

SCOTTISH NATURAL HERITAGE

BIODIVERSITY DUTY REPORT – 2015 to 2017

This document comprises Scottish Natural Heritage's (SNH) Biodiversity Duty report for the period 2015 to 2017 inclusive, as required under the Wildlife and Natural Environment (Scotland) 2011 Act.

SNH promotes, cares for and improves Scotland's natural heritage; through protecting nature, helping people to enjoy nature responsibly, enabling a greater awareness of nature and improved understanding of the benefits nature brings to people. We promote the sustainable use of natural assets to ensure a prosperous future. Biodiversity conservation is at the centre of what we do and is embedded across most of our work.

We set out our objectives for delivering nature conservation in Scotland in our Corporate Plan and Business Plan. We regularly monitor and report on our progress in reaching these natural heritage outcomes.

This biodiversity duty report provides some highlights of the biodiversity work undertaken by SNH covering the period 2015-2017. We provide more detail in each of our [annual reports](#).

1. Introductory information

a. Give an overview of your organisation's regulatory role.

Our Purpose

Scottish Natural Heritage (SNH) is funded by the Scottish Government. Our purpose is to:

- Secure the conservation and enhancement of nature and landscapes
- Foster understanding and facilitate enjoyment of nature and landscapes
- Advise on the sustainable use and management of nature and landscapes

Our regulatory role includes:

- supporting the planning system by providing conservation advice to developers and decision-makers
- management of protected areas through advice to land managers and decision-makers, and our responsibility for issuing notifications and consents
- wildlife management advice and our role in issuing species licences and authorisations

The way we carry out these functions is guided by the Scottish Regulators' Strategic Code of Practice. The Code seeks to support an enabling approach by applying the key principles of better regulation (transparent, consistent, proportionate, accountable and targeted), to assist businesses and help deliver sustainable economic growth.

Operating Principles

We work in partnership, by cooperation, negotiation and consensus, with all relevant interests in Scotland, including public, private and voluntary organisations and

individuals. We operate in a devolved manner, delegating decision-making to the local level, helping our organisation to be accessible, sensitive and responsive to local needs and circumstances. We operate in an open and accountable manner in all our activities.

Organisational Values

Our organisational values help us achieve our goals, setting out how we work with colleagues and partners:

- We do what we'll say we do
- We communicate clearly and honestly
- We take the initiative and are willing to adapt
- We listen to and respect others' views
- We treat everyone with dignity and respect
- We encourage people to deliver their best
- We work together and learn from each other

b. Outline how biodiversity feeds into your organisation's decision-making structure, including any initiatives or groups in which your organisation and its staff, board members, etc. are active.

SNH aims to achieve:

- High-quality nature and landscapes that are resilient to change and achieve public value
- Nature and landscapes that make Scotland a better place in which to live, work and visit
- More people experiencing, enjoying and valuing our nature and landscapes
- Nature and landscapes as assets contributing more to the Scottish economy

This report details our progress towards achieving these aims through high quality public service. It also provides information about how we met the National Performance Framework (NPF) indicators; in which we were either the lead reporting organisation or to which we made a contribution.

How we plan our work

Our 2015-18 Corporate Plan drives our work, setting the objectives within the context of our corporate strategy. Our annual business plan details how we will deliver the objectives of the corporate plan. We plan and organise our work through a programme approach which is structured around four portfolios and fifteen activities. The activities outline how we achieve our objectives.

Portfolio 1 - Caring for the Natural World

Outcome: The condition of nature and landscapes is maintained and, where possible, improved to halt the loss of biodiversity and deliver wide benefits for the local economy, jobs and tourism

Activities:

- Biodiversity Monitoring
- Protected Areas
- Marine Management
- Scotland’s Rural Development Programme

Portfolio 2 - Enriching People’s Lives

Outcome: Better quality places in which to live, work and visit and increased opportunities to experience and value nature first hand

Activities:

- Creating Better Places
- Managing Nature Reserves
- Increasing Participation

Portfolio 3 – Promoting Sustainable Economic Growth

Outcome: Natural resources are sustainably managed as a key asset, underpinning Scotland’s sustainable economic growth

Activities:

- Wildlife Management
- Natural Resource Management
- Planning & Development
- Climate Change

Portfolio 4 - Delivering a High Quality Public Service

Outcome: Meeting the high standards expected of a public body by embracing three principles of public service delivery: putting the customer first; focusing on improvements; and making sure that every public pound is spent wisely

Activities:

- Asset Management
- Finance Management
- People Management
- Corporate Governance

c. Include examples where staff and/or board members have promoted biodiversity initiatives.

The focus of SNH staff and board members is to promote biodiversity and to connect people with nature. The few example below which provide a small selection of the diverse work we are involved with that promote biodiversity in Scotland. These examples relate directly to land or other assets which we own or manage.

National Nature Reserves

SNH manages or jointly manages 29 of the 43 National Nature Reserves in Scotland. These places represent the best nature reserves and are home to nationally and internationally important species and habitats. They are managed for wildlife and also so people can enjoy these special places, with many having visitor centres and trails. <https://www.nnr.scot/>

These NNRs celebrate the great variety of our habitats and species that occur across Scotland from Caledonian pine forest to blanket bog, from seabird colonies to mountain plants. Much of the land within NNRs is also designated under national and international legislation that protects it.

Most NNRs are Sites of Special Scientific Interest and many are Natura sites – Special Areas of Conservation and/or Special Protection Areas. In many reserves, the land will have more than one designation on it. SNH has a statutory duty to monitor, report progress and agree conservation action across these sites.

SNH offices

The grounds around the Battleby office near Perth and our headquarters at Great Glen House in Inverness continue to be managed for nature, with meadows, woodland, green roof and wetland areas all encouraging wildlife. With the location of webcams in bat and bird boxes we provide visitors and staff a chance to get up close to nature. Each office has an established grounds management group that develop the plans for nature, staff and visitors and ensure implementation.

Life Nature and Biodiversity projects

SNH have lead a number of EU LIFE Nature and Biodiversity funded projects in Scotland; which have focused on freshwater pearl mussel, Atlantic salmon and habitat improvements.

The EcoCo LIFE project is a 4 year, £2.3 million EU LIFE+ funded biodiversity project running from September 2014 to August 2018, set within the Central Scotland Green Network area to improve ecological coherence.

“Ecological coherence” is about habitat and species resilience, habitat networks and biodiversity. The project also aims to contribute to enhanced ecosystem services such as; natural flood management, diffuse pollution, and soil carbon storage.

There are many more inspiring stories and examples on our website <https://www.nature.scot/>

2. Mainstreaming

d. Identify the steps your organisation has taken to incorporate biodiversity measures into other areas of policy, strategies or initiatives.

Under the Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004 Scottish Natural Heritage is identified as a ‘consultation authority’. This means that we provide specialist environmental advice and comment to other public sector organisations carrying out their own assessments of their policies, plans and strategies to ensure that environmental issues are central to public sector decision-making.

SNH is supporting other organisations and businesses across Scotland in developing Delivery Agreements which set out their contribution to the Scottish Biodiversity Strategy *2020 Challenge for Scotland’s Biodiversity*. So far five public bodies within the environment sector have published their [Deliver Agreements](#) and six are in progress, with others to be identified.

There are many other activities that SNH lead or are involved with, that help to mainstream biodiversity delivery across many sectors including through planning. We focus our advice on those developments with the most significant potential

impact on our natural assets and only object outright where unresolved issues of national importance are raised. We have continued to engage at an early stage with planning authorities and developers and increased our involvement in pre-applications from under 10% in 2012 to 73% in 2014/15.

We work with land managers to ensure continued support and care of protected nature sites, through the Agri-environment and Climate Change Scheme. During the transition period between schemes we implemented management agreements to ensure continued support for farmers in undertaking work for biodiversity.

Examples in 2014/15



Approximately 50 land management agreements in place to enable land managers

to enhancement and protect the natural heritage, including protected nature sites and for wider biodiversity during the transition period between Agri-Environment schemes.



Engaged pre-application in 73% of planning cases

subject to environmental impact statements helping developers to take account of nature and the landscape in their proposals

Examples in 2015/16



Assessed over 300 applications for the new Agri-Environment-Climate Change Scheme which promotes land

management practises for the protection and enhancement of the natural heritage, including protected nature sites and for wider biodiversity



Engaged pre-application in 64% of planning

cases subject to environmental impact assessment, helping developers to take account of nature and landscape in their proposals

Examples in 2016/17



Led the new £20m Green Infrastructure Strategic Investment Programme, with seven project awarded funding to help improve Scotland's urban environment in our towns and cities



Assessed 386 contract under the Agri-Environment Climate

Scheme management practises for the protection and enhancement of the natural heritage, including protected nature sites and for wider biodiversity. This amounted to £22m of new investment to 318 rural land managers.



We responded to over 100 Development Plans and provided

Scoping or pre-development advice in 87% of the planning cases on which we were consulted helping developers to take account of nature and the landscape in their proposals

3. Actions taken to improve biodiversity conservation

e. Identify any actions that your organisation has undertaken on the ground, on your own land or elsewhere as part of a contribution to a wider project and how these benefit biodiversity.

Our National Nature Reserves (NNRs) showcase the very best of Scotland's landscape and wildlife. We ensure they are well managed and that visitors enjoy the reserve whilst not harming or disturbing the habitat and wildlife. To encourage visits we hosted a series of open days and events throughout the year including guided walks, displays and demonstrations. In 2015/16, we estimate that around 610,000 people visited our reserves. We receive regular feedback on their experience to help us improve our service. Over the year, we created the opportunity for people to engage with nature with 4,000 volunteering days, 6 yearlong student placements, and 3,500 attendees at special events.

We continued with a programme of investment to enhance our visitors' experience through infrastructure improvements on NNRs, including path extensions and improvements on the Isle of Rum, path improvements at Ben Wyvis, and an upgraded car park at Flanders Moss, near Stirling.

In support of protected areas, we also continued to manage our sites to achieve favourable condition. As of March 2016, 84.2% of the 599 features on our NNRs were in favourable condition. This compares well with the overall favourable condition statistic of 80.4%.

We aim to manage the land around our buildings for nature conservation and have sown a wildlife meadow outside the Stirling office we share with SEPA. The grounds around the Battleby office near Perth and our headquarters at Great Glen House in Inverness continue to be managed for nature, with meadows, woodland, green roof and wetland areas all encouraging wildlife. With the location of webcams in bat and bird boxes we provide visitors and staff a chance to get up close to nature.

Through partnership working, supporting others through our grant programme and providing advice SNH influences the management of land, freshwater and the marine environment across Scotland for the benefit of nature and people. The following case studies provide an insight into the projects and partnerships that SNH either leads or is a key partner and the biodiversity benefits they are bringing to Scotland.

f. Include any partnership initiatives on biodiversity that you have been involved in: what these aimed to do, what actions have happened, what you believe the successes were and any plans for future or follow-up work.

Case study 1: Pearls in Peril

One particular project that SNH led enabled us to work across 21 sites in Scotland, England and Wales to secure the future of the freshwater pearl mussel. Freshwater pearl mussels act as a barometer of the health of our rivers and burns. The actions we have taken to conserve them also benefit the wider river ecosystem.

This increasingly rare mollusc lives hidden amongst the bed of cold, fast flowing rivers and burns. Scotland has many of the world's most important remaining populations and a significant number of rivers with breeding populations. But even in Scotland there has been a dramatic and sustained decline of this species.

Maintaining populations that are still breeding is essential for their long term existence.

'Pearls in Peril' (PIP) is a LIFE+ nature project (a European funded project) is led by SNH to save and restore freshwater pearl mussel in 21 sites across Scotland, England and Wales. The project has delivered simple conservation measures working with 22 organisations and a range of stakeholders, including land managers and owners, conservation charities, volunteers, and local schools, businesses and communities.

A major restoration project was undertaken on the River South Esk in 2015: PIP restored natural river processes by removing almost 1km of boulder bank protection. This has created a new river channel with a diverse habitat that now acts as a source of sediment to replenish downstream freshwater pearl mussel beds and provide spawning areas for Atlantic salmon and trout. The project has planted thousands of trees on the South Esk and created new wet woodland. Stock fencing along seven kilometres of watercourses and eight off-stream livestock watering points have been installed. The pearl mussel is a cold water species that requires a silt-free, oxygenated riverbed to survive. Trees provide shade, helping to lower water temperatures, and their roots bind the riverbank reducing erosion. Fencing prevents livestock from accessing the river and creates a buffer near arable fields. This reduces the fine silts that enter the watercourse and smother the riverbed. These measures directly benefit freshwater pearl mussel and other river wildlife. The management work was funded by applications to Angus Environmental Trust and to the Agri-Environment Climate scheme under the Scottish Rural Development Programme.

Case study 2: Seven Lochs

The Seven Lochs Partnership of Scottish Natural Heritage, Glasgow City Council, North Lanarkshire Council, Forestry Commission Scotland and The Conservation Volunteers, has worked for many years to develop the concept of the wetland park as a resource for local people as well as a regional destination. This culminated in July 2016 when the Heritage Lottery Fund awarded £4.5million towards a five-year, £6.8 million project to develop the Seven Lochs Wetland Park as a new hub for biodiversity, heritage learning, outdoor recreation and community engagement.

The park already boasts five local nature reserves, a country park and one of Glasgow's oldest buildings at Provan Hall, as well as miles of walking and cycling routes. The additional funding will help develop a series of projects, including upgrading the four gateway visitor centres and some fascinating habitat improvement projects. This includes installing BioHaven floating wetlands to help create almost 500m² of new wetland habitat, planted with over 2000 wetland plants collected from around the Seven Lochs by local volunteers. These floating wetlands

should increase chances for breeding birds such as Great Crested Grebe; as well as help to reduce blue-green algae.

Despite all the wetlands in the area, one of the more unusual projects involves the unique population of water voles that appear to thrive in parks, gardens and areas of vacant and derelict land across north east Glasgow – away from any water bodies. These grassland water voles are surviving without their usual watery habitat; Cranhill Park, in particular, has perhaps the highest density of water voles in the UK. One of the aims of the project is to understanding the needs of the water voles and plan a network of permanent grassland sites managed specifically for them to help ensure that they remain a feature of the area as it is developed to meet social and economic priorities, including the 4,300 new homes earmarked in the Gartloch-Gartcosh community growth area.

The park projects also include developing walking and cycling routes throughout the park with improvements to paths, signage and interpretation. The park will become a major new hub for heritage conservation, learning and engagement, and will leave an important legacy for the communities within and neighbouring the park.

When complete, the project will enable local people and visitors to experience the natural and cultural heritage of the Seven Lochs area like never before and help local communities take ownership of the park for generations to come.

4. Section 4: Partnership working and biodiversity communications

b) Describe and illustrate your organisation's involvement in partnership working on biodiversity.

SNH has developed an Ecosystem Approach training programme to help staff and others implement this approach in their partnership working. The ecosystem approach involves taking account of how nature works and crucially, involves others in making decisions in how to use and take care of it. The end result is that we protect nature for itself and the benefits we receive from it.

There have been a number of projects facilitated by SNH which provide good examples of this way of working and how involving many other stakeholders in decision making improves the quality of outcomes for nature and people. The case study below shows how an ecosystem approach was beneficial to an NNR that SNH is responsible for managing.

Case Study 3: Flanders Moss National Nature Reserve

Flanders Moss National Nature Reserve (NNR) is one of the largest and least damaged lowland raised bogs in the UK and lies about 15 miles west of Stirling on the flat lands of the Carse of Stirling. Lowland raised bog is a rare and declining peatland habitat that is home to a number of specialist species. As well as being an NNR, the reserve is protected by European and UK designations. Scottish Natural Heritage manages the reserve, which is located within one hour's drive of two million people in Scotland; yet in 2001, no more than 200 people a year came to visit.

Since 2005 SNH has provided many opportunities for the public to enjoy this special habitat through improved visitor facilities such as path extensions (900m), interpretation and installation of a viewing tower. Involving people in the location and design of these facilities has also encouraged volunteering.

In 2006 and 2016, Scottish Natural Heritage consulted all landowners on the reserve, neighbouring landowners, local people and special interest groups about the plans for managing the reserve. For the 2016 management plan, the consultation has welcomed views from local people on what could improve their experience as visitors. In the proposed vision for Flanders Moss to 2041, local schoolchildren come to the reserve to learn about peatlands, reflecting an increasing awareness of how this habitat helps to tackle climate change. Neighbouring landowners, communities and volunteers are also actively involved in management decisions.

- **Advantages:** There have been huge advantages in boosting visitor numbers by involving people: around 8000 people now visit the reserve each year, a 40-fold increase since 2001. Consultations and improved visitor facilities have raised awareness of the site and its importance. Local people feel a sense of ownership for Flanders Moss and concern for its future. Accommodation providers and estate agents in the area have started to mention Flanders Moss in their descriptions, suggesting that it is a valued part of the area's natural heritage.
- **Challenges:** It is difficult to involve people in management decisions, particularly those that have to do with complex ecological processes, such as peatland restoration. With a variety of designations, site managers also have a statutory obligation to manage nature for its peatland flora and fauna. Conflicts can occur with the surrounding intensively managed agricultural land, including some contentious issues such as flooding and deer management. These are being addressed through the Carse of Stirling Partnership, local deer management groups, and working with local people.

Through this work and the involvement of people many of the species for which this special habitat is protected are benefitting. The distinctive domes shaped by the water within, support a rich, colourful carpet of bog mosses with large areas of the bog still accumulating peat. A whole host of specialist plants and nationally rare invertebrates can be found here including; Rannoch brindled beauty, argent and sable moths and the spider *Heliophanus dampfi*. Barn owls, wetland bird species, adders, bats and many types of dragonflies can be seen on the bog. These wide range of species make their home on this floating habitat; which provides an important breeding site for many bird species in the spring and summer months as well as for passage or overwintering.

The underlying geology tells a fascinating story of ancient sea level changes and within the peat itself, pollen records changes that have taken place in the surrounding landscape over the years. Flanders became an NNR in 1982, it has

since been recognised as internationally important and is now one of the sites in the Natura 2000 network of protected areas in Europe.

As visitor numbers have increased, it has become apparent that the site has immense value, as a recreational area for locals and visitors, and for this reason, as an addition to the local economy. Funding for the paths and visitor facilities was provided by the European Union's LEADER+ program, recognising the contribution that Flanders Moss could make to the area in terms of tourism and recreation. These enhancements to improve visitor experiences have resulted in visitor number increasing from 7,000 in 2011 to approximately 10,000 by 2017.

The reserve's management recognises the value that peatland has in helping us tackle climate change. Peatlands are rare globally, but 23% of Scotland's land area is covered in this boggy habitat. These soils store 1.6 billion tonnes of carbon dioxide. Part of restoring the peatland is to achieve a low level of grazing on the moss. Scottish Natural Heritage is working with local graziers to re-establish grazing. This has re-established the link between the moss and surrounding landowners. One of the graziers now produces Flanders Moss Organic Beef, adding further economic value to the reserve. Visitor perception surveys have confirmed that there is a lot of 'non-monetary value' given to Flanders Moss. The survey found that visitors value the wild and natural landscape where they can escape the mayhem of modern life for a short time.

A nature reserve is by definition a discrete area with agreed administrative boundaries, which can make it difficult to manage at the ecosystem scale. However, National Nature Reserves like the one at Flanders Moss, are aiming to blur the boundary of the designated site, by engaging with local communities and interest groups, and by embedding the site in the surrounding landscape. At Flanders Moss an ecosystem approach to management has resulted in working with visitors, locals and surrounding land users makes it clear that the site is a valued part of the landscape.

c) Describe any biodiversity communication that your organisation has undertaken to help raise awareness of and communicate about biodiversity conservation, including any partners that you worked with on communication and awareness raising activities.

SNH has a whole programme of work focused on bringing people closer to nature and communicating about nature is an essential part of this programme. The new website www.nature.scot provides a whole raft of information across the range of work undertaken by SNH and some of the best places to see and experience nature in Scotland. The SNH Facebook page www.facebook.com/ScottishNaturalHeritage/ offers up to date information on activities, experiences; including regular blogs from our reserve managers.

d) Describe any training or learning activities that have been carried out internally or externally relating to biodiversity, for example, CPD seminars or attendance at external events.

A series of Sharing Good Practice events covering many topics related to biodiversity conservation and communication is provided free of charge by SNH. The programme and events are co-produced to ensure that it meets stakeholder requirements.

A Teaching in Nature course is offered by SNH to teachers as part of their CPD, providing training and resources to enable teachers to confidently use nature to teach across the Curriculum for Excellence.

SNH has provided Ecosystem Approach Training opportunities for staff to ensure this approach is embedded across our work. Measures are in place to assess the success and application of this training across the organisation.

e) Identify any opportunities that your staff are given to take part in practical action such as volunteering, e.g. with John Muir Trust, British trust for Conservation Volunteers, RSPB.

Staff in SNH are involved in many aspects of practical action, including direct conservation management such as tree planting; they also provide direct advice on all aspects of conservation management. Staff also focus on monitoring and assessing the impact of work undertaken by others including farmers, land managers, fishermen and foresters to determine any future action for nature conservation.

5. Section 5: Biodiversity highlights and challenges

a) Describe your organisation's main achievements for biodiversity over the reporting period and what you are most proud of (this can include processes, plans, projects, partnerships, events and actions).

Highlights from 2014/15

Here are a few examples of our achievements:

- Working with our partners and stakeholders we developed a 'Route Map' for delivery of the '2020 Challenge' for Scotland's Biodiversity Strategy on behalf of the Scottish Government. This sets out the work needed to meet the international Aichi Target to protect and restore biodiversity by 2020. The Route Map identifies six 'Big Steps for Nature' under which a number of priority projects will be undertaken to enhance biodiversity and improve the state of nature in Scotland and the benefits it provides.
- The current percentage of natural features on protected areas in favourable condition stands at 79.3%, an increase of 7.9% since 2005, and on track to achieve the 80% target by 2016. This progress has made a major contribution to achieving the Scottish Government's National Indicator for improvements to the condition of protected nature sites.
- In support of the Scottish Government's initiative on youth employment we assisted five young people to complete their modern apprenticeship scheme

and provided other opportunities including our graduate placement scheme, student placement and volunteering opportunities.

- In partnership with the National Health Service Scotland and other organisations, we helped with the development of a 'natural health service'. This work focusses on improving health and well-being through active participation, improvements to green spaces and better targeting of resources on priority areas and groups.
- To contribute towards the Scottish Government's National Indicator for increasing people's use of the outdoors, our grants provided 678,000 opportunities for people to get involved with outdoor activity. This included an increase by 40,000 opportunities over the past two years for people to participate in some form of volunteering, allowing them to take direct action in looking after Scotland's nature and landscapes. 75% of these opportunities were provided for under-represented groups including young people and those on low incomes or living in areas of deprivation.
- The then First Minister, Alex Salmond MSP, opened the 134-mile coast-to-coast John Muir Way, in Dunbar. Assisted by nine local authorities we helped fund and develop the new path which was one of the key projects undertaken on behalf of the Central Scotland Green Network and one of the national developments in the Scottish Government's National Planning Framework. The new path provides opportunities – particularly for the 3 million people who live in the central belt of Scotland – to visit the outdoors and experience nature at close hand, benefitting our physical and mental health.
- We made a key contribution towards establishing new marine protected areas (MPAs), an important element of the Scottish Government's vision for a healthy marine environment. Following the announcement by Government of the initial MPAs to be selected we engaged with local interest groups on options for the future management of these MPAs. We also worked with our partners on proposals for a second tranche of MPAs and developed plans to consult with stakeholders during 2015.
- When they are in good condition, Scotland's vast peatlands act as a carbon sink and prevent the release of CO₂ into the atmosphere. Our Peatland Action Project helped to restore over 5,500ha of peatlands, a significant step forward in protecting this fragile habitat and contributing towards the Scottish Government's National Indicator to reduce Scotland's carbon footprint.
- We reduced our organisation's CO₂ emissions by 10% since April 2014, well ahead of the 4% target for this year. This has meant we reached our 2020 target five years ahead of schedule, making a further contribution to reducing Scotland's carbon footprint.
- Through our grants programme, we provided approximately £370k of funding for greenspace projects in urban areas that delivered a wide range of benefits. These ranged from supporting a programme of work undertaken by the Edinburgh & Lothian Greenspace Trust such as habitat improvements on

cycle ways to supporting smaller projects including helping volunteers to develop a community garden on the grounds of Midlothian Community Hospital. – Alongside Scottish Environmental Protection Agency (SEPA), we conducted a full review of our support to the hydro-electric development sector, looking to ensure that our advice and guidance was consistent and responsive to the needs of the sector. From its findings we made some adjustments in our engagement to ensure our continued support with this nationally important industry.

Highlights from 2015/16

- The Scottish Government confirmed our leadership role for the Scottish Biodiversity Strategy's 2020 Challenge and Route Map to 2020. The first interim report shows good early progress on the actions which will benefit biodiversity and improve the state of nature in Scotland.
- We updated the Natural Capital Asset Index, which is a world leading approach to monitoring annual changes in natural capital. Natural capital, such as ecosystems, species, freshwater and land provides many benefits which help sustain our quality of life and it is crucial that they remain to benefit future generations.
- We worked with Marine Scotland to develop the Scottish Government's approach to managing sensitive habitats and species in our seas. Statutory measures are now in place for nine marine Special Areas of Conservation and ten Nature Conservation Marine Protected Areas which support the vision for clean, healthy, safe, productive and biologically diverse oceans and seas.
- We set a target in 2013 of bringing 80% of protected site features into favourable or improving condition by March 2016. This target was achieved (80.4%) and contributes to the Scottish Government's National Performance Framework Indicator for improving the condition of protected nature sites.
- Our work, in partnership with others, has contributed to an increase in the number of adults making one or more visits to the outdoors a week. The number grew to 48%, compared with 46% in 2013, and 44% in 2006 (the baseline year). This links to our on-going work on the 'Natural Health Service' which aims to improve health outcomes and reduce inequalities through safe local access to nature.
- The Green Infrastructure Strategic Intervention programme opened on 18th January. We are leading this major project, which will use £15m of European funding to improve Scotland's urban environment. The scheme will increase and enhance green space in our towns and cities, especially close to areas of deprivation.
- In support of the updated Wild Deer: National Approach, we worked closely with the 44 members of the Association of Deer Management Groups. We provided nearly £150,000 to 34 groups to help develop effective deer

management plans contributing to the sustainable management of Scotland's wild deer population.

- We contributed to the Year of Food & Drink through our Scotland's Natural Larder campaign. This promotes opportunities for healthy, natural food to reconnect people with the land and support local businesses.
- Working closely with Forest Enterprise Scotland, we supported over 50 projects through the Peatland Action Project, raising awareness of techniques and opportunities for the future, and restoring over 3,800ha of peatland. When added to the previous year's achievements, a total of almost 9,250ha has been restored under this programme, contributing to the restoration of an important habitat and helping to mitigate climate change.
- We worked with Scottish Government to prepare guidance on wild land, in support of Scottish Planning Policy. We received the Scottish Renewables' Green Energy Award for the joint SNH-SEPA Hydro Construction Best Practice Guidelines. We continue to invest considerable resources to enable development that supports Scottish Government strategies and carbon reduction targets.
- We have been an active supporter of the Scottish Government's Youth Strategy, providing modern apprenticeships, graduate placements and longer term student placements. Those joining us have made a valuable contribution to our work; one of our apprentices won the '2015 Apprentice of the Year' award from Skills Development Scotland.
- We made 4.2% in efficiency gains during 2015/16, against the Scottish Government's target of 3%, allowing us to maximise our investment in the natural heritage. We achieved this through a continued programme of shared service initiatives with other public bodies and through further reduction of our office estate, which has decreased in size by 40% since 2011.

Highlights from 2016/17

Here are a few examples of our achievements over the past year:

- We supported the rural economy through our role in delivering 30% (386) of all the contracts under Scotland's Rural Development Programme (SRDP's) Agri- Environment Climate Scheme (AECS) delivering £22m of new investment.
- We led the Scottish Biodiversity Strategy (SBS), delivering priority projects, as well as coordinating actions by others. The majority of projects are on track, as reported in our first annual progress review on 'Scotland's Biodiversity – a Route Map to 2020'.
- We've invested £0.4m in restoring a further 400ha of peatlands, contributing both to Scottish Biodiversity Strategy (SBS) habitat restoration goals, and climate change targets. We also launched a major new phase of our award winning Peatland ACTION programme, to restore a further 8000ha, backed by

additional funding of £8m for 2017/18 as part of The Scottish Government's Climate Change Plan.

- We launched our £20m European Union Regional Development Fund (ERDF) Green Infrastructure (GI) Strategic Intervention, increasing and enhancing green space in our towns and cities, especially close to areas of deprivation. We have funded seven projects from the first two rounds of applications.
- We helped to develop a network of Marine Protected Areas (MPA) to meet the 2020 Biodiversity Challenge.
- We worked with the Scottish Environment Protection Agency (SEPA) to improve access to environmental information and digital services, winning two awards for excellence for the Scottish Environment Web (SEWeb).
- We led the development of the National Walking and Cycling Network (NWCN) by funding feasibility and delivery projects. We have funded four strategic routes projects as part of Central Scotland Green Network (CSGN)
- 'Our Natural Health Service' has established four NHS Greenspace for Health Partnerships, to promote the benefits of exercise and make the best use of green spaces.
- We're working with 37 schools in low Scottish Index of Multiple Deprivation (SIMD) areas to improve children's access to and use of local greenspace.
- We've encouraged more visits (both virtual and actual) to our National Nature Reserves by providing opportunities for visitors and strengthening our on-line profile.
- We published our Review of Deer Management to investigate the effectiveness of deer management in Scotland. The Association of Deer Management Groups (ADMG) and its members, John Hutton Institute (JHI) and other partners contributed to the extensive review.
- We completed major office reconfigurations at Newton Stewart, Edinburgh and Inverness, reducing costs and carbon footprints and allowing us to further share office space with partners, and helping to reduce their costs too. This has contributed to delivering nearly £1.8m of efficiency savings, meeting our 3% target.
- We continued to reduce our carbon emissions with an 8% reduction in 2016/17 over the previous year.

These examples illustrate that it's essential for us to work with a wide variety of individuals, businesses, the voluntary sector and other public sector bodies to achieve results for Scotland's nature and people.

Together, we can ensure that our magnificent natural heritage thrives, strengthening our economy with clean and healthy natural resources, and improving mental and

physical health with the benefits of nature. In doing so, we're supporting the Scottish Government's purpose of creating a more successful country, with

b) Looking ahead, what do you think will be the main challenges over the next three years?

There are a number of areas that are seen as particularly challenging over the next three years and are being addressed through the SNH Corporate Plan and subsequent annual Business Plans

- changes in how land and water is managed and used
 - Uplands
 - Seas
- conflicts between wildlife and land use
- climate change
- the disconnect between people and nature
- Post Brexit land manager support uncertainties
- Continuation and expansion of green and blue infrastructure
- Clearly articulating the multiple benefits nature provides to people

6. Section 6: Monitoring

a) What follow-up actions or monitoring have you undertaken to assess the impacts of the actions you have taken? How have you measured this? If you do not carry out any monitoring activities, please explain why.

We have an extensive monitoring programme which provides information on the outcomes of our Corporate Plan and annual business plans. These are summarised in the Annual Reports SNH submits to Scottish Government.

We also judge our success by how well we are working for Scotland's people and nature. Our priorities are also informed by the state of nature as well as economic and social factors. We collate, analyse and report on a whole host of biodiversity measures and are working to provide much of this data as 'open access for others to utilise.

Statutory reporting by SNH under International, European and domestic legislation provides a wide variety of measures to assess the progress being made across a wide variety of species, habitats and other measures including climate change provide a comprehensive review of progress and are used to inform future priorities and projects.

b) Does your monitoring show any significant trends of highlight any areas of concern?

There are a number of areas where greater collaborative working is required if Scotland is to achieve the ambitions set out in the Scottish Biodiversity Strategy: *2020 Challenge for Scotland's Biodiversity*. Through the reporting on delivery of the strategy which SNH leads a number of areas have been highlighted:

People's attitudes to biodiversity remain low with only 25% of the Scottish population identifying biodiversity as relevant to their lives.

Involvement in biodiversity conservation remains static at 6% of all volunteers undertaking environmental related activities

Habitats requiring further conservation action include

- Uplands (particularly peatland and healthland)
- Semi-natural grassland
- Native woodland

Species requiring further conservation action

- Waders – continued decline since 1996 and now at the lowest on record
- Breeding seabirds – decline in abundance and productivity since 1986, particularly Arctic tern and Blacklegged kittiwake
- Vascular plants – diversity has decreased between 1998-2007 especially for plants associated with acid grassland; broadleaved, mixed and yew woodland; coniferous woodland; bog; improved grassland; fen; marsh and swamp; and neutral grassland.
- Specialist butterflies – declines have been recorded since 1979 with significant decreases in abundance of Small pearl bordered fritillary; Large heath and Grayling.

c) Have you added your data to the National Biodiversity Network Atlas

As a public body, SNH is committed to high standards of openness and transparency. Part of this is about making the information and data that we gather and use readily available to all.

We have a comprehensive programme of work to ensure that all the data we collect, collate, analyse and that is collected through our provision of grants is uploaded to the NBN Atlas Scotland. SNH is a partner in the NBN Atlas Scotland.

7. Section 7: Contribution to targets

a. Use the following tables to indicate the biodiversity targets to which your organisation has contributed. You may wish to insert additional targets from the [2020 challenge for Scotland's biodiversity](#) (the Biodiversity Strategy), the [Six Big Steps for Nature](#) or the [Aichi Targets](#).

Targets/key steps from Chapter 1 (Healthy ecosystems) of the "2020 Challenge for Scotland's Biodiversity"	Contribution to key step?	Justification
(1.1) Encourage and support ecosystem restoration and management, especially in catchments that have experienced the greatest degradation	✓	Peatland Action – supporting 10,000ha of peatland restoration with £5m of funding. https://www.nature.scot/climate-change/taking-action/carbon-management/restoring-scotlands-peatlands/peatland-action-201718
(1.2) Use assessments of ecosystem health at a catchment level to determine what needs to be done	✓	Ecosystem health indicators have been used to help identify action required at a catchment scale. https://www.nature.scot/sites/default/files/2017-06/Ecosystem%20approach%20case%20study%20-%20Spey%20catchment%20management%20-%20August%202016.pdf
(1.3) Government and public bodies, including SNH, SEPA and FCS, will work together towards a shared agenda for action to restore ecosystem health at a catchment-scale across Scotland	✓	The Route Map to 2020 was developed to identify collaborative action required across many organisations to help deliver the Scottish Biodiversity Strategy: <i>2020 Challenge for Scotland's Biodiversity</i> . Three priority projects for peatland, woodland and freshwater restoration have been set up and involve SNH, FCS and SEPA as well as many other partners and land managers. https://www.nature.scot/sites/default/files/2017-06/Ecosystem%20approach%20case%20study%20-%20Spey%20catchment%20management%20-%20August%202016.pdf
(1.4) Establish plans and decisions	✓	SNH has applied the ecosystem approach across a number of areas of work

<p>about land use based on an understanding of ecosystems. Take full account of land use impacts on the ecosystems services that underpin social, economic and environmental health</p>		<p>and has developed a series of case studies to demonstrate this. https://www.nature.scot/scotlands-biodiversity/value-ecosystem-approach/ecosystem-approach-case-studies</p>
<p>Targets/key steps from Chapter 3 (Biodiversity, health and quality of life) of the "2020 Challenge for Scotland's Biodiversity"</p>	<p>Contribution to key step?</p>	<p>Justification</p>
<p>(3.1) Provide opportunities for everyone to experience and enjoy nature regularly, with a particular focus on disadvantaged groups</p>	<p>✓</p>	<p>SNH provides many opportunities, both directly and through our grant programme for a wide variety of people to enjoy nature. This collection of work offers a chance for people to get active outdoors, places to visit (including National Nature Reserves), opportunities to volunteer and events to attend in Scotland's outdoors. https://www.nature.scot/enjoying-outdoors</p>
<p>(3.2) Support local authorities and communities to improve local environments and enhance biodiversity using green space and green networks, allowing nature to flourish and so enhancing the quality of life for people who live there</p>	<p>✓</p>	<p>SNH is working with a number of partners to enable 100 schools within the most deprived areas of Scotland to access greenspace for learning and outdoor activities. https://www.nature.scot/professional-advice/education/learning-local-greenspace SNH is leading the Green Infrastructure Strategic Interventions programme which has secured £37.5m to invest in urban greenspace and water to provide environmental and quality of life benefits; focusing on woodlands, road verges, community growing spaces, rivers, streams and wetlands. https://www.greeninfrastructurescotland.scot/about-us</p>
<p>(3.3) Build on good practice being developed by the National Health Service (NHS) and others to help encourage greenspace, green</p>	<p>✓</p>	<p>SNH is working in partnership with the National Health Service and Forestry Commission Scotland to promote better health and quality of life for Scotland's people by encouraging more physical activity outdoors and more contact with nature. A large focus of the project has been on the land around</p>

<p>exercise and social prescribing initiatives that will improve health and wellbeing through connecting people with nature</p>		<p>NHS hospitals and care centres. Providing a whole range of information and demonstrations of the benefits nature can bring to patients, staff and visitors. https://www.nature.scot/professional-advice/contributing-healthier-scotland/our-natural-health-service</p>
<p>(3.4) Increase access to nature within and close to schools, and support teachers in developing the role of outdoor learning across the Curriculum for Excellence</p>	<p>✓</p>	<p>SNH is working with a number of partners to enable 100 schools within the most deprived areas of Scotland to access greenspace for learning and outdoor activities. https://www.nature.scot/professional-advice/education/learning-local-greenspace</p> <p>SNH provide £600k to support young people to have regular, frequent, structured and progressive outdoor learning experiences. The projects must be focused on young people (3-26 years) from the most deprived areas and disadvantaged backgrounds. https://www.nature.scot/professional-advice/funding/outdoor-learning-nature-fund</p> <p>SNH also offer National Park travel grants to schools https://www.nature.scot/professional-advice/education/grants-outdoor-learning-visits</p> <p>SNH provides many resources for teachers relevant to all levels of the Curriculum for excellence as well as supporting teacher professional development https://www.nature.scot/professional-advice/education</p>
<p>(3.5) Encourage public organisations and businesses to review their responsibilities and action for biodiversity, and recognise that increasing their positive contribution to nature and landscapes can help meet their corporate priorities and performance</p>	<p>✓</p>	<p>SNH provides guidance and information to organisations regarding their biodiversity duty https://www.nature.scot/scotlands-biodiversity/biodiversity-duty/biodiversity-duty-reporting</p> <p>There is also considerable information regarding how transport and other infrastructure industries can mitigate their impacts and contribute to biodiversity https://www.nature.scot/scotlands-biodiversity/biodiversity-duty/biodiversity-duty-guidance-and-advice/transport-and-other-infrastructure</p> <p>We have commissioned a wide array of studies to help demonstrate the value nature brings to society and the economy. Helping businesses identify where they invest in biodiversity to help improve corporate performance and priorities. https://www.nature.scot/climate-change/climate-change-impacts-</p>

Targets/key steps from Chapter 4 (Wildlife, habitats and protected places) of the "2020 Challenge for Scotland's Biodiversity"	Contribution to key step?	Justification
(4.1) Ensure that the management of protected places for nature also provides wider public benefits	✓	<p>scotland/impacts-people-and-our-economy</p> <p>SNH provides advice and information which articulates the added value protected areas bring to the Scottish economy and Scotland's people. A few examples are provided: Benefits from nature https://www.nature.scot/scotlands-biodiversity/ecosystem-approach/ecosystem-services-natures-benefits Woodland https://www.nature.scot/professional-advice/land-and-sea-management/managing-land/forests-and-woodlands/woodland-benefits Peatlands https://www.nature.scot/climate-change/taking-action/carbon-management/restoring-scotlands-peatlands/benefits-healthy-peatlands</p>
(4.3) Integrate protected areas policy with action for wider habitats to combat fragmentation and restore key habitats	✓	<p>SNH leads a Statutory Bodies Protected Areas Group to ensure that resources are targeted and action coordinated on designated sites. The group have attained the 80% features in favourable condition target set by Scottish Government. Work is now underway to develop the work of the group further, including the wider role of protected areas and the membership of the group. https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/scottish-biodiversity-strategy-working-groups</p> <p>Restoration of priority habitats in the Route Map to 2020 (lead by SNH) also ensures coordinated action across peatland, native woodland and freshwater habitats. http://www.gov.scot/Resource/0048/00480289.pdf</p>
(4.5) Involve many more people than at present in this work and improve understanding of the poorly known	✓	<p>SNH commission specific survey data and research to support species and habitat conservation efforts. This work involves professionals and specialist societies. Through grant funding, including from SNH, many organisations are able to galvanise volunteer support and develop their skills to collect</p>

elements of nature		<p>quality data that provides greater understanding of the nature in Scotland. Specific activities such as support through SNH grants enable many more people to engage with nature and contribute to our understanding. The Conservation Trust is one example of an organisation support by SNH to deliver a citizen science and volunteer opportunities programme</p> <p>http://www.tcv.org.uk/scotland/discover/citizen-science</p>
Targets/key steps from Chapter 5 (Land and freshwater management) of the "2020 Challenge for Scotland's Biodiversity"	Contribution to key step?	Justification
<p>(5.1) Promote an ecosystem approach to land management that fosters sustainable use of natural resources and puts biodiversity at the heart of land-use planning and decision-making</p>	<p>✓</p>	<p>SNH has developed various resources and delivered events to help land managers, communities and NGOs develop an ecosystem approach to their work. https://www.nature.scot/scotlands-biodiversity/value-ecosystem-approach/how-apply-ecosystem-approach</p> <p>An ecosystem approach training course has been developed and delivered for many SNH staff to ensure we embed this approach across much of our work.</p> <p>SNH runs a Sharing Good Practice series each year and many of these events focus on sustainable land and water management such as:</p> <ul style="list-style-type: none"> • An Ecosystem Approach in Action – working with nature for multiple-benefits Scottish wildcats – development, forestry and SRDP • Identifying, planning and undertaking river restoration projects • Landscape partnerships • Lowland deer management planning • Deer management planning • Biodiversity – design with nature • Joining up nature in practice – making ecological coherence a reality

		<ul style="list-style-type: none"> • Spatial planning for on-shore wind energy
(5.2) Ensure that measures taken forward under the Common Agricultural Policy encourage land managers to develop and retain the diversity of wildlife habitats and landscape features	✓	<p>SNH provides advice and guidance to applicants for the Agri-Environment Climate Scheme under the Scottish Rural Development Programme. Teams of staff in four locations have been established to provide specialist advice and respond to queries and questions from land managers, as well as undertake formal assessments of applications to ensure the £344m scheme is delivered. Working closely with Scottish Government colleagues, SNH contributes to the development of policies and prescriptions to enable farmers, land managers and foresters to deliver conservation action for targeted species and habitats across Scotland.</p> <p>https://www.nature.scot/professional-advice/funding/scottish-rural-development-programme</p>
(5.3) Support 'High Nature Value' farming and forestry	✓	<p>SNH has worked alongside Scottish Government and other partners to provide policy support, advice and development of a suitable indicator for high nature value farming. This system of farming provides many benefits to biodiversity conservation which support delivery of the Scottish Biodiversity Strategy, which SNH is leading.</p> <p>http://www.knowledgescotland.org/briefings.php?id=258</p>
(5.4) Put in place the management necessary to bring Scotland's protected areas into favourable condition and improve the ecological status of water bodies	✓	<p>SNH leads a Statutory Bodies Protected Areas Group to ensure that resources are targeted and action coordinated on designated sites. The group have attained the 80% features in favourable condition target set by Scottish Government. Work is now underway to develop the work of the group further, including the wider role of protected areas and the membership of the group. https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/scottish-biodiversity-strategy-working-groups</p> <p>Restoration of priority habitats in the Route Map to 2020 (lead by SNH) also ensures coordinated action across freshwater habitats.</p> <p>http://www.gov.scot/Resource/0048/00480289.pdf SNH is working in collaboration with Scottish Environment Protection Agency (SEPA) to coordinate action in priority catchment to ensure both water quality and</p>

		<p>biodiversity benefits are realised. https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/safeguards-beyond-protected-areas/water-framework-directive</p>
<p>(5.5) Ensure that biodiversity and ecosystem objectives are fully integrated into flood risk management plans, and restore wetland habitats and woodlands to provide sustainable flood management</p>	<p>✓</p>	<p>SNH is supporting SEPA and Local Authorities in implementing natural flood management as a mechanism for reducing flood risk and flood damage. This work enables biodiversity to play a part in protecting people as well as improving the conservation value of riparian and up-stream habitats such as wetland, wet woodland and other riparian habitats. https://www.nature.scot/professional-advice/land-and-sea-management/managing-freshwater/flood-management The Eddleston Water project provides a good example of this work in practice as it aims to reduce flood risk and restore the Eddleston Water for the benefit of the local community and wildlife http://www.tweedforum.org/projects/current-projects/eddeleston</p> <p>SNH has a formal role under the Flood Risk Management (Scotland) Act 2009 through:</p> <ul style="list-style-type: none"> ▪ Provision of advice to SEPA and local authorities on flood protection schemes and flood risk management plans ▪ provide advice to national and local advisory groups ▪ advise on the impact of flood protection schemes on designated sites and species of national and international importance ▪ promote working with nature to manage flood risk
<p>(5.6) Restore and extend natural habitats as a means of building reserves of carbon and to help mitigate climate change</p>	<p>✓</p>	<p>SNH is leading the Peatland ACTION project, which has restored more than 10,000 ha of peatland since 2012. This restoration programme secures the carbon already stored in peatlands and ensures they can actively sequester more carbon in the future. https://www.nature.scot/climate-change/taking-action/carbon-management/restoring-scotlands-peatlands/benefits-healthy-peatlands</p> <p>This work supports the maintenance and restoration of these unique habitats supporting special groups of birds, plants, fungi, invertebrates and</p>

		<p>micro-organisms, some not found together anywhere else in the world, with some birds nesting at the highest densities yet recorded.</p> <p>https://www.nature.scot/sites/default/files/2017-07/A1697542%20-%20150730%20-%20peatland_plan.pdf</p>
(5.7) Provide clear advice to land and water managers on best practice	✓	<p>SNH provides a range of professional advice to land and water managers on topics ranging from planning and development to land and sea management, and from education to funding for natural heritage projects</p> <p>https://www.nature.scot/professional-advice</p> <p>We also run a series of Sharing Good Practice Events which is a unique programme of events for people from a wide variety of sectors, including land managers, local authorities, health, business, education, voluntary and government. These events provide an opportunity for practitioners with differing levels of experience to network, learn from experts, influence future policy, share ideas and gain new insights and inspiration.</p> <p>https://www.nature.scot/enjoying-outdoors/events</p>
Targets/key steps from Chapter 6 (Marine and coastal) of the "2020 Challenge for Scotland's Biodiversity"	Contribution to key step?	Justification
(6.4) Achieve good environmental status for Scottish seas	✓	<p>SNH supports the sustainable use of our coasts and seas. We provide advice to steer development to less sensitive locations and minimise negative effects on habitats, species and landscapes. Scotland has a marine planning system, which covers the use of Scottish waters at the international, UK, Scottish and regional levels. SNH provide advice to help plan and steer marine uses and activities (oil and gas development and on-shore processes) away from sensitive locations. Among other things, we hope it will minimise conflicts of interest over marine uses and activities. Our main focus for advice is in relation to fishing, marine aquaculture industry and seaweed harvesting. Our role is to inform the location of marine renewables schemes, advise on</p>

	<p>consent applications, conduct research on interactions, and provide guidance. We also advise on how to avoid marine pollution and construction impacts from coastal development. https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas</p> <p>SNH provides guidance and technical advice to Marine Scotland on Nature Conservation Marine Protected Areas (NCMPAs). Covering more than 10% of our seas, the 30 NCMPAs will help to deliver a healthy, productive and biologically diverse marine environment for Scotland. The NCMPAs give much-needed spatial protection to a wide range of marine wildlife, habitats and geology not previously covered by the network. https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-areas/national-designations/marine-protected-areas/scotlands-marine-protected</p>
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For further information please contact Biodiversity@snh.gov.uk