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**National
Galleries
Scotland**

NGS Biodiversity Report 2021 – 2023

Report Context

Biodiversity is fundamental to the living networks (the ecosystems) that provide us all with a healthy environment and a regulated climate. In 2019 the UN reported that nature was declining at an unprecedented rate with around 1 million animal and plant species facing extinction. The Nature Conservation (Scotland) Act 2004 places a statutory duty on all public bodies in Scotland to further the conservation of biodiversity. Section 1 of the Act states:


“It is the duty of every public body and office holder, in exercising any functions, to further the conservation of biodiversity so far as it is consistent with the proper exercise of those functions.”

The Wildlife and Natural Environment (Scotland) Act 2011 introduced a requirement for all public bodies in Scotland to make a report publicly available on their compliance with the biodiversity duty. Biodiversity duty reports are required every three years.

The Biodiversity duty aims to:

- Protect biodiversity through management of specific sites, habitats, and species
- Increase the level of understanding and connection between people and the living environment
- Promote consideration of all our impacts on the natural world through our actions and decisions, including through procurement and use of resources
- Encourage staff, partners, and customers to engage with, understand and consider biodiversity

This report has been created with the help of the NatureScot Guidance Notes.



Introduction to NGS

The National Galleries of Scotland (NGS) cares for, develops, researches, and displays the national collection of Scottish and international art. With a lively and innovative programme of activities, exhibitions, education, and publications, it aims to engage, inform, and inspire the broadest possible public. The estate is primarily historic buildings based in Edinburgh comprising of the National, the Portrait, and the Modern. There are also storage facilities in Granton, Newbridge and Loanhead. The two buildings of the Modern are situated in the 75,690m² of grounds which acts as the focal point for influencing biodiversity improvements. NGS has approximately 355 staff and 2 million local to international visitors through its doors, and 2.5 million visitors digitally to our website each year. In this respect we have a role to play informing and engaging with communities, young people, and the public in relation to biodiversity through the national art collection as well as through green spaces that we occupy and maintain.

Protecting and enhancing biodiversity

Actions NGS has undertaken alone or as part of a partnership to benefit biodiversity directly or achieve wider outcomes for nature and people.

Our Grounds

The grounds at the Modern are the primary green space for us to implement projects to support and improve biodiversity. The grounds include a variety of habitats such as mixed woodland, scattered trees, tall ruderal vegetation, rough grassland, amenity grassland and wildflower area as well as spaces such as the allotments and the orchard. Grass around the margins of the main green spaces and under the trees has been left to grow longer to encourage different plant species and provide animal habitats.

The trees at the Modern are protected by a Tree Preservation Order as well as being within the Dean Conservation Area. We have over 400 trees ranging in age from newly planted saplings to trees in excess of 150 years old. Most trees are native British species including Ash, Beech, Cherry, Oak, Lime and Elm.

There are some excellent trees, notably two Spanish Chestnuts one of which has Edinburgh Heritage Tree status. Many trees have been lost over the years though Dutch Elm disease and we are monitoring for Ash dieback. Trees are regularly



The orchard at the Modern

inspected, and recommendations actioned in consultation with the Tree Officer at the City of Edinburgh Council. In 2022 as part of our annual tree inspection surveyed by specialist arborists, 20 trees within our grounds were found to be diseased and in danger of dropping branches posing a serious risk to our visitors and colleagues. Funding has been secured to support the planting of new trees, and in line with our biodiversity survey recommendations these trees will be native and diverse species.

The woodland down to the Water of Leith is lightly managed, and fallen timber is retained on site as woodpile habitats for small mammals, insects, and fungi. Leaves are collected on site and composted, the compost then being used on the flower beds. Bird houses, bat houses and insect hotels are installed around the grounds to support local species such as robin, wrens, tits, and woodpeckers as well as swallows and swifts in the warmer months.

A well-established allotment space is situated on the grounds of Modern Two that is managed by The Dean Gallery Allotment Association. A large array of flowers, soft fruits and vegetables are grown all year round with the grounds surrounded by apple, plum and pear trees. The space is managed to a high standard of cultivation and all produce is organic.

In 2022, The Nurture Group took over our grounds maintenance contract, with a strong emphasis on our Environmental Policy and Plan being communicated throughout the procurement process. We are currently working with this new company to align the maintenance with supporting the local species and habitats and increasing biodiversity where possible. The team of gardeners maintain the grounds; grass cutting, hedge pruning, weeding, snow clearance, litter picking and maintaining the roads and paths.



Wood and compost are left as habitat piles for a variety of species.

The Art Works project – partnership working

The Art Works (TAW) project is a new building centred around the care and research of the national art collection. The 4.5-hectare site, located in North Edinburgh Granton area, is underpinned by placemaking principles, and aspires to be an area for the community including green spaces to support biodiversity. The land where the site will be situated is owned by Scottish Government and is currently home to the Mobile Orchard comprising of 90 Scottish heritage apple trees, installed by Soilutions. Our Community Development Officer has been working with the site by identifying projects for engagement with local communities. The development has recently been granted planning approval in late 2023 for work to commence in 2024. It will have biodiversity embedded through the holistic approach of the sustainability framework.

In 2023 NGS formed an informal partnership with National Museums of Scotland (NMS) who have their national collection facility located adjacent to the TAW site in Granton. NMS has been recording and monitoring the species around the grounds of the collection facility and making improvements to the way their grounds are managed in particular supporting wildflower meadows, encouraging all sorts of insects, invertebrates, birds and mammals. Utilising the expertise that NMS have in-house through their Natural Sciences department, the partnership has provided the opportunity for identifying plants and species that we will be able to move between the TAW site and the NMS site to preserve them in the lead up to the TAW building work commencing.

Mainstreaming biodiversity

Steps NGS has taken to incorporate biodiversity measures into its wider policies.

Strategy

Our response to the Climate Emergency is one of the organisation's key priorities alongside Equalities, Diversity & Inclusion and Health & Wellbeing. A new Environmental Response Plan for 2022-25 was created throughout 2021. This was a whole-organisation collaboration, with each department planning out in the short, medium, and long term, how their work could help the organisation achieve net-zero carbon emissions and become more environmentally friendly. Through this process NGS colleagues identified where their department could make an impact in all areas of sustainability; one of these named areas being biodiversity. In the final plan, biodiversity is woven throughout from project work, engagement to adaptation. An interactive



Colleague engagement session for new strategy

session to promote NGS' new strategy was attended by 326 colleagues over a two-week period in late 2021, and since then regular updates are given from key projects. The new Environmental Response Plan has been launched internally and on the NGS website for visitors. Our internal governance structure was set up in early 2022 to monitor and manage the plan.

Policy

The protection and improvement of biodiversity is one of the key priorities with the NGS Environmental Policy. This policy is used by staff as a way of identifying the key areas of work in relation to environmental sustainability. It is also used as part of the Terms & Conditions sent to contractors and suppliers during the procurement process. We ask all organisations that we work with through procurement services to take the environment into consideration with their work.



Reporting

Our annual reporting on environmental sustainability includes a section on biodiversity to communicate and mainstream what work is being done across NGS. These annual reports can be found on our [website](#). NGS achieved Gold standard for the Green Tourism Award in 2018 and are being reassessed in 2023 across all three sites. The award system has multiple criteria to evidence how we are monitoring and improving biodiversity onsite as well as supporting our visitors to connect with nature.

Internal decision-making

The topic of environmental sustainability and the impact on biodiversity has also been embedded into other decision-making processes such as project management training, procurement training and the planning process for our Public Programme of exhibitions and displays. Through our Environmental Impact Evaluation colleagues are asked to consider the positive and negative impacts of their work on biodiversity as well as other areas of sustainability while also including measures being implemented to mitigate any negative impacts.

Training

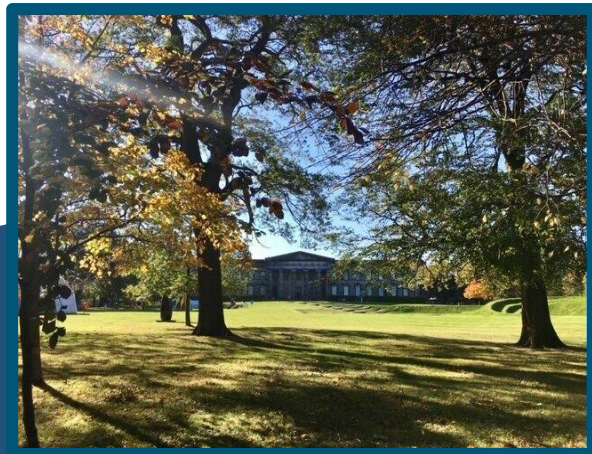
Resources have been made available to colleagues, in particular, our *Networks Resource* of organisations that are working on sustainability in the arts and culture sector. This resource allows for colleagues to easily access helpful partner organisations who have case studies, research, guidance, or networks of people who are already working on a host of environment improvements of which biodiversity is included.

At the start of 2023 we rolled out NGS Climate Literacy Training for all colleagues. This half hour training covers the very basics of climate science, frequent terminology used while talking about climate change and looks at the impacts of climate change internationally, in Scotland and well as for NGS. As part of this we cover the work that NGS are doing to support and improve biodiversity and encourage colleagues to consider the impact of their work on the surrounding environment, whether that is through air, soil, land pollution or direct impacts on biodiversity locally or further afield. Across NGS 80% of our colleagues have completed the training so far and all new colleagues joining the organisation are also requested to complete it as part of their induction process.

Nature-based solutions, climate change and biodiversity

How NGS support the contribution biodiversity can make to build resilience and mitigate and adapt to climate change.

The trees, woodlands, and maintenance of the grounds around the Modern site continue to be the main mechanism of nature-based mitigation and adaptation of Climate Change. Providing carbon sequestration, though on a small scale, as well as flood management for the surrounding area. With the new ground maintenance contract, we have been discussing adaptation opportunities. The focus being on identifying areas that would benefit from plants that can help slow surface run off in heavy rainfall events, as well as plants and trees that can support shade during intensive heat periods.



Modern One

Within the Chief Operating Office, Emergency Response documents are being updated and disaster response planning have started to consider elements of climate impacts such as storms and rain events. Further work is planned to roll out adaptation training and planning with key departments such as Collection Care and Estates which includes the grounds and the biodiversity within. Improvements to the current Estates, particularly the National with the Scottish National Gallery project which reopened in 2023, has support futureproofing of the building to help with flooding and extreme rain events. Further discussions are considering whether planting in the small green spaces around the National could support further adaptation for flooding. Similarly, climate resilience has been embedded into The Art Works project from the first stages of planning through the sustainability framework.

Public engagement and workforce development

Learning and engagement with communities, young people, and the public.

Exhibitions & Displays

The Scottish national art collection is for everyone to enjoy and a useful tool in being able to engage on the topic of biodiversity. The artwork exhibited throughout all the gallery sites reaches a wide audience of local and international visitors, in particular the permanent collection at the National which showcases the diverse and iconic Scottish landscapes. The Modern and the Portrait have also exhibited artists whose work covers elements of the natural world through a variety of exhibitions.

The Thomas Joshua Cooper exhibition, [The World's Edge](#), was shown at the Portrait in 2021/22. The display covered three decades of Cooper's work circumnavigating the globe taking photographs of the most extreme points and locations surrounding the Atlantic Ocean. An additional podcast in conversation with Cooper explored his experience of witnessing climate change first-hand through his photography.

Many talented artists work at NGS and the [Artists at Work 2](#) exhibition celebrated their creativity at the Portrait in 2022/23. The artwork produced by colleagues covered a wide range of topics, with a significant number that touched on our natural world around us; nature, the environment, sustainability, and landscapes were popular themes which arose and were explored in many of the artists' work. We followed up this exhibition with an internal webinar with some of the artists interested in this topic. It was a brilliant conversation hearing about personal interests and experiences from watching the decline of seabirds on the Scottish east coastline to artists actively choosing the most environmentally friendly materials for their work so that their practise matches their message.



Spring Sea, Soaring, St. Abb's
Susan Harvey, NGS Gallery Attendant

Conversations with the Collection at the Modern happily coincided with the start of Scotland's Climate Week in September 2022 and continues to run in 2023. Multiple thematic rooms within this collection display explore themes that impact our environment. In particular, the [Creative Terrains](#)

room looks at the conversations that artists have with the natural environment around them. Colleagues have been supporting this display with insights of their own through blogs on our NGS website. Colleagues choose their favourite artwork from the display and talk about why they are drawn to it. An example is one blog focusing on the work by artist Richard Long which is on display, [A Line Made by Walking](#), 1967. Josh Murfitt, our Security and Visitor Experience colleague who authored this blog, explores the relationship between creating artworks using landscapes and how human presence impacts the natural environment around us.

Members of our Collection & Research directorate supported the work of the University of Glasgow's [Discipline Hopping Peatlands & Wetlands Group](#); a multidisciplinary group which considered integrated approaches towards understanding the cultural and scientific value of these habitats. The research and climate mitigation workshops led by NGS curators, looked at historic depictions of wetlands and peatlands in art and photography, stimulating discussion around sites that have been lost or significantly changed and present-day management and preservation. Tapping into the group's interdisciplinary insights also helped provide NGS with an enriched understanding of these images; opening up new ideas for encourage audiences to engage with their natural environment through the national collection.



Photos from the Peatlands and Wetlands working group sessions.

Learning & Engagement



NGS Education Officer on the e-cargo bike as part of the 'Art in the Open' project.

Our Learning and Engagement programme also takes the art out to our local communities, often with a strong link to the surrounding environments. Below are some examples of engagement projects which use nature, ecology and biodiversity as inspiration as well as incorporating materials from nature in their work.

The NGS Learning & Engagement Team purchased our own e-cargo bike following the success of the [Art in The Open](#) project of 2020. Artist Damian Callan and Education Officer Mara Barth (pictured) hold free drop-in sessions all over the city for anyone to have a go at drawing and sketching sessions. A lot of these sessions have taken place in Edinburgh green spaces such as Leith Links and the Meadows, allowing people to connect with the local environment through the art.

Engagement in relation to the biodiversity has continued at The Art Works site which is home to the Mobile Orchard comprising of 90 Scottish heritage apple trees. Our Community Outreach Officer held biodiversity workshops in 2021 with the curatorial team from the National Museum of Scotland. Surveys have been done by the NMS team and found some interesting species including birds of prey, invertebrates, and small mammals.

Our Director of Conservation and Collections Management and a member of our Learning & Engagement Team were joined at the TAW site for Creative Edinburgh's session *Creative Circles: Inspiring Climate Action* to talk about the power of our arts and culture in making derelict and underused land accessible, culturally valuable, and biodiverse to benefit local communities.

Sessions were also held for the North Edinburgh community gardens group from Granton Castle Walled Garden in 2022. Freelance artist Kate Temple led a natural ink making workshop; inspired by autumnal artworks in the collection, the workshop used foraged plants and berries such as elderberries, rosehip, and brambles to create inks used for creating art. The group were able to bring some of their own materials for ink making from their community garden.

[Your Art World](#) is an ongoing project in 2023 which challenges 3 to 18-year-olds to make and share their art – the art challenges are set by young people across Scotland to inspire creativity. Some of the topics suggested and explored include 'Will the world ever end?' and 'What would it be like to be tiny like a bee?'. A current challenge came from Dounby Community School in Orkney who decided on the theme 'protect' to demonstrate their commitment to protecting the environment, inspired by their concern for the litter that regularly washes up on their shores. All 152 children from the nursery and primary have helped create an installation about the things they want to protect, with a central mascot 'Bob' who has been made from recycled materials. Their work has been on display at the National during 2023.

Art crates returning from last year's international touring exhibition to Japan presented us with a great opportunity, not only to retain and reuse some for displaying art but also find new ways of sustainably disposing of the others. Our Learning & Engagement team took on 7 crates for reuse as part of an exhibition at the Portrait, while another 23 crates have been delivered by the Art Movement Team shuttle to communities across Edinburgh to use as garden planters – their new homes include Friends of Burdiehouse, Corstorphine Community Centre, Grove Garden in the Park, the Meadows Community Garden and the Salvation Army community garden near our Granton Art Store and the site for The Art Works. The repurposed crates have come into bloom in 2023 with some creative planting from these community groups.



Burdiehouse Burn Valley Park's repurposed art crates in bloom.

COP26

In November 2021, National Galleries of Scotland and the National Library of Scotland partnered for an engagement project [Preserving Pasts, Imagining Futures](#) with the aim to connect Scottish audiences with the UN Climate Summit COP26 being held in Glasgow. Using the power of both organisations' collections, audiences were encouraged to learn about Scotland's industrial and agricultural heritage and consider how landscapes have evolved and will continue to do so in the future, due to climatic, societal, and technological changes. Illustrations, photographs, audio-visual content, and textual sources were collated for five locations around Scotland: Outer Hebrides, the Cairngorms, River Clyde, Fife, and Edinburgh. These materials were then used to explain environmental topics such as sea level rise, the low carbon energy transition, active travel, and sustainable food production, exploring how these related to different landscapes across Scotland.



Sasha Saben Callaghan's reimagining of 'Gorgie Road' in the future due to climate change.

Visitors were encouraged to create their own artistic response to imagine how these Scottish landscapes could look in the future, with submissions including photography, collage, and drawings. Prominent themes in the entries includes the natural environment, green spaces, and biodiversity.

As part of the *Preserving Pasts, Imagining Futures* project, a partnership with artist [Patricia Macdonald](#) was formed, and a series of blogs were created to address the environmental topics of sea level rise and biodiversity loss in the Highlands and Islands; using images from Patricia's work included in the NGS art collection. The blogs raised awareness of the often-overlooked UN Biodiversity Summit which was happening before the COP26 Summit.

Research and monitoring

NGS actions to increase understanding of nature and biodiversity both internally and externally and to measure the impacts of the actions you have.

In late summer of 2021, a biodiversity survey was undertaken at the Modern, to help support the creation of a Biodiversity Action Plan. This site has the most potential for NGS to support and improve biodiversity due to the size of the grounds that we manage there. A desk-based analysis and habitat survey were completed along with a walk round to identify any evidence of species, in particular any protected species such as bats, badgers, and otters in the surrounding area that we would need to be aware of.

In the local area there have been recordings of the following species, some within NGS grounds and others in the local vicinities around the Water of Leith and Craigmyle Woods:

- Bats
- Badgers
- Otters
- Hedgehogs
- Roe deer
- Birds such as kingfishers, terns, swifts and mute swans
- Butterflies and other invertebrates
- Amphibians

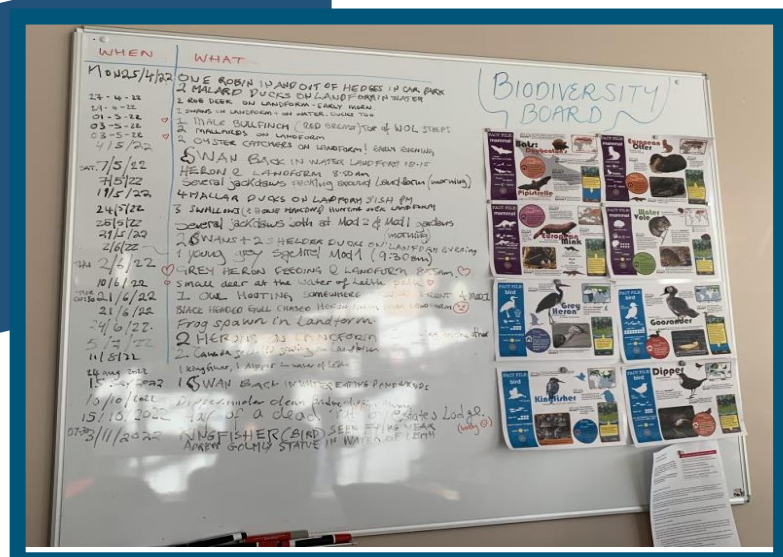


Roe deer print
(within the blue circle) found in
the Modern grounds.

The survey has provided us with a good starting point to identify the habitats and species that we can support and encourage, recommendations were also included to help form the basis of a Biodiversity Action Plan. The survey identified some local species of particular interest that we could support such as badgers and otters who are found around the Water of Leith area. We arranged a visit with the organisation Scottish Badgers to better understand our role in the local area and confirm that our maintenance practises around the grounds support this protected species. Work will continue into 2024 to work with our grounds team to improve habitats at the Modern, and also engagement with our colleagues and visitors with the local species. More monitoring and surveys will help support our work to identify where improvements are making an impact.

Colleagues at the Modern have continued with their wildlife watching and monitoring on our internal Biodiversity Board. This is a space for staff to log details of any local wildlife that they spot around the gallery site, as well as the local Water of Leith walkway which is a frequent spot for lunchtime walks.

Highlights so far included baby otters, a badger, and a surprise appearance from a few roe deer who had made it to the Water of Leith area and into the grounds of the Modern. Many birds such as swallows, bullfinches, grey wagtails, and oystercatchers, have been sighted. It is planned that these sightings will be regularly submitted to iRecord to help towards data collation for science and conservation.



The NGS Biodiversity Board in our social space for colleagues to add sightings to.

Biodiversity highlights and challenges

NGS' main achievements for biodiversity over the reporting period.

Real progress has been made with the completion of the biodiversity survey, allowing us to focus our efforts on the local species and habitats that we can support. A solid base from where to start improving our sites, in particular the Modern. This has allowed a clear pathway of how we engage and work with our grounds maintenance team and look to improve not only the physical spaces but how we approach the maintenance to reduce disturbance to the local species. Challenges on our site include the need to find a balance between functional spaces for artwork and visitors and encouraging biodiversity. Some beneficial practises that we have found have been incorporating long grasses with clear trails for walking between artworks, to allow visitor to experience the site but also minimise disturbance of species inhabiting the space. Dog walking onsite has increased significantly since the Covid-19 pandemic, and we encourage all visitors to keep their dogs on leads while around the Modern site to minimise disturbance of the biodiversity as well.

The Charles Jencks *Landform* is a recognisable feature at the Modern site. In 2022 Cramond Primary School approached us after their visit to the gallery to inform us of frogs within the water of the feature and enquiring about whether they would be able to get out with the shape of the sides. Our grounds team installed some stone steps and wooden planks around the edges of the artwork in order for these newly hatched frogs to be able to move from the feature.

One of the most significant improvements over the past three years has been our partnership working and engagement with our colleagues. The Covid-19 pandemic brought a renewed appreciation for nature, and it has been encouraging to engage more with our colleagues and visitors with this. Our Learning and Engagement Team through their Outreach work have fed back how often our local communities are looking to discuss the environment and nature in their local surroundings. Colleagues actively interacting with the Biodiversity Board, requesting a biodiversity working group and getting involved with practical gardening opportunities around the sites have been a highlight. Our partnership working between local groups and in particular NMS are at an exciting starting point and something that we look forward to learning from and growing over the coming years.

