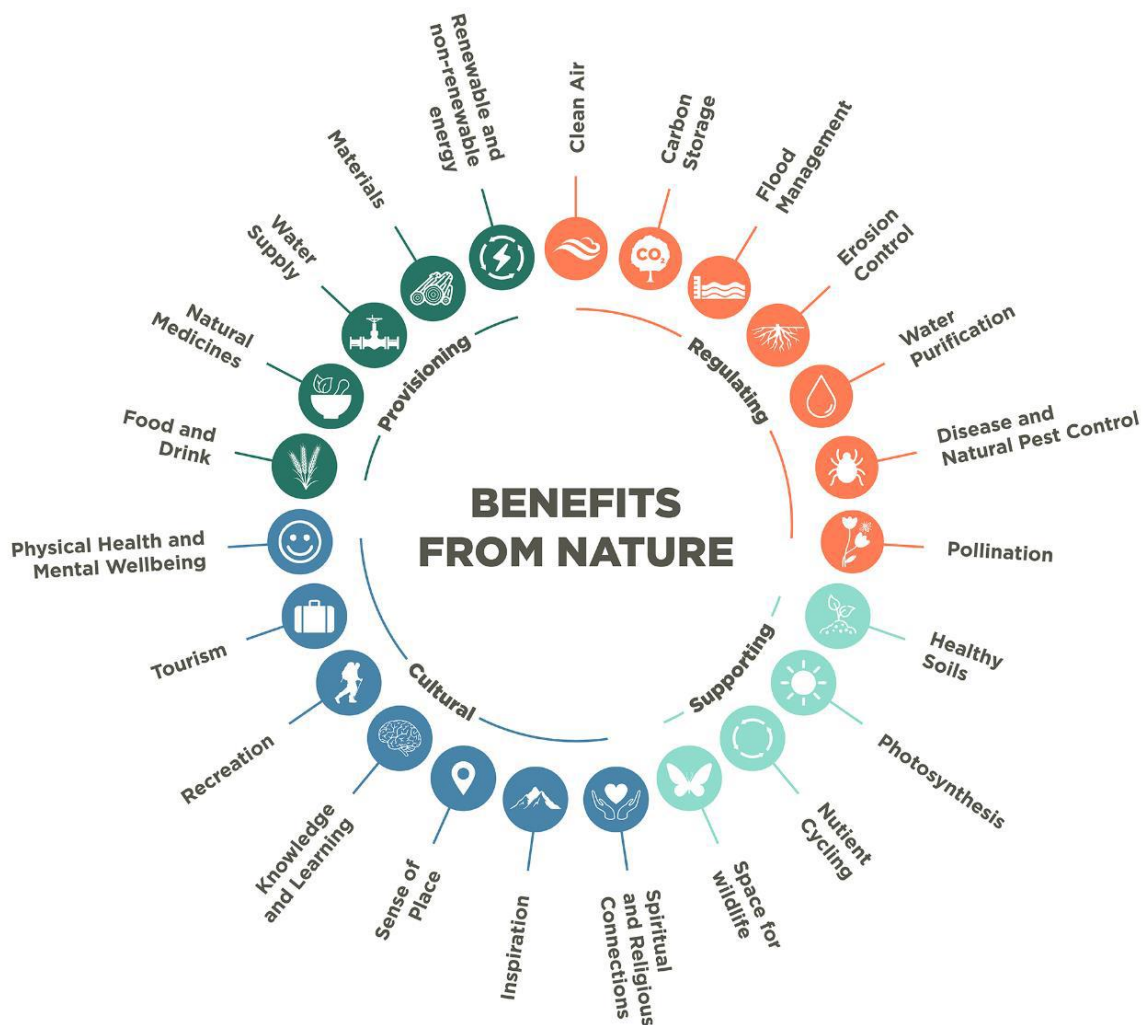


Figure 1. Benefits from nature (adapted from NatureScot [Ecosystem services – nature's benefits](#))

Ecosystem services are the benefits that natural capital provides to people, such as insect pollination, flood mitigation, and carbon sequestration.

The benefits from nature can be divided into four categories:

**Provisioning** – these are tangible goods that people can harvest from the environment such as food, timber, water, renewable and non-renewable energy, natural medicines and materials.

**Regulating** – these are the benefits from regulation of ecosystem processes such as clean air, carbon storage, temperature regulation, flood management, water purification, erosion control, insect pollination and disease and natural pest control.

**Supporting** – ecosystems cannot function without the services of the nutrient cycle, soil formation, photosynthesis and habitat provision for biodiversity, forming the basis for the other three types of services.

**Cultural** – non-material benefits that people derive from interacting with nature such as mental wellbeing and physical health, aesthetic inspiration, tourism, recreation, knowledge and learning sense of home and spirituality.

NatureScot has developed a [Natural Capital Tool](#) for Scotland which aims to support land managers and decision-makers to take a 'natural capital approach' to managing land in Scotland. A beta version of the tool is available.

Conservation Management and Advice documents for Marine Protected Areas (MPAs) contain information on the benefits of each site. This makes the links between protection for habitats and species and the resulting contribution to natural resources and functions which lead to benefits for people.

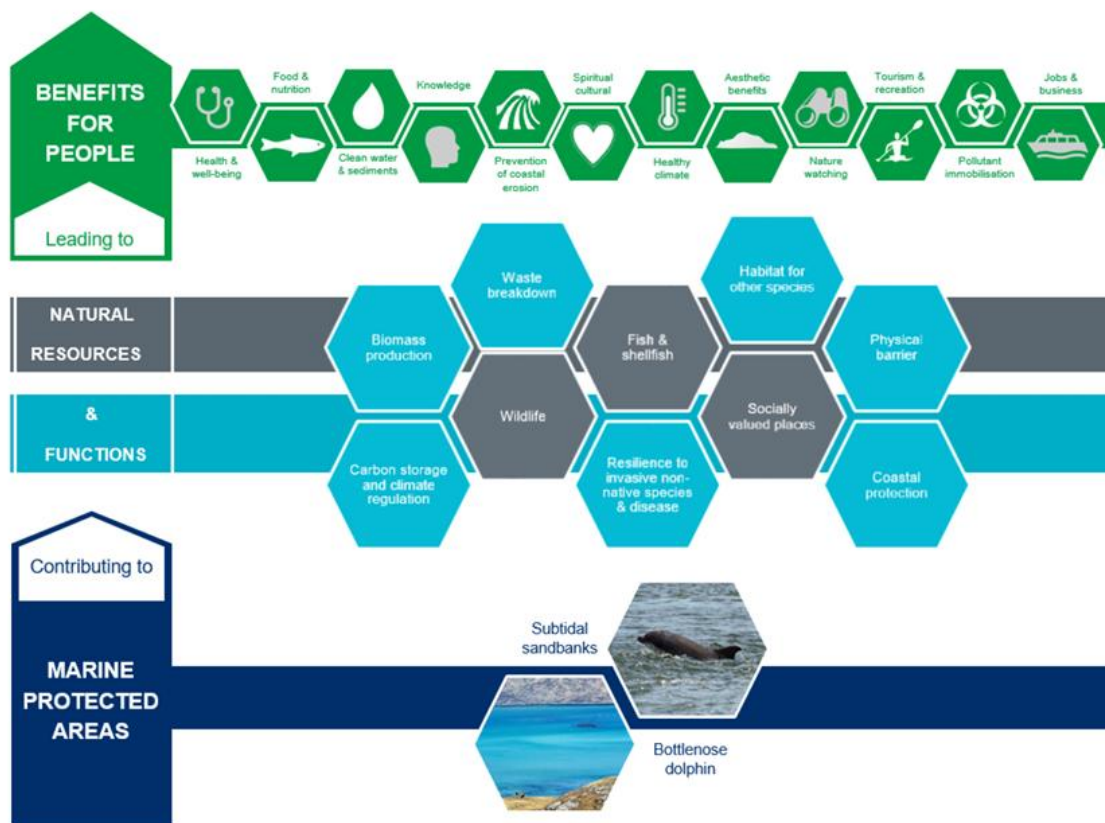


Figure 2. Benefits to people associated with protected features of the Moray Firth SAC (from [Conservation and Management Advice for the Moray Firth SAC](#), June 2025)

[Peatland ACTION](#) has supported greenhouse gas monitoring within the Caithness and Sutherland Peatlands SAC to better understand and improve emissions factors of Scottish Peatlands. The [Scottish GHG Flux Network 2022 Review](#) was the first network report combining data from instrumentation owned by a partnership of research institutes and universities.

This valuable work has already supported research publications (e.g. [Evans et al. 2021](#)). Peatland ACTION has also supported the functioning of numerous other greenhouse gas monitoring locations within Annex I habitats, including the Balmoral flux tower and Midlothian raised bog flux tower. Additionally, support was given to a project to monitoring the response of bog vegetation following the 2019 Flow Country wildfire ([Andersen et al. 2024](#)).

#### 1.4 Positive changes in public acceptance towards biodiversity protection

Positive action for biodiversity must include steps to improve public engagement and understanding of biodiversity protection. The NatureScot Opinion Survey (NOS) is an annual survey designed to measure the public’s awareness of NatureScot, their understanding of the organisation’s work, and their attitudes to a range of topics that fall within the organisation’s remit. The full report is available on the [NatureScot website](#).

Stakeholder views on marine management, conservation, and Marine Protected Areas (MPAs) were collected across the Outer Hebrides during 2020 as part of the [MarPAMM – Seas of the Outer Hebrides \(SEASOH\) project](#). Equivalent work, also carried out as part of the Interreg-funded MarPAMM project, was undertaken in Argyll and can be viewed [here](#).

In 2021/22 NatureScot facilitated a review of protected areas that used insights from behavioural science to develop lessons for stakeholder and wider public engagement with protected areas. The research considered three questions:

1. How can NatureScot work with owners and land managers of protected areas to change their perception of the sites from being a constraint/burden to an asset and motivate them to proactively manage them?
2. How can local and wider stakeholder interests be encouraged to get involved in decision making and management of protected areas?
3. How do we achieve greater public appreciation and support for protected areas?

The findings and Think-piece are available on the [NatureScot website](#).

Building on the review, the [30 by 30 Framework](#) developed by NatureScot to deliver Target 3 in the Global Biodiversity Framework was developed using a co-design approach, utilising expertise of over 120 individuals from nearly 100 organisations from a broad spectrum of Scotland's sectors and communities. Theme 4 – Participation engagement, and communication recognises three key delivery principles that value public understanding and support.

- The value of 30 by 30 sites for nature and people is clear;
- Collaboration is key;
- Landowning public bodies will manage their land to contribute towards 30 by 30.

### **1.5 Improved co-operation between authorities, nature conservation and other groups**

A series of measures and tools are used to help improve and facilitate co-operation between authorities, nature conservation and other groups. NatureScot works closely with the National Biodiversity Network Trust (NBN) and the [Scottish Biodiversity Information Forum](#) (SBIF) to secure biodiversity data from citizen scientists and improve the use of this data in decision making and policy.

The Better Biodiversity Data project (BBD), led and managed by the NBN Trust and supported by NatureScot and The Scottish Government, aims to develop the first steps in a strategic approach to the collection, collation and sharing of biological data across Scotland. The Output Report 2025 is available on the [NBN website](#).

[Species on the Edge](#) is a groundbreaking partnership programme between NatureScot and seven nature conservation charities, dedicated to protecting 37 of Scotland's rarest and most vulnerable coastal and island species. These include species listed in Annex I or Annex II of the Habitats Directive and looked after by the European Site network. More information is available on the website.

As part of the UN Convention on Biological Diversity (CBD) process, Scottish Government led on convening partners from subnational and local governments to contribute to the post-2020 Global Biodiversity Framework (GBF). This ‘Edinburgh Process’ developed an ‘Edinburgh Declaration’ that outlined the high-level political objectives of these subnational, regional and local governments.

The [Edinburgh Declaration](#) calls on national governments to adopt a GBF that recognises the vital role played by subnational governments, cities and local authorities. It outlines the role of devolved governments in implementing, mainstreaming, and securing finance for, biodiversity actions, and it notes the ‘need to develop effective policy, governance and financing solutions at all levels of government and ensure vertical integration across national, subnational, city and local levels to affect transformative change’. It also notes that these solutions ‘should address both the direct and indirect drivers of biodiversity loss and integrate all dimensions of sustainable development’.

## **1.6 Increased availability of information**

To increase engagement, improve positive management, and enhance cooperation we work hard to make information and data findable and accessible. The following are examples of the work that has gone into making information on European sites and features findable and accessible.

The [SiteLink database](#) provides key information on individual European sites.

Data, including habitat data can be viewed and downloaded from [NatureScot](#) and [Scottish Government](#).

Information about the Scottish marine environment can be found [here](#), including resources that are made available by the Scottish Government’s [Marine Directorate](#) and partners. The mapping site [National Marine Plan interactive](#) (NMPi) allows marine biodiversity data to be viewed alongside data on activities and developments in the marine environment.

NatureScot and Scottish Government are investing in new data sources including earth observation data to support mapping habitats. The [Land LiDAR programme](#) started in 2025 will provide additional data on habitats and land cover.

NatureScot is working with the Joint Nature Conservation Committee (JNCC) to understand how earth observation data can be used to detect change in the condition of habitats ([Black et al. 2023](#)).

The Scottish Land Cover maps provide habitat and land cover data at EUNIS level 2. This data is not detailed enough to use in the present report. The maps are available as open data, and support landscape-scale decision-making.

In 2025 NatureScot worked with Alma Economics to understand the need for habitat and land cover data and the value of this data in enabling others to take data-driven decisions for nature. [NatureScot Research Report 1382](#) suggests a framework to assess the value of open data.

NatureScot has worked with Scottish Government to make public sector data easier to find. The [Find Data tool](#) helps everyone to discover Scottish Public Sector data, saving time in data searches and helping to gain insights on data quality and use.

## 2. General information sources on the implementation of the Habitats Regulations

### 2.1 General information

- Scottish Government – [Wildlife Habitats](#)
- NatureScot
  - i. [Habitats Directive and Regulations](#);
  - ii. [Protected Areas and Species](#)
- Conservation and Management Advice Documents are published on the JNCC and NatureScot webpages.

### 2.2 European site research and survey

This is not an exhaustive list, but it illustrates the research and survey work that has been undertaken and is on-going and provides links to where the information and data are available.

#### Commissioned Research and Survey

NatureScot publishes commissioned or research reports on its [website](#). Additional reports and surveys may be published elsewhere. See References for links to research and survey reports.

NatureScot publishes survey data on its [spatial data hub](#). Recent surveys include:

- Cairngorms National Park Grassland Mapping Project 2020-2022
- Mountain woodland relict sites and restoration sites
- Raised bog sites
- Riparian woodland

As well as survey specific data sets, Open Data also includes GeMS (Geodatabase of Marine features in Scotland) which is a collation of marine habitats and species data from relevant marine research and survey.

The Habitat Map of Scotland (HabMoS) is a composite dataset comprising different layers of detailed habitat data. All the data has been given a common Habitat Coding from [EUNIS, the European Nature Information System](#) as well as an Annex I code from the Habitats Directive, where appropriate. More information on habitat data and the [Habitat Map of Scotland](#) is available on the NatureScot website.

Aerial photography Interpretation (API – a form of Earth Observation) can give us information about Annex I habitats. NatureScot developed a methodology for mapping Annex I upland habitats using stereo colour near-infrared aerial imagery interpretation ([Scobie 2018](#)). The methodology has been used to help map Raised Bog in Scotland, data which has been used for Reporting in 2025.

The Scottish Government [Environment, natural resources and agriculture – strategic research programme](#) is a portfolio that “seeks to improve our understanding of Scotland’s environment, communities, its people and the rural economy”.

## **Peatland ACTION**

[Peatland ACTION](#) undertakes a variety of monitoring activities in support of the partnership’s monitoring priorities. Vegetation surveys were undertaken on 13 sites in [2015](#) to create a baseline, and repeated in [2021](#).

Six of these sites fall within boundaries of a SAC:

- Airds Moss
- Carsegowan Moss
- Flanders Mosses
- Inverpolly (Drumrunie)
- Moine Mhor
- Muir of Dinnet (Black Moss)

The remaining seven sites fall within Annex I habitats (D1 raised and blanket bogs). To date a single Peatland ACTION Restoration Monitoring Network (RMN) site falls within a European site, the Caithness and Sutherland Peatlands. The network continues to grow, and further sites within SAC boundaries maybe added in the future. A further 16 RMN sites fall within Annex I habitats (D1 raised and blanket bogs).

Peatland ACTION operates a network of hydrological monitoring equipment across Scotland with the data published online, in the [Peatland Action Hydrological Monitoring Data Explorer](#). Twelve of the hydrological monitoring sites are within SAC boundaries. Several sites have now been decommissioned whilst others continue to operate, gathering long-term post-restoration hydrological trends:

- Ben Lawers
- Blawhorn Moss
- Cairngorms (Abernethy)
- Carrifran
- Coalburn Moss
- Flanders Mosses
- Longbridgemuir
- Moffat Hills (Carrifran)
- Moine Mhor
- Muir of Dinnet (Black Moss)
- Red Moss of Netherley
- Threepwood Moss

There are 35 hydrological monitoring sites in total; in addition to those 11 within a European site boundary, there are 20 hydrological monitoring sites that lie within Annex I habitats (D1 raised and blanket bogs).

The RSPB has been supported for many years by Peatland ACTION to carry out monitoring of the restoration work at the Forsinard Reserve (Caithness and

Sutherland Peatlands); the vegetation and hydrological monitoring data is available [online](#).

Peatland ACTION projects undertake peat depth and condition surveys in support of applications for funding, to date over 190,000 peat depth measurements have been undertaken from across Scotland and published [online](#). In the region of 24,000 points fall within an SAC boundary.

Peatland ACTION has supported the development of landscape monitoring techniques that use Sentinel-1 InSAR data to record and interpret surface motion as a proxy for an aspect of peatland condition; [work reported to 2025](#) included a total of ~680,000 ha of peatland. The data covers the period 2015–2023, and is available to download from the [InSAR Peatland Condition Class and Condition Change](#).

### **Collaborative research on marram grass in the Outer Hebrides**

Historic Environment Scotland and NatureScot have undertaken the first two phases of work to better understand the impacts of marram harvesting on dune resilience, recognising its cultural importance in the Outer Hebrides and the need to safeguard both the dunes and the availability of traditional thatching materials. The [research to date](#) has focused on gaining a better understanding of cutting practices, improving mapping of dune habitat and the acquisition of baseline surveys, as well as undertaking research trials to investigate the effects of cutting frequency on marram recovery.

### **Research and SAC/MPA monitoring documents for marine habitats**

[Scotland's Marine Assessment 2020](#) provides a precis of current research and survey undertaken for marine habitats in the intertidal and continental shelf, highlighting case-studies where valuable insight has been gained for specific habitats in some areas. It notes that significant knowledge gaps remain and makes recommendations on how these may be addressed.

The [Scottish MPA Monitoring Strategy](#) developed by Marine Directorate, NatureScot and JNCC outlines an agreed approach to survey and monitoring marine habitats that will gather sufficient information to assess the condition of protected features, determine the effectiveness of management measures, and meet national and international reporting obligations. The strategy provides a framework for prioritising monitoring efforts, standardising methodologies, and promoting collaboration among government bodies, academia, industry, and citizen science programs. A Scottish imp Monitoring Programme to implement the Strategy and details proposals for seabed and intertidal habitats monitoring 2026-2038 is in preparation.

Monitoring and research for the period covered by the present report has concentrated on:

- Establishing baseline conditions for MPAs to support the effective management of fishing activity.
- Examining time series data for sensitive habitats at priority MPAs.
- Investigating pressure/state relationships within MPAs.
- Adding to our understanding of the distribution and abundance of habitats of high conservation importance in Scottish inshore waters.

Examples of research recently published include:

[NatureScot Research Report 1372](#) evaluates change in selected protected features since the introduction of management measures.

[NatureScot Research Report 1213](#) explores methodologies which might assist in more systems-based nature conservation work.

[NatureScot Research Report 1156](#) presents the results of monitoring of Loch Creran's protected biogenic habitats.

[NatureScot Research Report 1275](#) evaluates long-term monitoring approaches for maerl beds and makes recommendations on innovative approaches.

(See References – Research and SAC/MPA monitoring documents for Marine Habitats for full list and links.)

### **Collaborative Research and SAC/MPA monitoring documents for marine mammals**

NatureScot works closely in collaboration with many citizen science monitoring programmes and research institutes to deliver monitoring and research work that feed into the evidence base for assessments. These include:

- The Hebridean Whale and Dolphin Trust (HWDT)
- Whale and Dolphin Conservation (WDC)
- The Sea Mammal Research Unit (SMRU)
- The University of Aberdeen
- Scottish Association for Marine Science (SAMS)

Monitoring and research work for the period covered by the present report has focused on gaining a better understanding of marine mammal distribution patterns (seasonality), abundance trends, habitat use and quality/availability of available prey resources. This has been through a combination of dedicated surveys, collation/processing, statistical analysis and interrogation of existing long-term datasets, and the development of analytical methods and testing new technologies. Examples of recent commissioned research reports are below (See References – Research and SAC/MPA documents for Marine mammals for full list and links):

[NatureScot Research Report 1364](#) presents results from boat-based surveys undertaken in the Hebrides by the Hebridean Whale and Dolphin Trust as part of their long-term cetacean monitoring and research programme.

[NatureScot Research Report 1360](#) presents results from dedicated boat-based bottlenose dolphin photo-ID surveys in the Moray Firth SAC and Firth of Tay, with an updated population estimate for the SAC and Coastal East Scotland Management Unit.

[NatureScot Research Report 1369](#) presents preliminary results from 14 years of dedicated boat-based Risso's dolphin photo-ID surveys undertaken by WDC in the North Minch and North-east Lewis MPA, as a phase 1 review to a more

comprehensive phase 2 statistical analysis and catalogue creation for the west coast of Scotland currently underway.

[NatureScot Research Report 1379](#) presents a suite of proposed ecosystem health metrics that can be used for assessments of habitat quality and anthropogenic impacts/pressures on cetacean populations and protected sites.

### **Survey and reporting partnership data for birds reporting**

The present Implementation Report draws on surveys which were funded or organised, *inter alia*, by the following organisations (and their predecessor bodies):

- British Trust for Ornithology (BTO);
- Game and Wildlife Conservation Trust;
- Joint Nature Conservation Committee;
- Rare Breeding Birds Panel;
- Royal Society for the Protection of Birds;
- Scottish Ornithologists' Club (SOC);
- Scottish Raptor Study Group;
- Shetland Oil Terminal Environmental Advisory Group;
- Wildfowl and Wetlands Trust.

We thank especially BTO, BWI and SOC for the use of data and information from the [Britain and Ireland Bird Atlas 2007-2011](#) and The State of the UK's Birds 2020 ([Burns et al. 2020](#)).

### **Contribution of Citizen Science**

The assessments would not have been possible without the massive voluntary efforts of many tens of thousands of volunteers who have given their time (and resources) to participate in citizen science.

Data from recording schemes and the [NBN Atlas](#) provided much of the information needed to complete the reports, and citizen science contributes significantly to monitoring species, including [Annex I species in Scotland](#).

### **Monitoring of Protected Areas**

Features on protected areas are monitored by NatureScot's Site Condition Monitoring programme. The purpose of Site Condition Monitoring is to determine the condition of the natural features within each site, to work out whether a natural feature is likely to maintain itself in the medium to longer term under the current conditions. These include the management regime in place, and wider environmental or other influences. The condition of individual features on a site can be found by searching for a protected area on NatureScot's [SiteLink website](#).

The data is also available to view using the Protected Nature Sites interactive tool on the [Scotland's Environment website](#).

## **2.3 Information on the network of European Sites**

- European sites represent the very best of Scotland's nature and are internationally important for threatened habitats and species. These sites are

ambitious in their aim, requiring more than just the avoidance of species extinctions and habitats loss. Instead, the objective is for all species and habitats covered to contribute towards their favourable conservation status (FCS). More information on European sites is available on the [NatureScot website](#).

- [SiteLink](#) provides easy access to data and information on [Protected Areas](#) across Scotland ranging from sites of local natural heritage to designations of national and international importance, including European sites.
- Additional information on European marine sites is also available on the [NatureScot website](#).

## 2.4 Monitoring schemes

- Information on protected area monitoring in Scotland is available on the [NatureScot website](#);
- [National Biodiversity Network](#) mobilises a wealth of (mainly location-related) species records across the UK.
- The Scottish MPA monitoring strategy is available on the [Scottish Government website](#).
- Further information on marine monitoring is available on the [NatureScot website](#).

### Terrestrial monitoring schemes

- [Countryside Survey](#);
- [National Amphibian and Reptile Survey](#);
- [National Bat Monitoring Programme](#);
- [National Plant Monitoring Scheme](#);
- [UK Air Pollution Information System](#);
- [UK Butterfly Monitoring Scheme](#);
- [UK Environmental Change network](#).

### Marine mammal and habitat monitoring schemes

- [Joint Cetacean Data Programme](#);
- [MarClim programme](#);
- [Scottish Marine Animal Stranding Scheme](#);
- Small Cetacean Abundance in the European Atlantic and North Seas (SCANS) ([SCANS IV](#));
- [Special Committee on Seals](#) (SCOS);
- [Hebridean Whale and Dolphin Trust Monitoring Programme and Whale Track](#);
- [Whale and Dolphin Conservation ShoreWatch Monitoring Programme](#);
- [Scottish Passive Acoustic Network](#) (SPAN) (and predecessor programmes ECOMMAS/COMPASS prior to 2022);
- UK Bycatch Monitoring Programme, which is now part of the [Marine Wildlife Bycatch Mitigation Initiative](#) (BMI);

### Monitoring schemes for birds

- [Avian Influenza monitoring](#);

- [Breeding Bird Survey](#) (common breeding birds); (BBS also includes [Mountain hare](#))
- [Constant Effort Sites Scheme](#) (productivity assessment);
- [Goose and Swan Monitoring Programme](#) (non-breeding geese and swans);
- National Beached Bird Survey (monitoring seabird mortality);
- [National Game Bag Census](#) (bag records from shooting estates) (NGBC also includes [Mountain hare](#));
- [Nest Record Scheme](#) (productivity assessment);
- [Predatory Bird Monitoring Scheme](#) (monitoring of pesticide and other pollution residues);
- [Rare Breeding Birds Panel](#);
- [Ringing Scheme](#) (movements and survival);
- [Scottish Raptor Monitoring Scheme](#) (birds of prey in Scotland);
- [Seabird census programmes](#);
- [Seabird Monitoring Programme](#) (breeding seabird numbers, productivity and survival);
- [Waterways Breeding Bird Survey](#) (common breeding birds of waterway habitats);
- [Wetland Bird Survey](#) (non-breeding waterbirds);
- British Trust for Ornithology also produce a [non-avian taxa dataset](#).

## 2.5 Protection of species

- Information on legal protection for species in Scotland is available on the [NatureScot website](#);
- Information on protected species in Scotland is available on the [NatureScot website](#);
- Information regarding the protection of marine species in the UK is available on the [JNCC website](#).
- Information regarding the protection of bird species (Articles 5-8), which includes international conventions and agreements, conservation listing, priority species, protected areas, surveillance and monitoring, indicators, reporting, and advice is available on the [JNCC website](#).
- [Wildlife management and wildlife crime](#).

## 2.6 Research and advice (including research and work required as a basis for the protection, management and sustainable use – birds only)

Research relevant to the reporting period that has contributed to the assessments is provided in the References, with links to published reports and articles. There is also research on the management of certain bird species.

## 2.7 Impact of measures

A summary of the impact of the measures taken in Scotland to meet the provisions of the Birds and Habitats Directives, and to achieve the objectives of those Directives during the period 2019-2024 is provided. The full assessments are available on the NatureScot website (terrestrial habitats and species and marine habitats) and on the JNCC website (marine mammals and birds).

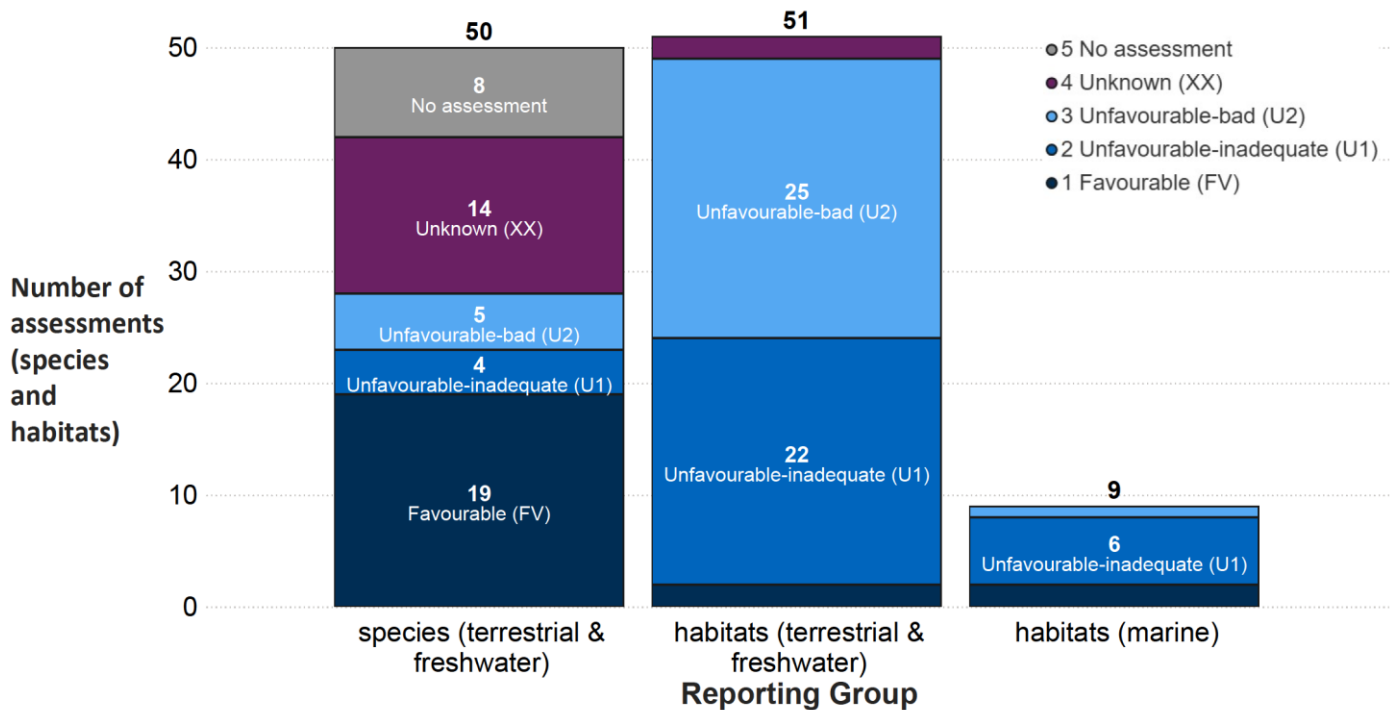


Figure 3. Conservation Status Overall Assessment by Reporting Group

The chart in Figure 3 reflects data of varying age (1962-2024) and collected for a range of use cases. Action to address the causes of the decline in these species and habitats was an important part of the development of the [Scottish Biodiversity Strategy](#) and associated Delivery Plan, published in 2024. This is the framework through which partners can work to improve nature and nature's contributions to people and improve the impact of measures portrayed in the chart.

## 2.8 Transposition of the Directive (legal texts) and translation after EU Exit

For Scotland the Habitats and Birds Directives are transposed through a combination of the Conservation (Natural Habitats, &c.) Regulations 1994 And the Wildlife & Countryside Act 1981. The Conservation of Habitats and Species Regulations 2017 apply in relation to reserved matters see:

- [The Conservation \(Natural Habitats, &c.\) Regulations 1994](#);
- [The Conservation \(Natural Habitats &c.\) Amendment \(Scotland\) Regulations 2004](#);
- [The Conservation \(Natural Habitats, &c.\) \(Amendment\) Regulations 2007](#);
- [The Conservation \(Natural Habitats, &c.\) Amendment \(Scotland\) Regulations 2007](#); Article 17 report format 2013-2018 12
- [The Conservation \(Natural Habitats, &c.\) Amendment \(No 2\) \(Scotland\) Regulations 2007](#);
- [The Conservation \(Natural Habitats, &c.\) Amendment \(Scotland\) Regulations 2008](#);
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- [The Conservation \(Natural Habitats, &c.\) \(Amendment\) \(No. 2\) Regulations 2009](#);
- [The Conservation \(Natural Habitats, &c.\) Amendment \(Scotland\) Regulations 2011](#);
- [The Nature Conservation \(Scotland\) Act 2004 \(Authorised Operations\) Order 2011](#);
- [The Conservation \(Natural Habitats, &c.\) Amendment \(Scotland\) Regulations 2012](#).

The Habitats Regulations have been amended as a result of leaving the EU so that European sites are both protected, and continue to operate as they have done since their original designation. The changes to the Regulations also mean that the requirements of the Directives continue to be relevant to the management of European sites.

- [The Conservation \(Natural Habitats, &c\) Amendment \(Scotland\) Regulations 2019](#);
- [The Conservation \(Natural Habitats, &c\) Amendment \(No. 2\) \(Scotland\) Regulations 2019](#);
- [The Conservation \(Natural Habitats, &c\) \(EU Exit\) \(Scotland\) \(Amendment\) \(Scotland\) Regulations 2019](#).

Part 2 of the [Nature Conservation \(Scotland\) Act 2004](#) provides for the notification, management and protection of Sites of Special Scientific Interest (SSSI). This designation underpins the majority of terrestrial SACs and SPAs, and the associated provisions work in conjunction with the legislation listed above.

Through the [Natural Environment \(Scotland\) Bill](#), Scotland is developing statutory nature recovery targets which aim to improve the management and effectiveness of existing protected areas. The Scottish Biodiversity Strategy to 2045 also includes commitments to increase the extent and connectivity of protected areas as well improve condition.

### **3. European sites – site designation**

#### **3.1 All sites**

There are 244<sup>1</sup> SACs in Scotland, and 164 SPAs. These sites are on Scotland's landmass and within the Scottish inshore zone to 12 nautical miles). The present report does not cover sites in the Offshore Zone.

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<sup>1</sup> This is the number of sites within or overlapping with Scotland's terrestrial landmass and or inshore zone.

### 3.2 – 3.3 Surface area<sup>2</sup> of terrestrial and marine sites

Zone	SACs	SPAs
Terrestrial (3.2)	6,073.5 km <sup>2</sup>	9,560.9 km <sup>2</sup>
Marine (Inshore) (3.3)	17,581.4 km <sup>2</sup>	13,431.5 km <sup>2</sup>
Total Area	23,654.9 km <sup>2</sup>	22,992.4 km <sup>2</sup>

### 3.4 SAC and SPA data used in calculations dated 2025-09-04

The present report does not cover offshore sites which are included in a UK report by the Joint Nature Conservation Committee (JNCC). The area of European sites in the offshore zone is included here for completeness

Zone	SACs	SPAs	Total area
Scottish marine (offshore)	30,575.8 km <sup>2</sup>	4,911.5 km <sup>2</sup>	527,243.1 km <sup>2</sup>
UK marine (offshore)	77,646 km <sup>2</sup>	6,406 km <sup>2</sup>	722,128 km <sup>2</sup>

Source: [UK Offshore Implementation – Technical Report](#)

## 4. Set of conservation measures and management plans for European sites

### 4.1 Necessary conservation measures have been established according to Article 6(1) and are applied

All Scottish SACs have published Conservation Objectives. For most terrestrial SACs (183) these are within a Conservation Advice Package document which details the conservation priorities for the site and the conservation measures required to achieve the objectives.

The [Agri-Environment Climate Scheme](#) (AECS) promotes land management that protects and enhances Scotland's natural heritage, improves water quality, manages flood risk, and helps us to mitigate and adapt to climate change. It is the principal means for funding positive management of terrestrial protected areas in Scotland. In the period covered by the present report, 327 AECS contracts have been entered into on 79 SACs, benefiting 312 SAC features.

NatureScot also has powers to offer management agreements for the benefit of protected areas. During the period of the present report it has entered into 22 agreements on 13 SACs, benefiting 29 features.

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<sup>2</sup> The reported surface area is restricted to areas of sites within Scotland's terrestrial landmass and Inshore zone. Surface Area is calculated to account for overlap of sites within designation type to avoid duplicate area counts; area calculated in Lambert Azimuthal Equal Area projection ([ETRS\\_1989\\_LAEA: WKID: 3035 Authority: EPSG](#)) as per previous reporting to the European Union.

In addition, most terrestrial European sites are underpinned as Sites of Special Scientific Interest (SSSI). This provides additional statutory protection including regulation of land management operations through the SSSI consent process. SSSI designation cannot be applied below Mean Low Water Springs.

All relevant SACs in the MPA Network have conservation objectives within Conservation and Management Advice (CMA) documents; these meet the requirement under Regulation 33(2) to make special provisions for the protection of European marine sites.

Within the Scottish MPA Network there are 24 SACs where necessary conservation measures have been established and applied.

#### **4.2 Conservation measures established for SPAs**

All Scottish SPAs have published conservation objectives.

During the period covered by the present report, 363 AECS contracts have been agreed on 59 SPAs, benefiting 201 SPA features. NatureScot has also entered into 3 management agreements on 3 SPAs, benefiting 7 features.

For SPAs within the Scottish MPA Network, 44 have published Conservation and Management Advice (CMA) documents, which include the sites' conservation objectives. Where appropriate these meet the requirement under Regulation 33(2) to make special provisions for the protection of European marine sites.

In addition, 1 SPA within the Scottish MPA Network has necessary conservation measures established and applied.

#### **4.3 Conservation measures established outside the European site network**

Fourteen Nature Conservation MPAs provide protected areas additional to those provided by the European sites within the Scottish Inshore zone for habitats and species on Annex I or Annex II of the Habitats Directive, or Annex I of the Birds Directive. These sites have published Conservation and Management Advice (CMA) documents, equivalent to the requirement under Regulation 33(2) to make special provisions for the protection of European marine sites and afford an additional surface area of 14,892.7 km<sup>2</sup>. Of these 14 sites, 8 have management measures in place. These cover 1,065.5 km<sup>2</sup>.

### **5. Measures taken in relation to approval of plans and projects (Article 6.4)**

List projects and plans for which compensatory measures are necessary. For each project/plan with compensatory measures include:

<b>5.1 Site code</b>	<b>5.2 Site name</b>	<b>5.3 Title of project/plan</b>	<b>5.4 Year project/plan was started</b>
UK9001182	East Caithness Cliffs SPA	Greenvolt Offshore Windfarm (GVO)	2024 (consent given)
UK9002491	Buchan Ness to Collieston Coast SPA	(GVO)	2024 (consent given)
UK9004171	Forth Islands SPA	(GVO)	2024 (consent given)
UK9002271	Fowlsheugh SPA	(GVO)	2024 (consent given)
UK9002471	Troup, Pennan and Lion's Heads SPA	(GVO)	2024 (consent given)
UK9004171	Forth Islands SPA	Berwick Bank Offshore Windfarm (BBOW)	2025 (consent given)
UK9002271	Fowlsheugh SPA	(BBOW)	2025 (consent given)
UK9020316	Outer Firth of Forth and St Andrews Bay Complex SPA	(BBOW)	2025 (consent given)
UK9004271	St Abb's Head to Fast Castle SPA	(BBOW)	2025 (consent given)
UK9006021	Farne Islands SPA	(BBOW)	2025 (consent given)
UK9002491	Buchan Ness to Collieston Coast SPA	(BBOW)	2025 (consent given)
UK9001182	East Caithness Cliffs SPA	(BBOW)	2025 (consent given)
UK9006101	Flamborough and Filey Coast SPA	(BBOW)	2025 (consent given)
UK9001181	North Caithness Cliffs SPA	(BBOW)	2025 (consent given)
UK9002471	Troup, Pennan and Lion's Heads SPA	(BBOW)	2025 (consent given)
UK9002101	West Westray SPA	(BBOW)	2025 (consent given)
UK9002011	Hermaness, Saxa Vord & Valla Field SPA	(BBOW)	2025 (consent given)
UK9004171	Forth Islands SPA	Salamander Offshore Windfarm (SOW)	2025 (consent given)
UK9020316	Outer Firth of Forth and St Andrews Bay Complex SPA	(SOW)	2025 (consent given)
UK9002491	Buchan Ness to Collieston Coast SPA	(SOW)	2025 (consent given)

<b>5.1 Site code</b>	<b>5.2 Site name</b>	<b>5.3 Title of project/plan</b>	<b>5.4 Year project/plan was started</b>
UK9001182	East Caithness Cliffs SPA	(SOW)	2025 (consent given)
UK9002271	Fowlsheugh SPA	(SOW)	2025 (consent given)
UK9001181	North Caithness Cliffs SPA	(SOW)	2025 (consent given)
UK9002471	Troup Pennan and Lion's Heads SPA	(SOW)	2025 (consent given)
UK9004271	St Abb's Head to Fast Castle SPA	(SOW)	2025 (consent given)
UK0030176	Kinloch & Kyleakin Hills SAC	Skye Reinforcement Project	2025 (consent given)
UK9002181	Sule Skerry and Sule Stack SPA	West of Orkney Offshore Windfarm (WOOW)	2025 (consent given)
UK9004171	Forth Islands SPA	(WOOW)	2025 (consent given)
UK9020316	Outer Firth of Forth and St Andrews Bay Complex SPA	(WOOW)	2025 (consent given)
UK9001182	East Caithness Cliffs SPA	(WOOW)	2025 (consent given)
UK9002271	Fowlsheugh SPA	(WOOW)	2025 (consent given)
UK9002141	Hoy SPA	(WOOW)	2025 (consent given)
UK9001181	North Caithness Cliffs SPA	(WOOW)	2025 (consent given)
UK9002371	Rousay SPA	(WOOW)	2025 (consent given)
UK9002101	West Westray SPA	(WOOW)	2025 (consent given)
UK9002091	Fair Isle SPA	(WOOW)	2025 (consent given)
UK9002011	Hermaness, Saxa Vord and Valla Field SPA	(WOOW)	2025 (consent given)
UK9002151	Copinsay SPA	(WOOW)	2025 (consent given)
UK9002491	Buchan Ness to Collieston Coast SPA	(WOOW)	2025 (consent given)

## **6. Measures taken to ensure coherence of the European site network**

NatureScot has created a comprehensive series of information and guidance documents on many aspects of habitat and species connectivity for a range of users covering applications, initiatives, tools and research.

There are two key areas of work that are in development in Scotland that will ensure the coherence of the European site network:

- 30 by 30 – the initiative to secure 30% of Scotland’s land and seas to be managed for nature by 2030, in line with the [Kunming-Montreal Global Biodiversity Framework target 3](#), is progressing at pace. The European site network is an important component of the range of designations that are counted towards the 30% target. The target is more than just an area figure to meet. Sites that are included must be effectively managed so that their features are considered to be in favourable condition.
- Monitoring to deliver ecosystem health – this project aims to change how the condition of protected areas, including those in the European site network, is determined. This will be through a revised methodology that focuses on the pressures affecting sites and assesses the health of the ecosystem(s) within a site. This can then better direct appropriate management to improve the overall ecosystem health, including where necessary to tackle off-site issues.

The [Marine Protected Area network report to the Scottish Parliament](#) includes recommendations for the connectivity and replication of features within the network.

## 6.1 Initiatives

### Nature Networks Framework

NatureScot has developed a [framework for Nature Networks](#) in partnership with over 200 individuals from nearly 110 organisations from a broad spectrum of Scotland’s sectors and communities. The networks will help build people’s connection to nature, providing biodiversity-rich spaces that deliver local benefits, and meet the priorities of local communities for nature.

### The Central Scotland Green Network

Covering 10,000 km<sup>2</sup> and with a 40-year timeframe, the [CSGN](#) is one of the largest and most ambitious green infrastructure programmes in Europe. Through the support of the Scottish Government and over 80 partners, its focus is to address climate change, biodiversity loss and environmental inequality by connecting people to greenspace where it is needed most.

## 6.2 User tools

The [Nature Networks Toolbox](#) is a live resource for local authorities, partnerships, organisations, and groups. The aim is to facilitate the effective design and implementation of Nature Networks at the local and regional level and support strong alignment in approaches across Scotland.

The [Big Biodiversity Layer](#) (BBL) is a tool which will aid anyone wishing to explore their lands potential to be recognised as an Other Effective area-based Conservation Measures (OECMs) and contribute towards Scotland’s 30 by 30 efforts. The tool is being developed by NatureScot and maps biodiversity across Scotland in order to identify the most highly biodiverse areas. The BBL is intended to be one tool which helps inform decision making around new 30 by 30 sites.

[Marine Recorder Online](#) (MRO) is a data management solution for UK marine data, focusing on biodiversity and associated seafloor sampling data. From Marine Recorder Online, custodians (or other authorised users) can query, and download signed off and published datasets.

### **6.3 Marine Protected Area Network**

In addition to designating parts of Scotland's marine area as European sites, a [Scottish Marine Protected Area Network](#) has been completed. The MPA network supports the Scottish Government's vision for a clean, healthy, safe, productive, biologically diverse marine and coastal environment, managed to meet the long-term needs of nature and people. Scotland's MPA network also, for the Scottish Inshore zone, supports meeting our statutory obligations under the Marine (Scotland) Act 2010, the Habitats Regulations, and the UK Marine Strategy Regulations 2010. The MPA Network represents a total area of 37,885 km<sup>2</sup> (41.9%) within the Scottish Inshore zone, from a conservation perspective it is comprised of Nature Conservation Marine Protected Areas (NC MPAs), European sites, Sites of Special Scientific Interest (SSSI) and Ramsar sites. The MPA Network both overlaps with and complements the European site network; contributing to a well-managed coherent network.

Within the MPA Network, Nature Conservation MPAs and SSSIs provide protected areas additional to those of the European sites within the Scottish Inshore zone for habitats and species on Annex I or Annex II of the Habitats Directive, and Annex I of the Birds Directive. Specifically, within the MPA Network, 14 Nature Conservation MPAs provide an additional<sup>3</sup> 14,892.7 km<sup>2</sup> of protection, and 19 SSSIs provide a further additional 176.3 km<sup>2</sup> of protection.

The SBS Delivery Plan contains commitments to deliver actions to implement an adaptive management approach for MPAs within the Scottish MPA network and to assess the climate resilience of the MPA network.

## **7. Reintroduction of Annex IV species (Art. 22.a)**

The Eurasian Beaver *Castor fiber* became a European Protected Species in Scotland in May 2019. A policy change allowed beaver translocation to new catchments in Scotland from November 2021. Up to that point beavers had been officially permitted to remain in the Tay and Forth catchments and Knapdale. Since 2022 the licensed translocation of beavers has been authorized to three new river catchments: Loch Lomond (Leven), the Spey and the Beaully. A total of 115 beavers have now been translocated to new areas within Scotland. Beavers are also thought to have expanded naturally to the wider Forth catchment, West Lothian, Fife and in the Highlands.

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<sup>3</sup> 'Additional' means not overlapping with European sites.

## Appendix 1

Specific links to research and survey reports that support the Assessments are included in the feature assessments.

Research and survey reports published by NatureScot are on our [publications page](#).

Data can be viewed and downloaded from the NatureScot [Spatial Data hub](#).

Links to other sources of information are provided throughout the present report.

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