



Scottish Government
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Appendix 1 -LLTNPA BioDutyRep Agenda Item 11

National Park Authority Board Meeting

11 March 2024

Paper for information

BIODIVERSITY DUTY REPORT: LOCH LOMOND & THE TROSSACHS NATIONAL PARK AUTHORITY

Report Outline

Under the Nature Conservation (Scotland) Act (2004), all public bodies in Scotland are required to further the conservation of biodiversity when carrying out their responsibilities. The Wildlife and Natural Environment (Scotland) Act (2011) requires public bodies in Scotland to provide a publicly available report, every three years, on the actions which they have taken to meet this biodiversity duty. This report fulfils this duty for the Loch Lomond & The Trossachs National Park Authority for the period 2021-23.

- Section 1: Introduction about Loch Lomond & The Trossachs National Park Authority
- Section 2: Actions to protect and enhance biodiversity
- Section 3: Mainstreaming biodiversity
- Section 4: Nature-based solutions, climate change and biodiversity
- Section 5: Public engagement and workforce development
- Section 6: Research and monitoring
- Section 7: Biodiversity highlights and challenges

SECTION 1: INTRODUCTORY INFORMATION ABOUT YOUR PUBLIC BODY

Please describe your organisation's role and purpose, including any particular environmental responsibilities

<p>The National Park Authority</p>	<p>As a National Park Authority, we are charged with safeguarding an area of outstanding and diverse landscape and habitats. Our role as defined by The National Parks (Scotland) Act 2000 is to co-ordinate the delivery of the four statutory aims to secure a sustainable future for this very special part of Scotland. These are to:</p> <ul style="list-style-type: none"> • Conserve and enhance the natural and cultural heritage of the area • Promote sustainable use of the natural resources of the area • Promote understanding and enjoyment (including enjoyment in the form of recreation) of the special qualities of the area by the public • Promote sustainable social and economic development of the area's communities. <p>This report shows how we are fulfilling our biodiversity duty and embedding nature conservation across all our organisational services (Engagement and Innovation, Environment and Visitor Services, Corporate Services, and Place) with innovative use of our resources to deliver services to the highest standard. As a lead organisation with a primary role in delivering conservation benefits for this area we are committed to embedding nature throughout our functions and steering other organisations to also deliver through their plans and projects. Across all our services, we provide key direction, leadership and co-ordination of this effort with successes in collaborative working underpinning many of the important conservation initiatives in the National Park.</p>
<p>Leadership on Biodiversity</p>	<p>Loch Lomond & The Trossachs National Park is a key location in Scotland for nature conservation, providing ecosystems services of vital importance to the nation. As well as supplying most of Glasgow's drinking water and a considerable amount of hydroelectricity, our lochs and rivers are home to an impressively diverse range of native fish from the celebrated salmon to the archaic jawless lamprey. Loch Lomond on its own has the most diverse native fish population of any freshwater body in Scotland. Our inspiring and much-loved mountains are the hunting grounds providing the habitat for golden and white-tailed eagles. Our peat bogs lock up 20 million tonnes of carbon that would otherwise add to climate change. Likewise, our woodlands and forests store 2.5 million tonnes of carbon, as well as being a major source of timber and a huge attraction for visitors. They are also some of the most ecologically diverse and fascinating habitats on earth with a rich array of mosses and other plants.</p>



In December 2020 the National Park Authority signed the Edinburgh Declaration with the unanimous support of our Board. We used this opportunity to commit to a reinvigorated programme for biodiversity called Future Nature. Over the last three years we have developed Future Nature, co-creating a Future Nature Route Map and delivery plan with over thirty other organisations who will be key to successful delivery of ambitious, landscape scale nature restoration across the National Park.

The National Park Authority has led the development and creation of this ambitious approach to achieve a shared vision for Nature Restoration in the National Park:

Loch Lomond & The Trossachs National Park is a resilient nature-rich National Park, where abundant wildlife and a healthy natural environment provide a wealth of benefits through an extensive, well-connected living network.

Full details of the Route Map, delivery plans and monitoring structures are all laid out on our [website](#) and in the [full Route Map Document](#). In this report we will aim to pick out some of the highlights of the key elements, plans and achievements to date.

The Future Nature approach is a core element of our new [National Park Partnership Plan](#) which was approved by our board in December 2023. This new National Park Partnership Plan 2024-29, under the tag line “Here, Now, All of Us” puts front and centre the crucial role of the National Park in delivering nature restoration at scale and sets an ambitious vision that by 2045 the National Park is a thriving place that is nature positive and carbon negative.



SECTION 2: ACTIONS TO PROTECT AND ENHANCE BIODIVERSITY

Please describe and explain any actions that your organisation has undertaken alone or as part of a partnership to benefit biodiversity directly, to tackle the main drivers of biodiversity loss, or to achieve wider outcomes for nature and people

<p>Delivering Action for Nature</p>	<p>Through our Future Nature Route Map and delivery plan we are looking to address the wider strategic issues and drivers of biodiversity loss whilst delivering an urgent programme of Action for Nature. The delivery plan is therefore split into three pathways:</p> <div data-bbox="448 542 1232 973" style="background-color: #e6f2e6; padding: 10px; margin: 10px 0;"> <p>PATHWAY 1: ACT Action for Nature: Practical Delivery</p> <p>PATHWAY 2: FACILITATE Mainstreaming Nature-Friendly Processes & Practice</p> <p>PATHWAY 3: INSPIRE Engaging and Inspiring Action for Nature</p> </div> <p>In this section of the Biodiversity Duty Report we will describe the key focus of pathway 1 and highlight key achievements in delivering Action for Nature. In later sections we will address the work to Facilitate and Inspire.</p> <p>The Action for Nature Workstream is broken down into three key areas:</p> <p>Address Key Threats: Herbivore pressure, Invasive Non-Native Species (INNS), Water Quality and Climate Change</p> <p>Manage Key Habitats: Woodland expansion, Peatland Restoration, and River and Wetland Restoration</p> <p>Protect and Connect: Protecting and restoring key species and sites and delivering landscape scale restoration</p>
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	<p>Below we highlight key achievements and plans for next steps.</p>
Herbivore Pressure	<p>The National Park Authority engages with all collaborative deer management groups in the National Park (five traditional upland deer management groups, one for the Loch Lomond Islands, one Deer Working Forum in Cowal, and one Land Management Forum in East Loch Lomond), and have offered our support where required.</p> <p>The National Park Authority continue to engage and train land managers in understanding the impacts of herbivores (both wild and domestic) on upland and woodland sites and have funded several projects that will help to reduce herbivore impacts on designated habitats, including Ben Vorlich Site of Special Scientific Interest (SSSI) and Conic Hill SSSI. We delivered a woodland Habitat Impact Assessment online training event for land managers within the National Park. Further in-person upland and woodland Habitat Impact Assessment training events are scheduled for early 2024, in collaboration with NatureScot. These will help land managers make informed decisions about herbivore density and management.</p> <p>The National Park Authority has been working with the Deer Management Strategic Board. As part of the Deer Management Strategic Board's Operational Delivery Workstream, the National Park has been identified as a priority area and the National Park Authority are in the process of drafting an Action Plan.</p> <p>In support of this work and to help ensure strong connections with wild deer management across Scotland, we participated in and supported the initiation of the Common Ground Forum on Sustainable Upland Deer Management, which was launched in October 2023.</p>
Invasive Non-Native Species	<p>The National Park Authority has continued to deliver a strategic programme to control key riparian invasive non-native plant species (INNS) at a catchment scale, working in partnership with land managers, partner organisations and communities. Ongoing monitoring and control of these plants at locations within the upper catchments remains a high priority along with locations within protected sites such as SSSIs and Special Areas of Conservation (SACs). Over the last three years annual monitoring and control of sites within the River Fillan, River Dochart, and River Earn catchments has continued with a total of 150 sites surveyed in 2023. Of these sites complete eradication has now been achieved at 54% of locations with large decreases recorded at most of the other sites.</p> <p>In other areas of the park the National Park Authority has continued to provide ongoing support and funding to the Argyll and Loch Lomond Fisheries Trusts and the Forth Rivers Trusts to cover the other catchments and develop and deliver a comprehensive programme of control for riparian INNS across the National Park. The National Park Authority have been working with the Forth Rivers Trust to complete a programme of monitoring and control throughout the entire River Teith</p>




	<p>and River Forth catchments as well as working with the Loch Lomond Fisheries Trust to complete a programme throughout the Blane Water, Endrick Water, Fruin Water and Loch Lomond catchments. The National Park Authority has also worked with Argyll Fisheries Trust to expand upon the monitoring and control in Cowal with a focus on the River Goil and River Eachaig. This allowed for a further 485 locations to be surveyed and management carried out where required. This active restoration of riverside, lochside, and freshwater habitats has improved their connectivity and provided important ecological linkages to the surrounding wider landscape of the National Park. Removal of riparian invasive non native plant species has helped to stabilise riverbanks against erosion, reduce the effects of diffuse pollution, improve water quality, and provide better habitats for wildlife.</p> <p>Link here for further information.</p> <p>The National Park Authority also continue to work in partnership with Saving Scotland's Red Squirrels to reduce the number of grey squirrels in the National Park and many areas of the National Park are now grey squirrel free. We have also continued to work in partnership with Forestry and Land Scotland on the Trossachs Water Vole Project. This includes the control of non-native North American mink and monitoring expansion of water voles from a reintroduced population on the Upper Forth catchment as they have colonised large areas of suitable habitat where mink predation is kept low.</p>
<p>Woodland Expansion</p>	<p>Our Trees and Woodland Strategy (TWS) has been used to good effect to guide the location, type, and nature of woodland expansion. The private sector has used the TWS and its associated Landscape Capacity Toolkit to develop good quality woodland creation proposals. The TWS has allowed early pre-grant application discussions with forestry agents and landowners, resulting in a high number of good quality applications for largely native woodland creation being submitted and which fit well with the National Park.</p> <p>A delivery plan for the TWS is currently being developed. The delivery plan seeks to establish via targeted interactions the timing and location of new and forthcoming revisions of Long-Term Forest Plans, and woodland creation proposals. This will allow the National Park Authority to ascertain and understand opportunities for delivering woodland expansion and woodland management, to the betterment of the National Park's biodiversity and net zero targets.</p> <p>Under the current TWS, the following woodland expansion areas have been delivered in the last three years (note that figures are for financial, as opposed to calendar, years):</p> <p>2022-23: 129.49ha</p>





	<p>2021-22: 25.04ha 2020-21: 174.21ha Total: 328.74ha</p> <p>The rate of woodland creation has been slower than desired in this 3-year period but work to deliver significant additional woodland creation has been undertaken in this period and should lead to large areas of further new woodland in 2024 and beyond.</p> <p>The National Park Authority runs its own Tree Planting Grant Scheme which delivers small-scale tree planting projects, typically amongst farmers and rivers/fisheries trusts. These tend to be riparian and widely spaced, planted as individual trees rather than woodland areas. Over the last three years 19 tree planting projects have been delivered through the scheme with 6,100 trees planted.</p>
Peatland Restoration	<p>The National Park Authority is one of the delivery partners for the national Peatland ACTION programme, which uses Scottish Government funding to undertake peatland restoration across Scotland. Within the National Park we have been working closely with land managers to target and improve areas of deep, broken peat. Between April 2020 and March 2023, 1,034ha of peatland was put on the road to recovery, and we are aiming to have completed a further 505ha by the end of March 2024</p>



	 <p>In addition to the larger scale Peatland ACTION works, we have also been undertaking scrub clearance and dam installation on two of our lowland raised bog SSSIs to improve their condition. This work will be continued over the coming years.</p> <p>National Park Authority peatland restoration work featured in the Scotsman - https://www.scotsman.com/news/environment/ramping-up-peatland-restoration-in-loch-lomond-and-the-trossachs-scotlands-original-national-park-4172249</p>
Water Quality and our Water Network	<p>The National Park Authority has provided ongoing support and funding to the three Rivers Trusts operating across the National Park through which we have delivered a range of wetland habitat improvements, in addition to the INNS control detailed above. Highlights include working with The Lochgoil Community Trust, Argyll Fisheries Trust and The River Goil Angling Club to deliver a programme of habitat improvements, including planting hundreds of native trees to reduce bank erosion, increase biodiversity and provide shade to help regulate river temperatures. The riverbank was further secured by installing wooden stakes and compacted tree branches which absorb silt and energy. The National Park Authority has also worked closely with the Forth Rivers on the Upper Teith SAC and River Catchment delivery of river restoration projects which have seen installation of large woody debris in the River Larig and a follow-on project to create new wetland and enhance floodplain functioning in the wider landscape at Inverlochlarig.</p>



	<p>Amelia Heath from Forth Rivers Trust, talking about partnership working - https://www.youtube.com/watch?v=AjZpcXrn51M</p>
<p>Protect and Connect</p>	<p>We will take an approach both to protect and enhance our key species and designated sites whilst working through landscape scale partnerships to focus on connectivity across the wider landscape. Below is a summary of work on some key species and sites – further details of our landscape scale habitat approach is contained in section seven.</p> <p><u>Key Species</u></p> <p>Beavers</p> <p>We have supported the Royal Society for the Protection of Birds (RSPB) in undertaking consultation exercises and stakeholder engagement for two translocations of Eurasian beavers released at RSPB Loch Lomond in 2023. This has helped to consolidate the expansion of beavers into the Loch Lomond catchment, following sightings of individual beavers in 2020. The upper Forth, Earn and Fillan-Dochart catchments have been home to beavers recolonising naturally since 2012 and we have continued to collect records of their presence.</p> <div data-bbox="450 916 1128 1369"></div> <div data-bbox="1144 916 1823 1369"></div>



Waders

The National Park Authority continue to monitor the breeding wader population in the Glen Dochart Wader Project area in partnership with the landowners and RSPB. Surveys were carried out in 2021 and 2023.

Between 2021 and 2023, the National Park Authority assisted three land managers within the project area to enter the Agri-Environment Climate Scheme (AECS) agreements for wading birds, by paying for the consultancy fees associated with their AECS applications. Two of the AECS applications have been approved, and one is still awaiting a decision from NatureScot. The AECS consultant also provided several additional wader habitat management recommendations that were not available through AECS. The National Park Authority have provided funding to the land managers to carry out these recommendations.

The National Park Authority and Loch Lomond and Trossachs Countryside Trust are investigating the option to expand the Glen Dochart Wader Project area to include several further land holdings where managers are keen to undertake habitat management for waders. Further work on this will begin in 2024.

Black Grouse

The National Park Authority continue to survey black grouse leks at several key sites in the National Park. This contributes to the Central Black Grouse Study Group and produces trend data that is used to monitor the success of habitat management practices.

The National Park Authority have carried out habitat management at two key lek sites in the National Park to improve the conditions for lekking grouse. We have also ensured that new fences in black grouse areas, that have been funded by the National Park Authority, have the appropriate fence markers attached to deter grouse fence collisions.

Designated Sites

One of the indicators of success in the National Park Partnership Plan, is the number of designated sites in favourable condition. In 2021, the National Park Authority carried out a review of SSSIs in unfavourable condition in the National Park to help prioritise both the National Park Authority's and NatureScot's resources to effectively and efficiently improve the condition of the designated sites. Between 2021 and 2023 the National Park Authority completed projects in nine



	<p>designated sites. This has included projects on INNS removal at Blairbeich Bog SSSI, Inchmoan SSSI, Rowardennan Woodlands SSSI, The Great Trossachs Forest NNR, and Loch Lomond Woods SAC, and improved herbivore management to tackle overgrazing at Ben Vorlich SSSI and Conic Hill SSSI. Further habitat work has also been undertaken at Ross Park SSSI.</p>
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SECTION 3: MAINSTREAMING BIODIVERSITY

Please outline any steps your organisation has taken to incorporate measures to protect biodiversity into its wider policies, plans or strategies. This should include decision-making structures and staff and organisational roles and responsibilities.

<p>Mainstreaming Biodiversity</p>	<p>Pathway 2 of Future Nature is focused on mainstreaming nature friendly process and practices. It aims to drive and support effective delivery by creating the right policy, funding, and partnership structures. As an organisation, this starts with embedding our Future Nature strategy across our work, particular in the management of our own estate, the delivery of our ranger service and across our planning, engagement, education, and communications work. This is reflected in the new draft National Park Partnership Plan in which Future Nature has been a major pillar, guiding the long-term objectives of ending biodiversity loss by 2035 and restoring nature across the National Park by 2040.</p> <p>However, it also includes work with a wide range of partners across the National Park and the country to develop the funding, policy, and partnership structures required. There are three main areas of focus for us over the last three years which we will look to build on in the coming period.</p>
<p>Nature Positive Development</p>	<p>The National Park Authority Nature and Land Use team have provided advice to the development management team on approximately 291 planning cases between 2021 and 2023. This figure includes pre-application consultations and advice on the discharge of ecology conditions for consented developments. This input has secured the implementation of mitigation measures to avoid or minimise impacts on protected species and priority habitats (e.g. species protection plans, construction environmental management plans, tree protection plans, peat management plans and the oversight of these measures by an environmental clerk of works where appropriate). Where impacts have been unavoidable, suitable compensation and restoration measures have been secured through measures such as compensatory woodland planting, landscape restoration plans and the provision of replacement nesting/roosting features for birds and bats.</p> <p>The National Park Authority has sought to deliver biodiversity enhancement from development in line with the current Local Development Plan and more recent National Planning Framework (NPF) 4. Applying the mitigation hierarchy to avoid or minimise impacts on biodiversity is a vital first step in this process. A notable example of this was the removal of a proposed intake for an extension to the existing Ben Glas Hydro scheme which would have impacted on an internationally important bryophyte assemblage. A focus on native species in landscape plans, control of invasive non-native species, native woodland and hedgerow planting, bird and bat boxes and improved grassland management for biodiversity have all been secured via development.</p>



	<p>Prior to the finalisation of NPF4, the National Park Authority was able to secure a package of biodiversity enhancement measures as part of a proposal to construct a temporary floating access track to facilitate overhead powerline refurbishment at Ben Lui and Glen Falloch. This included off-site control of invasive non-native species and native woodland planting as well as the use of the temporary track to undertake peatland restoration works in adjacent areas. The 30-year Greater Cononish Glen Management Plan, secured via the permission for the Cononish Gold Mine, has delivered native woodland creation during this reporting period. A large 20ha enclosure and three smaller enclosures have been planted with native species to create low-density native woodland within Ben Lui Special Area of Conservation and adjacent to the Coille Coire Chuilc SSSI Caledonian pinewood.</p> <p>More recently in 2023, the National Park Authority Nature and Land Use team has provided substantial input on National, Major, and EIA developments at the application and pre-applications stages to ensure that these proposals deliver significant biodiversity enhancement that will contribute towards the objectives of the National Park Authority Future Nature Route Map. The outcome of this work will be reported in the next Biodiversity Duty Report, and it is anticipated that this will result in a step change in the amount of enhancement delivered by development.</p>
Agricultural and forestry grants and subsidies	<p>We work closely with land managers within the National Park and agencies and partners across Scotland on two levels. Firstly, every year we support those on the ground to understand and make use of the available agricultural and forestry grant applications. This can be in the form of supporting AECS applications, providing practical advice on land management or providing our own grants such as the small tree planting grant totalling £60,000 over the last three years. Between 2021 and 2023, the National Park Authority contributed towards seven AECS application consultancy fees for six land holdings. Two of the applications were successful and have resulted in land holdings undertaking habitat management to benefit waders. One application was unsuccessful, and we are still awaiting the outcome of the remaining four applications.</p> <p>We also work to support the evolution and development of those systems as the Scotland Government works to develop subsidy structures to support land use which can continue to deliver priorities such as food and timber, whilst increasing the impact these land uses can have in delivering for our climate and nature.</p>
New Funding Models	<p>The National Park Authority has been working over the last three years to develop understanding and realise opportunities for greater amounts of funding to be made available to land management and organisations within the National Park to scale up their nature restoration efforts, as well as scale up the National Park Authority's own delivery.</p>



We recognise that a mixture of core government funding, traditional grants, sponsorship, and innovative development of new green finance opportunities will all be required to deliver the combination of large-scale capital and ongoing development and management funding required to hugely scale up nature restoration.

Through the UK-wide [Revere](#) partnership, the National Park Authority and Palladium are exploring potential for private investment, in particular through woodland creation. We have secured Scottish Government and other grant funding to develop a range of research and pilot projects which, in the coming year, will aim to develop a woodland carbon platform to deliver high integrity woodland schemes which also deliver wider community and biodiversity benefits. We also secured a £95,000 grant from Investment Ready Nature Scotland (IRNS) and are just reaching the end of a substantial review with [Landscape Finance Lab](#) which will inform the National Park Authority's upcoming delivery plans on how we can step up nature restoration funding in line with the aspirations of our new National Park Partnership Plan.

In terms of more conventional grants, we have secured £92,000 funding from Scottish Water, matched by the Great Trossachs Forest partnership organisations, for a two-year post hosted by Loch Lomond and Trossachs Countryside Trust to enable next steps for the flagship landscape scale partnership, The Great Trossachs Forest.

We have also developed the Wild Strathfillan landscape partnership, working closely with Loch Lomond and Trossachs Countryside Trust, and supporting them to secure and deliver a £250,000 Nature Restoration Fund development phase which will shortly move into being the delivery phase of this major new landscape partnership.

SECTION 4: NATURE-BASED SOLUTIONS, CLIMATE CHANGE AND BIODIVERSITY

How has your organisation integrated biodiversity into actions on the climate emergency such as through Nature based Solutions?

<p>Mission Zero</p>	<p>As large-scale landscapes, National Parks have a significant role to play in securing a more sustainable future for Scotland and the planet. We believe as a National Park Authority, we must lead by example in both our own operations and by bringing together stakeholders to deliver at landscape scale.</p> <p>The Scottish Government declared a climate emergency in 2019, setting a target for Scotland to become a 'Net Zero Nation' by 2045. The National Park Authority committed to supporting this and recognised the need to redouble our efforts to act swiftly and face the climate emergency head on.</p> <p>As an organisation, we committed to making a step change in how we operate, putting emissions reduction at the heart of our decision-making to dramatically reduce the emissions associated with work we undertake, services we deliver and those arising from across the land and buildings we manage. By 2030, we will be a net zero emitting organisation. This is our Mission Zero.</p> <p>Our three main areas of emissions targets are electricity, transport, and heating. This requires significant financial costs in terms of capital and revenue to install, run and maintain new renewable technologies on our estate, along with the need to invest in staff skills and training to run these new systems. Significant progress has been made since the launch of the Mission Zero Route Map in 2019.</p> <p>Our Future Nature Route Map was born out of the National Park Authority's commitment to the Edinburgh Declaration, an international agreement from the Convention of Biodiversity, agreeing that subnational, regional and local governments across the world commit to taking bolder action to halt global biodiversity loss.</p> <p>The journey to becoming a Net Zero National Park is also underway, with a Greenhouse Gas Footprint Assessment for the National Park completed in 2022 and consultation on the next National Park Partnership Plan proposing a target of reaching net zero as a place by 2040.</p> <p>In stepping up our commitments to nature, the National Park Authority was explicit that landscape scale nature restoration would need not only a clear, shared vision but a wide partnership and coalition of stakeholders to collectively develop the strategy, policy, engagement, and delivery mechanisms needed. The integration of our plans for nature</p>
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	<p>restoration and climate change mitigation and adaption are explicit in our new National Park Partnership and its aim to be nature positive and climate positive.</p>
Key achievements	<p>£200,000 investment in 2022/23</p> <p>Renewable energy technologies from 2022-23 are estimated to produce 25tCO₂e savings per year.</p> <p>Balmaha Visitor Centre</p> <ul style="list-style-type: none">• Installation of Solar Photovoltaic (PV) panels to power building• Installation of Air Source Heat Pumps and heating system upgrades• LPG gas no longer needed to heat building <p>Duncan Mills Memorial Slipway</p> <ul style="list-style-type: none">• Air Source Heat Pumps and heating system upgrades means no longer need to use grid supplied gas to heat building• Glazing upgrades and a reception canopy to retain heat <p>Loch Achray Campsite</p> <ul style="list-style-type: none">• Solar PV panels and battery storage, reducing diesel generator use <p>Staff Champions</p> <ul style="list-style-type: none">• Procurement Terms and Conditions reviewed to see how 'green clauses' can be included• 'Digital first' hybrid working approach to reduce travel emissions• Mission Zero training for Board members• More sustainable catering for events and increased use of QR codes to reduce leaflet printing• Embedded Mission Zero and Future Nature into Place Projects such as the new Bracklinn Bridge <p>National Park Greenhouse Gas Footprint Assessment completed including suggested pathway to Net Zero, and opportunity to move from being an emitter of greenhouse gases to sequestering over 700,000 tCO₂e per year in 2050.</p> <p>The Future Nature Strategy and new National Park Partnership Plan set ambitious targets for Woodland Expansion and Peatland Restoration as key elements of a holistic approach to becoming carbon negative as a place.</p>



<p>Climate change related challenges for biodiversity over the next three years</p>	<p>There is unequivocal evidence that the global climate is already warming, and the continued emissions of greenhouse gases will cause further warming and changes in the climate system. Regardless of how successful local, regional, national, and global mitigation efforts prove to be, the legacy of past and current greenhouse gas emissions means that climate change over the next few decades is now unavoidable. The National Park Authority is finalising a new suite of strategic plans that are driven by the interlinked crises of the climate emergency and biodiversity loss and seek to significantly scale up action to address both.</p> <p>The draft National Park Partnership Plan 2024-29 highlights some of the climate related challenges for biodiversity to which we must respond. It recognises that Scotland is already experiencing the impacts of our changing climate, including rising temperatures, sea levels, and rainfall, and these impacts are set to increase. It is projected that from 2020-2049 rainfall in Scotland will increase by up to 55% during certain months of the year, while other times of the year are projected to become drier. Our temperatures are projected to see substantial warming of up to 4°C between May and November and approximately 2-3°C in the winter. These differences may not sound significant but their impact on land and nature, and everything that relies on them, will be stark. For example, some upland areas of central Scotland are expected to shift from having a water surplus to being in deficit. Our changing climate threatens biodiversity, with some habitats and species struggling to adapt to these quickly escalating changes. More frequent extreme weather events and rising temperatures mean that we will see more of these impacts in the National Park, for example:</p> <ul style="list-style-type: none">• More blue-green algae blooms in lochs• Increased tree diseases affecting our forests• The spread of livestock diseases• Increased flooding, landslides, storms• Rising sea levels• Wildfires, and drought <p>Much of our programming, including practical work on the ground and building delivery partnerships, is based on better connected habitat networks, which in turn is all about it being resilient to a changing climate. We also need to deepen our understanding of risks and vulnerabilities faced by the National Park as the climate continues to change. We have commissioned National Park specific local climate change projections and a bespoke climate change risk and opportunity register.</p>
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SECTION 5: PUBLIC ENGAGEMENT AND WORKFORCE DEVELOPMENT

<p>Public engagement, workforce development and practical action</p>	<p>Over the 2021-23 calendar year period, our engagement to connect people with, and inspire action for nature continued. Though in-person engagement was reduced at the start of the period due to the ongoing impacts of Covid, we still had many notable projects, that are captured below.</p> <p>Our popular volunteer programme is rebuilding post-covid and in 2023 delivered a total of 7,400 hours; of which over 3,000 hours was practical conservation work. Our Wild Strathfillan partnership project proved particularly popular with 53 people volunteering 345 hours in their new tree nursery, collecting and planting thousands of native tree seeds. We're continuing to grow our volunteering opportunities with partners with a focus on upskilling our volunteers in relevant areas such as INNS removal and species monitoring, and have recruited 45 new volunteers in the winter of 2023, who will contribute their time in 2024 onwards.</p> <p>Our outdoor learning and youth engagement programmes have continued to educate and inspire young people from across Scotland, with our school support programme in 2022/23 engaging 81 schools and over 2,100 pupils to learn about the National Park and the challenges facing it. Notably, during COP26, our Youth Committee were active ambassadors for nature, with one member presenting at COP26 and another meeting international delegates from protected landscapes, and we developed a COP26 legacy project that saw 11 schools in the National Park planting trees to create small areas of woodland in their grounds. Our Junior Ranger programme continues to provide hands-on experiences for young people to develop passion and skills to protect nature, and our 2023 summer outreach programme welcomed nearly 250 people from underrepresented audiences to visit and develop nature connections in the National Park.</p> <p>We also continue to work closely with local communities and in 2022/23 multiple innovative projects were delivered. For example a Regional Land Use Partnership pilot explored ways for community members to engage in land-use decision making in order to support action on climate and nature, and four Local Place Plans were supported to be developed, all which considered environmental issues and the role of the community in taking action on them, amongst a wider programme of community engagement.</p>
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	<p>Within our Future Nature Route Map, we are drawing together and building upon the success of our engagement work to date and have identified a specific pathway to 'engage and inspire action for nature', acknowledging the central importance of engagement in all nature restoration work.</p>
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SECTION 6: RESEARCH AND MONITORING

Describe any research activities that your organisation has undertaken to help develop understanding and awareness of biodiversity

<p>Research</p>	<p>Through the development of the Future Nature Strategy and to inform the development of the new National Park Partnership plan the key piece of research we commissioned was a State of Nature review for the National Park. Carried out by the independent consultancy Ecosulis this report has enabled us to review a complete baseline for nature across the National Park.</p> <p>The report pulled together a wide range of sources and analysed datasets to give an overview of the baseline for nature in the National Park looking at two points of comparison:</p> <ul style="list-style-type: none"> • It looked at datasets which allowed comparison of progress within the National Park over approximately the last ten years, • It also looked at comparisons between the National Park and the rest of Scotland. <p>The full report is available online here.</p> <p>In addition to this report the National Park has also commissioned, supported, or contributed to many projects including working with SEPA on a project to explore the use of eDNA in habitat monitoring and working with NatureScot on projects to develop natural capital assessments and to develop new monitoring methodology for designated sites.</p>
<p>Monitoring</p>	<p>We have also built a structured monitoring programme as a key element of the Future Nature Route Map. This combines an annual deliver plan which monitors the actions and deliverable outputs of the programme, with a logic model and set of long term indicators. The long term indicators have been developed in consultation with the full Future Nature working group and then independently reviewed. We aim to launch a new dashboard of baselines indicators in the next year. Then on a five yearly cycle we will rerun these indicators as well as commissioning an update to the State of Nature report. Full details of indicators and monitoring is available here and on pages 49-52 of the Route Map.</p>



<p>Trends and Areas of Concern</p>	<p>The prior research and context already set in preparing the Future Nature Route Map and draft National Park Partnership Plan meant we were already aware that the National Park is not immune to the global biodiversity crisis and nature is still in trouble here. We were therefore not surprised that the overall assessment was a mixed picture for nature.</p> <p>We were pleased to see that some progress has been made. On some indicators the National Park has seen improvements for nature over the last ten years, and again, on some measures is doing somewhat better than the rest of Scotland. However, the report clearly states the context for those positive signs:</p> <p><i>“Although Scotland is renowned for its wonderful wildlife, it is still one of the most nature depleted countries in the world and experiencing major declines in biodiversity: the 2019 Scottish State of Nature report found that 49% of Scottish species have decreased in abundance in the last two decades.”</i></p> <p>Headlines from the 2023 Scotland’s State of Nature report conclude:</p> <ul style="list-style-type: none">• Scottish wildlife has decreased on average by 15% since 1994• Since 1970 the distribution of 47% of flowering plants has decreased• 11% (One in nine) Scottish species are threatened with extinction• 49% Scotland’s seabirds have declined by 49% between 1986 and 2019 <p>In this context, it is clear that doing a little better (on some measures) than the last ten years, and compared to Scotland overall, does not match the aspirations to restore nature and deliver a resilient, nature-rich National Park. As stated in the report, although the park may be performing relatively well compared to some benchmarks, it still falls significantly short of the ambitious goals set for a National Park.</p> <p>The report highlights Invasive Non-Native Species, peatland erosion and drainage, and deer grazing pressure particularly in wooded areas, as major challenges to the State of Nature in the National Park. It also highlights considerable data gaps which we will need to continue to fill to build as full a picture of possible to steer delivery in the years to come.</p>
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SECTION 7: BIODIVERSITY HIGHLIGHTS AND CHALLENGES

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).

<p>Main achievements</p>	<p>We believe that over the last three years we have made major strategic and delivery contributions to the protection and restoration of biodiversity.</p> <p>We have made a major commitment at board level to the Edinburgh Convention and followed that through with the co-creation of the new Future Nature Route Map with 30 partner organisations. We believe this is a major success, demonstrating shared commitment, setting out actions, spatial priorities, and monitoring structures. In turn that commitment is reflected in our new National Park Partnership plan in which the principles of not just biodiversity protection, but that of widespread nature restoration is front and central as a major pillar in a thriving future for the National Park.</p> <p>We have delivered an expanding, dedicated National Park Nature Restoration Fund programme supporting projects including:</p> <ul style="list-style-type: none"> • Habitat improvement and river revetment on the River Goil, • Planting of trees and montane scrub, • Removal of Rhododendron ponticum, Western Hemlock, and Sitka Spruce in the Great Trossachs Forest, • Vegetation management and cattle collars at Loch Lomond National Nature Reserve <p>We believe that we’ve demonstrated our commitment to a landscape scale nature restoration approach through our ongoing support and development of The Great Trossachs Forest, and in working closely with Loch Lomond and the Trossachs Countryside Trust and key land managers to develop a major new landscape scale partnership Wild Strathfillan, which now stands ready to deliver major delivery phases in 2024. This will be followed by a third landscape partnership, Loch Lomond Rainforest, which is undergoing initial scoping now and aiming to move into full development on 2024.</p> <p>We have been working with RSPB on a beaver translocation project at their Loch Lomond reserve. In January 2023, 7 Beavers were translocated from Tayside (2 adults and 5 juveniles). Two of the young are known to have been predated by otters and the two adults have moved downstream and away from the reserve. With no evidence of the</p>
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	<p>beavers on the reserve beyond August 2023 RSPB applied to extend their licence and released a further 2 adult beavers, also translocated from Tayside. They were released in November 2023. Footage has captured them feeding, vocalising, displaying territorial behaviour and collecting materials for dam building. So far, they have remained relatively close to the release site.</p> <p>We have been working with Palladium, is a global organisation dedicated to delivering positive social and environmental change, since March 2022 to assess the potential for private finance to enhance the viability of nature restoration. One of the Palladium projects, Revere, aims to deploy private finance at an unprecedented scale to remove carbon, restore nature for the long-term, and create livelihood opportunities for communities across the diverse working landscapes of the UK’s National Parks.</p> <p>We continue to work collaboratively with land managers such as Glenfalloch where we are currently supporting a woodland expansion project with provision of volunteer and staff time to collect seeds and plant trees. This is as part of the Wild Strathfillan partnership.</p> <p>Between 2020 and March 2023, 1,035ha of peatland was put on the road to recovery via the Peatland ACTION delivery programme.</p> <p>Initial clearance of Rhododendron ponticum at Inversnaid funded through NatureScot’s Biodiversity Challenge Fund was completed in spring 2022. Following the initial clearance work, the National Park Authority has committed to carry out follow up treatment for the subsequent 10 years to ensure the project is sustainable in the long term. Video available here.</p>
<p>Main Challenges</p>	<p>Considerable uncertainty affects the potential effectiveness and success of these landscape partnerships, and the overall success of the Future Nature vision being achieved. The National Park has a wide range of landowners, and they face great uncertainty in the future funding and policy affecting land management decisions and potential land use change.</p> <p>Many land managers in the National Park are keen and open to do more to protect and restore nature. Planning how to do that will rely on clarity over the developing carbon and biodiversity markets, the system to deliver biodiversity enhancement through the planning system, and the future of agricultural and forestry subsidies. Similarly, the charities</p>



and community organisations seeking to develop partnership projects and long-term management lack access to certainty and long-term funding.

We believe that we are scaling up our ability to deliver on the ground and will continue to work closely with both those on the ground and those developing policy. Ultimately the emergence of clarity and strong policy and funding structures to enable and support nature restoration and scale will be the most decisive factor in whether our attempts to reverse biodiversity decline will be successful.